



ramsey

Now In Our 36th Year!



New For 2008

40Watt Subminiature Audio Amplifier

40 Watts and 2½" square! The brand new UAM4 audio amplifier! The ultra-efficient design that produces 40 watt bridged or 20 watt stereo outputs in a single device that doesn't even require a heatsink! Balanced and unbalanced inputs and a whole lot more! See Page 21!

WIN! Monthly Giveaways!

Visit ramseykits.com
See page 53
No purchase required

WE PUT THE FUN IN ELECTRONICS!



Fun Hobby Kits



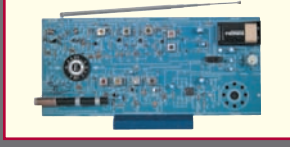
AM/FM Transmitters



Receivers and Transmitters



Amateur Radio Gear



Learning and Educational



Test Equipment



Tools, Soldering, and Accessories

THE LATEST AND THE GREATEST STUFF!

Passive Airband Aircraft Receiver



from \$89.95

FM Stereo Transmitter Kits



from \$44.95

Hi-Res Pressure Elevation Sensor



from \$239.95

ECG Heart Monitor



from \$44.95

OBDII CarChip Vehicle Monitor



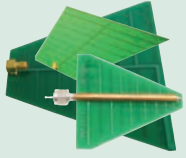
only \$99.95

Handheld Recorders



from \$198.95

Printed Circuit Plane Antennas



from \$29.95

Retro Nixie Tube Digital Clocks



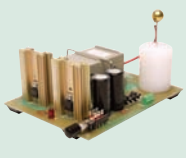
from \$169.95

Professional Weather Stations



from \$444.95

Plasma Generator



only \$64.95

PROFESSIONAL TEST & AUDIO EQUIPMENT

RF Test Equipment



RF Shielded Test Enclosures



FM & LPFM Broadcast



Professional Audio



YOUR AWESOME SOURCE FOR GREAT ELECTRONICS!

www.ramseyelectronics.com

Or Call 800-446-2295



Welcome to the world of Ramsey Electronics...

A LOT MORE THAN JUST KITS!

✓ Hobby Kits & Electronics

Do-it-yourself and factory assembled hobby kits, mini-kits, AM/FM broadcasters, transmitters, receivers, amateur radio gear, learning & educational labs, video cameras & accy's, test equipment, antennas, tools, parts, and a lot of really neat stuff!

✓ Professional FM Broadcast

FM stereo broadcast transmitters, FM Stereo "Stations-In-A Box" and broadcast antennas and accessories

✓ Professional RF Test Equipment

RF signal generators, communications service monitors & accessories

✓ RF Shielded Test Enclosures

RF shielded test enclosures for cellular and wireless communications testing, WiFi, WLAN, Bluetooth, RFID isolation and testing, and forensics isolation, capture & testing

✓ Professional Audio Equipment

Professional playback and recording equipment, home studio, computer audio, music accessories, and personal creativity tools

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☆ Friendly Dedicated People!

Our friendly staff is just like you, interested in neat electronic products! From the CSR's that take your order to the shipping personnel who confirm it, they are dedicated to one thing...your satisfaction!

☆ Easy Ordering!

We've redefined the term "easy" in regards to ordering! You can order safely and securely 24/7 on-line not only at www.ramseykits.com, but at our anchor stores on eBay and Amazon. You will also find a host of on-line resources to assist you with product questions, applications, and user forums to make your visit a pleasure! Beyond the internet you can also call our friendly CSR's toll free and they will answer any questions you may have and quickly guide you through your order. You will also find a convenient mail-in order form in this catalog. They've been there for thirty years and are still used today! All normal credit cards, PayPal, checks and wire transfers are accepted. Open accounts are also extended to suitably rated firms, organizations, and educational institutions. It really doesn't get much easier than that!



☆ Incredible Tech Support!

We consider our Technical Support Group to be second to none! That's a pretty strong statement, but we have 35 years of satisfied customers to back it up! We feel that buying and building an electronic kit is merely the beginning until that final moment when you turn it on and you see the incredible results of your handiwork. Our Tech Support Group handles it all; from parts questions, assembly questions, theory questions, schematic questions, troubleshooting problems, to repair and return procedures. Whether it be a phone call to verify the hookup or an email about a parts value, they are there for you. Likewise for the 24/7 user and technical forums at www.ramseykits.com!

☆ Risk Free Return Policy!

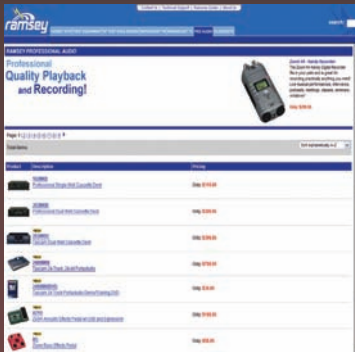
Not sure a kit or product is exactly what you are looking for? No problem! Order it and examine it (but don't build it if it's a kit!) for up to 10 days. If it's not exactly what you expected, return it for a full refund, no questions asked! Curious about the assembly of a product prior to building it? Got you covered there also; all manuals can be downloaded at ramseykits.com!

Shop online at www.ramseykits.com
Call Toll Free 800-446-2295



We Can't Fit EVERYTHING In Here! Visit The Web Site For A LOT More!

- ✓ All Of Our Products!**
- ✓ Giveaways!**
- ✓ Professional Audio**
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- ✓ RF Shielded Enclosures**
- ✓ And A Whole Lot More!**



Professional Audio
The Latest & The Greatest!



About Ramsey!
Learn MORE Than You Want!



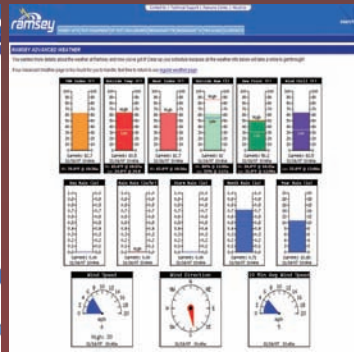
User Forums!
YOU Are The Author There!!



Dealer Information
Find a Dealer Near YOU!



Ramsey Weather
Our Local Weather!



Advanced Weather
Complete Weather History!



LIVE Webcams!
Watch Us LIVE 24/7!



WIN Every Month!
Register To WIN!



FAQ's
All The Answers You Need!!



FCC Reference Info
Operational Guidelines!



Kit Building Guides
How To Build A Kit!



Downloads!
Kit Manuals, Software...More!



Digital Synthesized FM Stereo Transmitters

- ✓ PLL synthesized for drift free operation
- ✓ Front panel digital control and display of all settings and parameters!
- ✓ Professional metal case for noise-free operation
- ✓ EMI filtering on audio and power inputs
- ✓ Super audio quality, rivals commercial broadcasts
- ✓ Available in domestic kit or factory assembled export versions

All The Features You Asked For...
PLUS A WHOLE LOT MORE!

THE LEGACY CONTINUES!

For nearly a decade we have been the leader in hobbyist FM radio transmitters. First we came out with our low cost FM10, the tunable FM transmitter that has set records as the most popular school, scouting, and first time hobbyist kit. Then we introduced the world famous FM25 series of FM transmitters. We took the basic concept of the tunable FM10, made it synthesized for rock solid and stable operation, and gave it the features and performance that made it THE LEADER in low cost FM stereo transmitters. From there we introduced our FM100 series Super Pro FM Stereo Radio Station.

NOW THE BEST OF BOTH WORLDS!

How could we make history better? First, we listened to thousands of our customers who loved the stability of the PLL synthesized FM25 series but wanted easy to change front panel control of the operating frequency and wanted to know what frequency they were transmitting on. They also wanted the capability of controlling the audio levels at the transmitter rather than changing the input levels. We thought those were very legitimate requests, and our response was to recommend they use the FM100 series. "But I don't need an audio mixer, I don't need all that fancy stuff built-in, I just need a small transmitter I can afford"! Well here you go, designed from the ground up... the FM30 series!



Our RF engineers took it as a challenge and designed not one, but TWO transmitters! The FM30B is designed using through-hole technology and components and is available only as a do-it-yourself kit, with a 25mW output very similar to our FM25 series. Then they re-engineered their brand-new design using surface mount technology (SMT) for a very special factory assembled and tested FM35BWT version, with 1W output for our export market! Both are designed around an RF tight vinyl clad metal enclosure for noise and interference free operation. All settings can be changed without taking the cover off! Enter the setup mode from the front panel and step through the menu to make all of your adjustments. A two line LCD display shows you all the settings! In addition to the LCD display, a front panel LED indicates PLL lock so you know you are transmitting. Besides frequency selection, front panel control and display gives you 256 steps of audio volume (left and right combined) as well as RF output power. A separate balance setting compensates for left/right differences in audio level. In addition to settings, the LCD display shows you "Quality of Signal" to help you set your levels for optimum sound quality. And of course, all settings are stored in non-volatile memory for future use!

The design includes EMI filters on line level audio and power inputs and a state of the art microstrip PCB inductor to reduce microphonics for the ultimate in alignment free operation. RF output is brought out to a professional, well shielded rear panel BNC connector for a perfect antenna match. Standard RCA connectors are used for left and right line level audio inputs. Both the FM30B and FM35BWT operate on 13.8 to 16VDC and include a 15VDC plug in power supply. The stylish black metal case measures 5.55"W x 6.45"D x 1.5"H. If you're looking for a super performer but don't need the extra features of our FM100 series transmitters, the new FM30B is for you! (Note: The FM30B is a do-it-yourself learning kit that you assemble. The end user is responsible for complying with all FCC rules & regulations within the US, or any regulations of their respective governing body. FM35BWT is for export use and can only be shipped to locations outside the continental US or valid APO/FPO addresses or valid customs brokers for documented end delivery outside the continental US).

- FM30B** Digital Synthesized FM Stereo Transmitter Kit, 0-25mW RF Output **\$199.95**
- FM35BWT** Digital Synthesized FM Stereo Transmitter, 0-1W RF Output, Assembled & Tested, Export Only **\$299.95**



SPECIFICATIONS	
Frequency Range:	87.9-108.1 MHz
Power Output:	0-25mW, BNC (FM30B) 0-1.0W, BNC (FM35BWT)
Audio Inputs:	Line level left and right RCA connectors
Controls:	Power on/off
Digital Controls:	Frequency, 256 step audio level, 256 step RF output level, 256 step audio balance, mono/stereo
Setup Digital Display:	Setup frequency, setup audio levels, setup audio balance, setup RF output level, setup mono/stereo, save settings
Normal Digital Display:	Frequency, RF power output, quality of signal
VCO Lock Display:	Front panel LED
Power Requirement:	13.8 to 16VDC, 500mA max
Dimensions:	5.55"W x 6.45"D x 1.5" H



Super-Pro Synthesized FM Stereo Radio Station

The Complete Radio Station...
The Pros Have Chosen For Years!

- ✓ Built-in mixer - 2 line inputs and one microphone input, line level monitor output!
- ✓ Frequency range 88.0 to 108.0, 100 kHz steps
- ✓ Precision active low-pass "brick wall" audio filter!
- ✓ Clean, filtered RF output suitable for RF amplification
- ✓ Dual LED bargraph audio level meters!
- ✓ Automatic microphone ducking!

The true professional workhorse of our FM Stereo transmitter line, the FM100B has become the transmitter of choice for both amateurs and professionals around the world. From the serious hobbyist to churches, drive-in theaters, colleges and schools, it continues to be the leader. Not just a transmitter, the FM100B is a fully functional radio station and provides everything but the audio input and antenna system.

This professional synthesized transmitter is adjustable directly from the front panel with a large LED digital readout of the operating frequency. Just enter the setup mode and set your frequency. Once selected and locked you are assured of a rock stable carrier with zero drift. The power output is continuously adjustable throughout the power range of the model selected. Audio quality is equally impressive. A precision active low-pass brick wall audio filter and peak level limiters give your signal maximum "punch" while preventing overmodulation. Two sets of stereo line level inputs are provided with front panel level control for both. Dual front panel LED bargraph meters provide left and right channel audio level metering. In addition to the line level inputs, there is a separate microphone input with a built-in mic mixer to control the level. Not enough? How about unattended microphone ducking! When enabled, the presence of mic audio automatically reduces and overrides the line level input! Just like the professional units at a fraction of the cost.

The FM100B series includes an attractive metal case, whip antenna and built in 110/220VAC power supply. A BNC connector is also provided for an external antenna. Check out our Tru-Match FM antenna kit, for the perfect mate to the FM100B transmitter. We also offer a high power kit as well as an assembled version that provides a variable RF output power up to 1 watt. The 1 watt unit must utilize an external antenna properly matched to the operating frequency to maintain a proper VSWR to protect the transmitter. (Note: The FM100B and FM100BEX are do-it-yourself learning kits that you assemble. The end user is responsible for complying with all FCC rules & regulations within the US or any regulations of their respective governing body. The FM100BWT is for export use and can only be shipped to locations outside the continental US, valid APO/FPO addresses or valid customs brokers for documented end delivery outside the continental US).

- FM100B** Super-Pro FM Stereo Radio Station Kit, 5uW to 25 mW Output **\$269.95**
- FM100BEX** Super-Pro High Power Kit, 5uW to 1Watt Output, Export only **\$349.95**
- FM100BWT** Factory Assembled & Tested FM100BEX, 5uW to 1 Watt Output, Export Only **\$429.95**



TOP
SELLER!

KIT

Includes Pre-Installed
SMT Components!

Synthesized FM Stereo Transmitter

- ✓ Synthesized 88 to 108 MHz for no frequency drift!
- ✓ Simple DIP switch frequency setting!
- ✓ Simple connection to your MP3 player, stereo, or computer!
- ✓ Built-in telescoping whip or external antenna operation

Priced like an inexpensive hobby transmitter but performs like a commercial unit! This unit is truly a cut above the rest, which probably explains why it is the most popular hobby transmitter around the world! The FM25B features a PIC microprocessor for easy frequency programming without the need for lookup tables or complicated formulas! The transmit frequency is easily set using simple board mounted DIP switches. Frequency drift is a thing of the past with PLL control making your synthesized signal rock solid all the time! This is critical for radios with digital tuners. No drift, no noise, right on frequency without any tuning or tweaking! SMT components are preassembled!

Besides the rock stable transmitter, the FM25B features a superb stereo generator providing you with amazingly good stereo separation to keep even the pickiest audiophile happy! Stereo line level audio input with loop out is perfect for connection to your computer using similar stereo 3.5mm mini audio jacks. We also provide a 3.5mm stereo to dual RCA stereo patch cable for connection to your CD player, tape deck, or mic mixer as well as a stereo 3.5mm patch cable for connection to your MP3 player, computer, or other music device. Use the built-in whip antenna or use an external antenna with the standard "F" external antenna connector on the rear panel. Just plug it in and you're on the air. Kit comes with the matching case set, whip antenna, 110VAC power adapter, and audio patch cable. Case size 5"W x 1 1/2"H x 5 1/4"D. (Note: The FM25B is a do-it-yourself learning kit that you assemble. Please remember that the end user is responsible for complying with all FCC rules & regulations within the US, or any regulations of their respective governing body in regards to the application and use of the FM25B).

FM25B Professional Synthesized FM Stereo Transmitter Kit, adjustable 5 uW to 25 mW Output

\$139.95

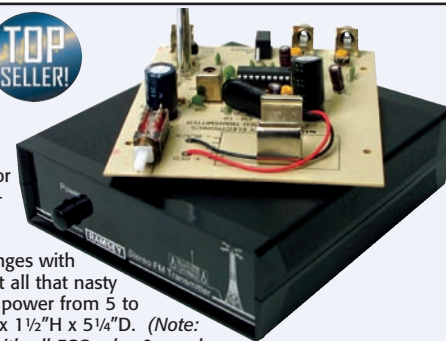
Tunable FM Stereo Transmitter

KIT

- ✓ Tunable anywhere in standard FM band... 88 to 108 MHz!
- ✓ Operates on 5 to 15 VDC
- ✓ Settable pre-emphasis 50 or 75 µSec for use anywhere in the world!
- ✓ Easy to build, low cost transmitter includes matching case set!

Learn The
Basics Of FM
Transmitters!

TOP
SELLER!

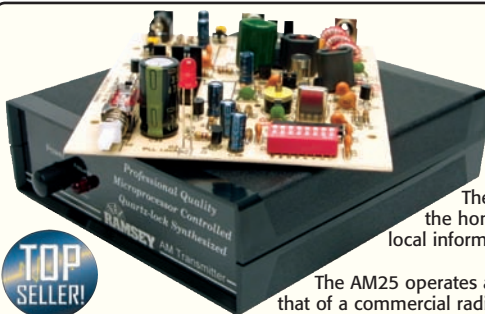


Here is a great entry-level kit that will teach the basics of FM Broadcast transmission while finding many uses around the home or dorm room. The FM10C has plenty of power to cover your home, backyard, or city block. Our manual goes into great detail outlining all the aspects of antennas, transmitting range and FCC rules and regulations.

You'll be amazed at the exceptional audio quality of the FM10C. Tunes through the entire 88-108MHz band in three separate ranges with a tuned LC circuit. Re-broadcast your favorite music commercial-free with the dynamic range the musician intended, and without all that nasty compression the big boys use to make their station sound louder than the competition. Runs on a standard 9V battery, external power from 5 to 15 VDC, or an optional 120 VAC adapter. Includes the matching case & knob set for a professional finished look. Case size 5"W x 1 1/2"H x 5 1/4"D. (Note: The FM10C is a do-it-yourself learning kit that you assemble. Please remember that the end user is responsible for complying with all FCC rules & regulations within the US, or any regulations of their respective governing body in regards to the application and use of the FM10C).

FM10C FM Stereo Transmitter Kit With Case
AC125 110VAC Power Adapter

\$44.95
\$9.95



TOP
SELLER!

KIT

Be As
Stable
As A Rock!

Professional Synthesized AM Transmitter

- ✓ Fully synthesized, no frequency drift!
- ✓ Ideal for schools
- ✓ Microprocessor controlled!
- ✓ Strappable for higher power output where regulations permit
- ✓ Includes AC power adapter and case set

The AM25 is not your ordinary hobbyist AM transmitter! The AM broadcast band is quite alive and well, and is still considered the home of talk radio. For years the AM band has been a popular place for community broadcasts, in-home broadcasts, and other local information broadcasts. Now you can have a professional synthesized AM transmitter at the cost of a hobby unit!

The AM25 operates anywhere within the standard AM broadcast band, and is easily set to any clear channel in your area. The design is similar to that of a commercial radio transmitter, so while you build it you'll learn how the "big guys" operate. It is widely used by schools - standard output is 100mW with range up to 1/4 mile and is jumper settable for higher output where regulations allow. There is no tuning or tweaking involved with the AM25. The PLL synthesized frequency is easily set with dip-switches and is rock solid without any drift, just like our FM25B. This is critical for any digital radio or tuner. The transmitter accepts line level input from any audio source including CD players, tape decks, computers, etc. Includes matching case & knob set and 110VAC power supply. Case measures 5"W x 1 1/2"H x 5 1/4"D. (Note: The AM25B is a do-it-yourself learning kit that you assemble. Please remember that the end user is responsible for complying with all FCC rules & regulations within the US, or any regulations of their respective governing body in regards to the application and use of the AM25).

AM25 Professional AM Synthesized AM Transmitter Kit, Case, and AC Power Supply

\$99.95

Tunable AM Radio Transmitter

KIT

- ✓ Tunes entire 550 to 1600 KHz AM band
- ✓ Operates on 9 to 12 VDC, includes case set
- ✓ Standard line level input with RCA phono jack
- ✓ 100 mW output. Range up to 1/4 mile under optimum conditions

#1 Scouting Project
For Years

The AM1 is a great first kit and a fine low power AM broadcaster for the hobbyist on a budget. It's a great way to learn the basics of AM broadcast technology, not to mention basic soldering and component identification (if you're a beginner!) The transmitter can be tuned to broadcast anywhere in the AM band (550 to 1600 kHz).

Setting frequency is simple - tune a nearby AM radio to the desired frequency, then adjust the AM1 coil to match the radio. With 100 mW of output power, range can be up to 1/4 mile. Connect any line level audio source from your CD player, tape deck, or mic mixer to the RCA input on the rear panel of the AM1C and you'll be on the air. It's that simple! The AM1 has been used by Scout camps, churches, schools, and other organizations to provide easy, low cost communications. Includes the matching case and knob set shown. Measures 5"W x 1 1/2"H x 5 1/4"D. (Note: The AM1C is a do-it-yourself learning kit that you assemble. Please remember that the end user is responsible for complying with all FCC rules & regulations within the US, or any regulations of their respective governing body in regards to the application and use of the AM1C).

AM1C AM Radio Transmitter Kit With Case
AC125 110VAC Power Adapter

\$34.95
\$9.95





KIT

Wired & Tested

**Mix Your Phone Line,
Microphone, And
Music Source!**

Ever wish you could broadcast on-the-air telephone calls like the big guys do? We know a lot of you do, because this is the most frequently requested kit idea in Ramsey history! By popular demand, we present the PPM3 Phone Patch Mixer!

This is a perfect match to any of our AM or FM broadcasters! It's easy to plug a music source into any of them but when you want to add a microphone (since you ARE the Disc Jockey of your station!) or you want to put incoming phone calls on-the-air it becomes difficult! Not anymore with the PPM3. All three audio inputs can be easily mixed together and put onto the Line output for feeding into any of our transmitter kits!

Simply plug your microphone, phone line, phone handset, and stereo line level program source into the PPM3. Connect the output to your AM or FM transmitter's line level input and you're all set! Remember that you'll need to speak into your phone's handset or use a speakerphone for the caller to hear you... this kit is not an expensive hybrid! Separate independent automatic noise gating and automatic variable gain and compression circuits are used for both the telephone line audio and microphone inputs to assure a great sounding line output! The stereo line level mixer features mono injection of phone line and microphone audio for equal balance. Powered by 9-15VDC. Now if people call complaining about YOU, put THEM on-the-air! (*But the way things are going, you'd better have a delay installed!*)

Phone Patch Microphone Mixer

- ✓ Send telephone call audio over-the-air!
- ✓ Stereo line/microphone/phone line mixer!
- ✓ Automatic gain, automatic noise gating, variable compression!

SPECIFICATIONS

Inputs:	Telephone line, RJ11 Microphone, 1/4" phone
Outputs:	Stereo line level, (2) RCA phono Line level out, (2) RCA phono
Controls:	Telephone line, RJ11 Phone line volume Microphone volume Line volume Phone line mute Microphone mute Power on/off
Indicators:	Power on LED Microphone on LED Line output peak LED
Power requirement:	9-15VDC 2.1mm adapter plug
Case/knobs:	Included, 9.55"W x 3.65"H x 12.54"D

PPM3C Phone Line Interface/Mixer Kit, With Case
PPM3WT Factory Assembled & Tested PPM3C With Case and Power Supply
AC125 110VAC Power Adapter

\$69.95

\$99.95

\$9.95

The Bullshooter-II Digital Voice Storage

- ✓ Multiple message storage and selection
- ✓ Full function controls with 7 segment display!
- ✓ Variable output levels to match your equipment!
- ✓ Great for telephone hold announcements, broadcast announcements, and much more!
- ✓ Attractive matching case set included

KIT

Wired & Tested

**Feature Packed
Digital Storage!**

**TOP
SELLER!**



Our BS1 Bullshooter digital voice storage recorder has been very popular to replace tape for basic voice announcements. As the applications have increased, so has the need for additional features. Consider it done...with the BS2 Bullshooter II!

The BS2 provides up to 8 minutes of digital voice storage that can be broken down in a maximum of 8 separate stored messages. The message number is displayed on the 7 segment LED front panel display! Recording/playing/stopping is similar to a standard recorder, and you can start/stop/pause your message during both record and playback! Now you can have separate and distinctive messages to fit various applications... or even different sponsors!

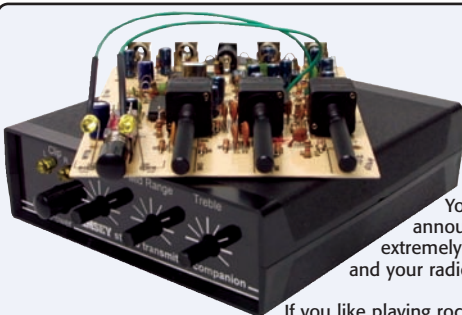
The BS2 has a built-in, highly sensitive electret condenser microphone for recording your voice messages. You can also plug in an external microphone and even an external line level input for professional studio sounding recording. External inputs also feature variable level controls to optimize your recording! Playback-wise, the BS2 features adjustable line level outputs (two mono outputs for stereo inputs) to properly feed any application! This is perfect for telephone system announcements on hold (MOH source), radio broadcasters, transmitters, and audio/visual displays. You can also directly drive a speaker with the built-in amplified speaker output and monitor the levels with the built-in headphone jack. Whatever your application is, the new BS2 has you covered! Runs on 12-15VDC.

BS2C Bullshooter-II, Multi-Message Digital Voice Recorder Kit With Case Set
BS2WT Factory Assembled & Tested BS2 with Case Set and Power Supply
AC125 110VAC Power Adapter

\$69.95

\$99.95

\$9.95



KIT

Wired & Tested

**Sound Just Like
The Pros!**

Your station's image and degree of professionalism are defined by its sound quality. While we can't make your jokes or witty announcing skills any better, we can at least, make the technical quality the best it can be! Just like the expensive (did we mention extremely expensive) broadcast voice and audio processors the STC1C connects easily between your CD player, mic mixer, or tape deck and your radio transmitter.

If you like playing rock music, crank up the Bass and Brilliance controls for some "sock-em" sound. Likewise, classical and vocal tunes come alive with a sweetening of the Presence control. Monologues, commentaries and talk radio are benefited by Bass and Presence. Set the levels so that the Peak LED flickers a bit and you're assured of perfect modulation without splatter or distortion! Low cost CD players that have poor filtering on the output are really cleaned up by the switched-capacitor low pass filtering in the STC1C. Higher order harmonics and clock feed-through that cause annoying heterodynes and whooshing noises disappear. Operates on 9 to 15 volts DC. Includes the matching case & knob set for a finished look! Sound like the pro's with the STC1C! Attractive case measures 5"W x 1 1/2"H x 5 1/4"D.

STC1C Stereo Transmitter Companion Kit With Case
STC1WT Factory Assembled and Tested STC1C With Case And Power Supply
AC125 110VAC Power Adapter

\$64.95

\$119.95

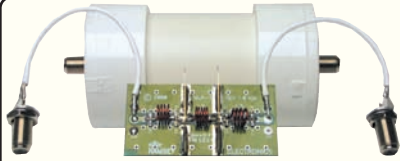
\$9.95

Stereo Transmitter Companion

- ✓ Make your radio station sound like the pros!
- ✓ Limiter/processor for that high density modulation "punch"
- ✓ 3 band audio processor - separate controls for Bass, Presence, and Brilliance

WHAT'S MORE IMPORTANT THAN YOUR ANTENNA? Antenna height and antenna match are the two easiest things you can do to increase your reception range. The old adage, "If you want more signal, put your money in an antenna rather than power" is certainly true. Check out our cost-effective antennas on the following page, and give your transmitter the best possible range. After all, that's the bottom line!

**"The 3 most important factors in
your broadcast system:
Antenna, Antenna, and Antenna!"**



KIT **Wired & Tested**

**"Clean Up" Your
FM Broadcasts!**

External FM Broadcast Low Pass Filter

- ✓ Clean up the output of a low quality FM exciter
- ✓ Designed around our FCC Certified LPFM transmitters
- ✓ Easy to put in line with your transmitter
- ✓ Includes outdoor PVC housing!

The FM Low Pass Filter kit came about while designing the PX1 and the PX50 Professional FM Transmitter. FCC Ruling 99-25 created a class of radio stations designed to serve local communities by authorizing new classes of non-commercial, low power FM radio services (LPFM). In order to meet the stringent guidelines of the FCC the PX1 and PX50 underwent months of design sessions and many hours of painstaking tests.

One of the secrets to its clean output is the FMLP1. If you own one of those spectrally dirty "import" exciters you'll definitely want to add the FMLP1 to clean up the output and properly match your power amplifier. Maximum input power is 50 watts. The kit utilizes surface mount chip caps, so you'll need ultra fine solder and a magnifying lamp! Includes outdoor PVC housing.

FMLP1 **FM Low Pass Filter Kit** **\$29.95**
FMLP1WT **Factory Assembled FMLP1 Low Pass Filter** **\$49.95**

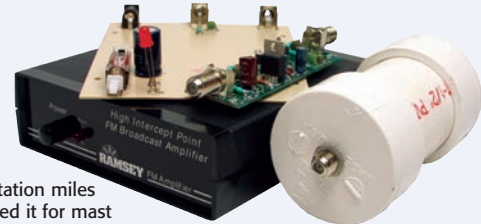
High Intercept Point FM Broadcast Amplifier

- ✓ Virtually overload proof
- ✓ Mast mount for best performance and signal to noise ratio
- ✓ Put your power at the antenna not in the feedline
- ✓ Very well filtered with 5 sections of low pass filtering
- ✓ Includes outdoor PVC housing!



KIT

**Amplify BEFORE
The Line Loss!**



Discover the 1st rule of amplifiers... do it BEFORE the noise! We developed this amplifier to receive a low power college FM station miles away while we had a nearby 50kw AM station. Standard preamps were simply overloaded. We took our LPA1C and redesigned it for mast mounting, sending power up the coax. Wow, did it work!

As an experiment, we tried using it to boost one of our FM transmitters for a customer overseas. We couldn't believe the increase in transmission range, and the lowpass filtering made us feel pretty good about not futzing up anyone else's reception! Naturally, this is a no-no in the USA, but great for the export markets that allow such equipment. Includes the outdoor PVC enclosure and the matching black case & knob set. (Note: The FMBA1C is a do-it-yourself learning kit that you assemble. Please remember that the end user is responsible for complying with all FCC rules & regulations within the US, or any regulations of their respective governing body in regards to the application and use of the FMBA1C).

FMBA1C **High Intercept Point FM Amplifier Kit With Case** **\$74.95**
AC125 **110VAC Power Adapter** **\$9.95**



KIT

**Our Famous Broadband
RF Amplifier!**



RF Broadband Power Amplifier

- ✓ Up to one watt RF power output!
- ✓ Broadband range 300KHz to 1000 MHz!
- ✓ Runs on 12-15 VDC

The LPA1 is the ticket for boosting power up to 1 watt over a frequency range of 300 KHz to over 1000 MHz! It is perfect for use as a broadband amplifier for test equipment to amplify low level signal input. It has been one of the most popular lab amplifiers for years! In addition, many users in foreign countries outside the US use the LPA1 to boost their low power FM stereo transmitters to a watt of power capable of providing radio service through an entire town. This application is limited to international areas not under the jurisdiction of the FCC or other similar agencies limiting the power output of your transmitter. Power required is 12 to 15 volts DC at 250mA via 2.1mm male power jack. Gain of 38dB at 10 MHz, 10 dB at 1000 MHz. Includes the custom matching case & knob set for a neat, professionally finished look. Case size 5"W x 1 1/2"H x 5 1/4"D. (Note: The LPA1C is a do-it-yourself learning kit that you assemble. Please remember that the end user is responsible for complying with all FCC rules & regulations within the US, or any regulations of their respective governing body in regards to the application and use of the LPA1C).

LPA1C **RF Linear Power Amplifier Kit With Case** **\$54.95**
AC125 **110VAC Power Adapter** **\$9.95**

Tru-Match FM Broadcast Antenna

- ✓ Fully weatherproof - rugged PVC construction
- ✓ Matches 50 or 75 ohm systems
- ✓ Broadband for perfect match over the entire 88 to 108 MHz FM band

**Rugged PVC Construction...
Keeps The Weather Out!**

KIT



Looking for a perfect low cost FM antenna? Our extremely popular TM100 Tru-Mach antenna will fit the bill! Matching your antenna to your transmitter is the single most important link in your transmitter setup. Without a proper match, power is reflected away from the antenna and back into the transmitter! This can cause the final amplifier stage to be damaged, not to mention spurious signals and (no better way to say it!) lousy range.

The unique design features PVC tubes and fittings to make it waterproof and impervious to rain and snow, which make the TM100 one of the most most reliable antennas available for the private broadcaster! Unlike other FM transmitter antennas that need to be tuned to a specific frequency, the TM100 is broadband over the entire 88-108MHz band yet still maintains a perfect match! The antenna terminates with a standard "F" connector for easy connection to standard coax and to your equipment. Maximum power rating of the TM100 is 25 watts. BTW, also makes a GREAT and easy-to-connect omnidirectional receiver antenna!

TM100 **FM Broadcast Low Power Antenna Kit (25W Max)** **\$69.95**



**Precision Tune To Your Exact
Frequency For A Perfect VSWR!**

5/8 Wave Colinear Vertical FM Antenna

- ✓ 5/8 wave for excellent gain and maximum range
- ✓ Field adjustable for a perfect match
- ✓ 3.4 dB gain effectively doubles your power!

This is probably the most popular antenna we sell. Why? Let's start with the proven omnidirectional ground plane design, clean rugged construction, and how about easy mounting? The 5/8 wave design keeps your signal low to the horizon and not uselessly radiating up into space - great if your listeners are on the space shuttle, but the pits for the folks out at the edge of town! Imagine a donut shaped pattern of signal radiating from your antenna. For the most range out to the horizon, we need to "squish" that pattern flatter to squeeze more signal out - and that's exactly what this antenna does!

The antenna is easy to assemble and is adjustable to your specific frequency during assembly. Makes a super match and a perfect VSWR to your transmitter! The base of the antenna mounts on any standard antenna mast or pipe (not included). A professional SO-239 connector is provided at the base of the antenna to match a standard PL-259 connector. A perfect match, easy assembly, and a breeze to mount and connect, it really can't get much better than that! Try one and see if you don't agree that it's one heck of an antenna for the money! Height: 7' 7" 200 watt power rating.

FMA200 **5/8 Wave Colinear Antenna (200W Max)** **\$129.95**



Holiday Favorites!

Electronics Is Fun, Especially At The Holidays

LED Halloween Pumpkin

- ✓ 25 bright LEDs!
- ✓ Random flash like a candle!
- ✓ Super bright illumination!

Spook Them With LEDs!

You won't be scraping the seeds and guts out of this pumpkin! A six-transistor circuit provides a neat random flash pattern that looks just like a flickering candle, and a super bright LED illuminates the entire pumpkin with a spooky glow!



Runs on a standard 9V battery (not included). Includes an edge mounted on/off slide switch. From Velleman.

MK145 LED Halloween Pumpkin Kit **KIT** \$9.95

Portable EL Electroluminescence

- ✓ 3.3 feet long!
- ✓ Low power consumption!
- ✓ Highly visible brilliant colors

Wired & Tested

Steady Or Flash!



Electroluminescent illuminated flexible wire sets can be used for a lot of things but when they're battery powered they're perfect for Halloween and Trick or Treat safety concerns!



Each thin, flexible EL wire set is 3.3' long and runs on two standard AA batteries (not included). Mode settings include steady glow and slow or fast flash! Make it part of a brilliantly lit, custom designed costume or simply add it for illuminated safety while Trick or Treating in the dark. From Velleman. (Think Tron!)

NWRR15 EL Illumination Wire Set, Red \$19.95
NWRG15 EL Illumination Wire Set, Green \$19.95
NWRB15 EL Illumination Wire Set, Blue \$19.95

LED Santa Display

- ✓ 126 LED animated display!
- ✓ Multi-color!

Here Comes Santa!

What a way to welcome the holiday season and learn about electronics at the same time!



This animated Santa and reindeer display has 126 dazzling colored LEDs to make a really nice holiday sign. Runs on 9-12VDC so you can use a standard 9V battery or an external power supply so it can be left on continuously. Includes an on/off switch. Measures 3.2" x 5.7". From Velleman.

MK116 Animated Santa Display Kit \$17.95
AC125 110VAC Power Supply **KIT** \$9.95

3D LED Christmas Tree

- ✓ Free standing 3D design!
- ✓ 16 flashing LEDs!
- ✓ Customize with extra LEDs!
- ✓ Can be hung on the tree!

Dazzle Your Friends!

This Christmas Tree is not your average PC board display! It has 4 "branch" sections giving it a 3D depth look!

Its unique design holds a standard 9V battery at its base as its "trunk" and will stand up on a table or desk with or without the battery. 16 flashing red LEDs are placed on the branches. Extra green and yellow LEDs are included to allow you to customize your tree any way you choose!



Runs on 9-12VDC or the 9V battery (not included) in its base. Measures 3.5" x 4.0". From Velleman.

MK130 3D LED Christmas Tree Kit \$7.95
AC125 110VAC Power Supply **KIT** \$9.95

Animated Ghost

- ✓ Automatically greets your visitors!
- ✓ Responds to sudden noises
- ✓ Built-in microphone
- ✓ Adjustable sensitivity

Moves, Shakes, Blinks!



Who says ghosts aren't real? Once your friends see this one they'll think differently! The unique circuit board design includes two ominous blinking eyes that change with various conditions, including sudden changes in ambient noise.

A highly sensitive built-in microphone picks up anything from noises to talking and makes the ghost dance with its built-in motor, make eerie sounds with the built-in speaker, and randomly blink.

A white cloth and a hanger are included as shown to make it look even spookier! Runs on 2 AAA batteries. From Velleman.

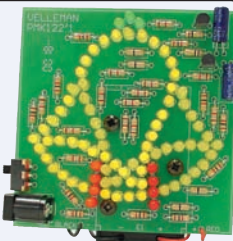
MK166 Animated Ghost Kit **KIT** \$21.95

Animated Holiday Bell

- ✓ 83 LED animated motion!
- ✓ Multiple colors!

Swings Back And Forth!

83 LEDs provide a neat looking holiday bell that swings back and forth! Multiple green, red, and yellow LEDs provide you with a festive holiday spirit the moment you see this bell!



A PC board mounted on/off switch and standard power connector are included. Runs on 9-12VDC or a standard 9V battery (not included). Measures 3.2" x 3.5". From Velleman.

MK122 LED Animated Bell Kit \$16.95
AC125 110VAC Power Supply **KIT** \$9.95

LED Deluxe Christmas Tree

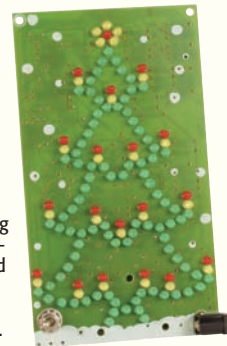
- ✓ 134 random blinking LEDs!
- ✓ Large multi color display!
- ✓ Battery or external power!
- ✓ Built-in on/off switch

Light Up Your Tree In Style!

This beautiful electronic Christmas Tree consists of a whopping 134 bright LEDs! Of the 134 LEDs, 18 randomly blinking "candles" give the tree an exciting animated look! Red, green, and yellow LEDs are used to provide a brilliant display.

Runs on an external 9-12VDC supply or a standard 9V battery. Use an external power supply and leave it on continuously! Includes a PC board mounted on/off switch. PC board measures 5.6" x 3.2". From Velleman.

MK117 LED Deluxe Christmas Tree Kit \$18.95
AC125 110VAC Power Supply **KIT** \$9.95



LED Christmas Tree

- ✓ 16 bright flashing red LEDs!
- ✓ Easy 9V battery operation!
- ✓ Self standing or "hangable"

Display The Season!

While a little more basic compared to the others above, this LED Christmas Tree is still a very neat looking self standing attention getter! The green PC board has 16 bright red LEDs mounted in the traditional tree pattern.

A nice 4 transistor circuit is used to make the LEDs blink just like your big tree does! An attached battery pack mounts on the bottom allowing the tree to be self standing or to be hung on your real tree. Runs on a standard 9V battery (not included). Measures 2.4" x 4" x 1". From Velleman.

MK100 LED Christmas Tree Kit **KIT** \$6.95



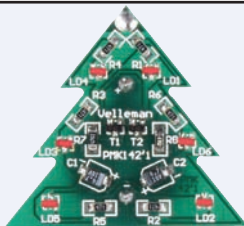


SMT LED Christmas Tree

- ✓ Alternating flashing 6 SMT LEDs!
- ✓ Great attention grabber!
- ✓ Learn SMT over the Holidays!

Wear A Flashing Tree!

Build this subminiature Christmas Tree and watch it alternately flash red surface mount LEDs! Small enough to wear as a badge or pendant, or to hang on the tree.



Six high intensity SMT LEDs brilliantly light up this tree. People will be amazed seeing the actual components on the tree while it flashes. Plus, you can tell them you built it! SMT components are used throughout the kit to give you a great start in surface mount. We know they are smaller than small, so as always we include extra parts in case you lose or damage any.

Runs on one standard CR2025 or CR2032 Li-Ion button cell. Measures 1.75" x .3". From Velleman.

MK142 SMT LED Christmas Tree Kit **KIT** **\$10.95**

Flickering Electronic Candle

- ✓ Yellow high intensity LED!
- ✓ 3 different "flame modes!"
- ✓ Power saver timer!

Can't Blow This One Out!

What a great and safe way to display the traditional flickering candle at the holidays!



In reality, this "candle" is a high intensity Yellow LED, and that means its safe for the kids, pets, and your fingers! The electronic circuit simulates three different modes: realistic flickering flame, steady flame, and slow fade in/fade out. All this without any heat, smoke, or mess! Plus the circuit features an automatic 5 hour power saver timer!

The unique round PC board is designed to drop into a standard 38mm plastic or glass cup. Use a frosted cup for the best display results! Runs on a standard CR2032 button cell (not included). Measures 1.5" x .98". From Velleman.

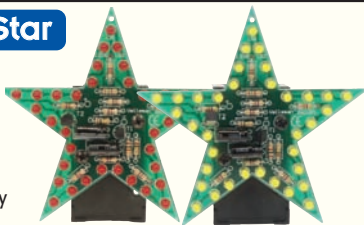
MK167 Flickering Electronic Candle Kit **KIT** **\$8.95**

LED Flashing Holiday Star

- ✓ 35 brilliant red or yellow LEDs!
- ✓ Flashing or steady display!
- ✓ Freestanding or hanging!

Brilliant LED Star!

A great seasonal gadget or gift for the holiday season!



A classic star shaped PC board contains 35 brilliant red or yellow LEDs. The circuit allows you to select either a flashing or steady display of the LEDs.

The built-in battery holder also acts as a freestanding base for table or desktop use, or you can hang it from the tree or ceiling. Runs on a standard 9V battery (not included). Measures 3.54" x 3.54". Makes a great addition to any holiday decoration. From Velleman.

MK169R Flashing Red LED Star Kit **KIT** **\$12.95**
MK169Y Flashing Yellow LED Star Kit **KIT** **\$12.95**

LED Animated Effects Star

- ✓ 60 brilliant animated LEDs!
- ✓ Microprocessor controlled!
- ✓ 24 different effects with sequencing!
- ✓ Create your own multi-colored display!

Dazzling Animated Holiday Display!

This large star features a whopping 60 LEDs and a microprocessor to provide 24 separate animated effects!



Besides the red LEDs, additional yellow LEDs are also included to allow you to custom build your own multi-colored display! Effects include 3 static displays, 15 blinking displays, and 6 animations complete with fading! In addition, "all effects" sequencing is available.

Runs on your choice of a standard 9V battery or an external 9-12VDC source. Measures 4.13" x 4.33" x 1.38". From Velleman.

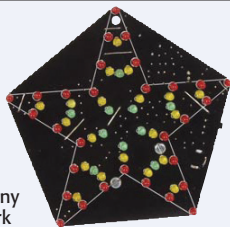
MK170 LED Animated Effects Star Kit **KIT** **\$19.95**
AC125 110VAC Power Supply **\$9.95**

LED Sound Actuated Star

- ✓ Acts like a LED Vu Meter!
- ✓ Built-in microphone!
- ✓ Adjustable sensitivity!

Is It A Star Or A Meter?

This is one of the neatest holiday displays that will light up any party! 60 multi-colored LEDs form an attractive star on a dark background PC board.



But it's not just a display... it responds to room audio! That's right, the built-in microphone picks up music and room audio and the LEDs respond just like a professional LED Vu meter!

Adjustable sensitivity allows you to balance the display to any audio level. Great for parties and events. Runs on 9-12VDC. Measures 4.2" x 4.4" x 1.4". From Velleman.

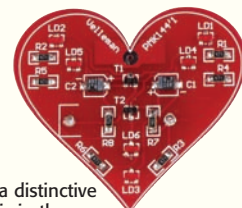
MK172 LED Sound Actuated Star Kit **KIT** **\$19.95**
AC125 110VAC Power Supply **\$9.95**

SMT LED Flashing Heart

- ✓ 6 Alternating flashing SMT LEDs!
- ✓ Learn about SMT devices and design
- ✓ Gets her attention!

The SMT Valentine!

Just like the MK142 Christmas Tree, this little kit gives you a distinctive display using 6 Surface Mount (SMT) LEDs. The PC board is in the shape of a heart and is also red.



The small size makes it perfect to be used as a badge or hanging pendant around your neck. Runs on a small CR2025 or CR2032 button cell (not included). Makes a great SMT learning kit and extra SMT components are included just in case you lose or damage any! Measures 1.9" x 1.7" x .3". From Velleman.

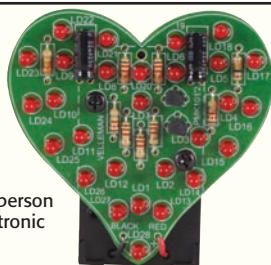
MK144 SMT LED Flashing Heart Kit **KIT** **\$11.95**

Flashing LED Sweetheart

- ✓ 28 brilliant red LEDs!
- ✓ Unique dual heart design!
- ✓ Freestanding mount!

The Perfect Valentine!

What a way to display your feelings to that very special person in your life! Dazzle her with this unique dual heart electronic display.



28 brilliant red LEDs are formed into two separate heart designs on the heart shaped PC board creating a great flashing display.

Built-in battery holder base makes the heart freestanding and perfect for a desk or table. Runs on a standard 9V battery (not included). Measures 2.4" x 2.4" x 1.2". From Velleman.

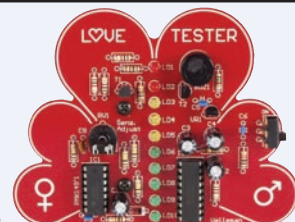
MK101 Flashing LED Sweetheart Kit **KIT** **\$6.95**

Electronic "Love Tester"

- ✓ 10 LED love scale display!
- ✓ Audible love level sound!
- ✓ Great party fun!

Check Your Love Life!

This uniquely shaped "Love Tester" is the ultimate gag for any couple! Designed to check your love life, each partner holds one end of the tester PCB at the appropriate male and female touch pads. Then they romantically join hands and watch the results on the love meter!



10 green, yellow, and red LEDs act like a scale and just like the carnival, when it hits the top they flash, indicating you're a red hot couple! There is also an audible alarm that changes with the "love level."

Next time you're at a party that just isn't going anywhere bring out this little tester and the party will come to life! It's a riot! Wide sensitivity range is compatible with all couples. Includes a built-in power on/off switch. Runs on a standard 9V battery (not included). Measures 4.1" x 3.1" x .98". From Velleman.

MK149 Electronic Love Tester Kit **KIT** **\$16.95**



**Measure Elevation To A
Third Of An Inch
And Air Pressure In
Nine Formats!**

KIT



Wired & Tested

High Resolution Air Pressure-Elevation Sensor

- ✓ Pressure resolution greater than 0.0001kPa!
- ✓ Super elevation resolution better than 1/3"!
- ✓ 128 x 64 pixel graphical display!
- ✓ Shows realtime elevation & pressure changes!
- ✓ USB computer interface for easy data transfer!
- ✓ 13,824 samples of FLASH storage available!
- ✓ Small coat pocket size
- ✓ Special pilots menu
- ✓ Multiple built-in alarms
- ✓ Settable offsets for pressure and elevation
- ✓ Built-in NiMH rechargeable AA batteries
- ✓ Smart charger included
- ✓ Simple graphical menu based operation

What The Customer's Are Saying... "Stunning"

THE ULTIMATE PRODUCT FOR THE SERIOUS AND THE CURIOUS!

We really did it this time! The UP24 is one of our most advanced kits to date, and an absolute MUST for anyone serious about the environment around us! But the applications only begin there. The unique design allows unprecedented super high resolution measurements and display of absolute atmospheric air pressure.

ELEVATION TO A THIRD OF AN INCH!

I have written a lot of catalog pages and a boatload of specification sheets but this one is a challenge because the applications are endless and the performance characteristics are beyond description! The UP24 senses ambient air pressure and critically calculates elevation with unheard of precision!

Using a highly sensitive sensor and 24-bit A/D converter in a special noise-immune design, less than 1/3" of an inch of elevation resolution is achieved! YES, we said 1/3 of an inch! This high accuracy and resolution opens the door to a host of sophisticated environmental air pressure monitoring applications.

AIR PRESSURE IN ANY FORMAT!

Unlike your normal run-of-the-mill barometer, air pressure is sensed in Pa's or kPa's. What are those you may ask? Pascals or KiloPascals. However, don't be afraid, for your convenience, and to fit any application you may have, it is also displayed in millibars, bars, PSI, atmospheres, millimeters of mercury, inches of mercury, and feet of water! Take your pick! The range of the UP24 is 15kPa to 155kPa. That also means:

- ✓ 15000 to 155000 Pascal's
- ✓ 150 to 1550 Millibars
- ✓ 0.15 to 1.55 Bars
- ✓ 2.175566 to 22.48085 Pounds per square inch
- ✓ 0.1480385 to 1.529731 Atmospheres
- ✓ 112.5093 to 1162.596 Millimeters of mercury
- ✓ 4.429498 to 45.77148 Inches of mercury
- ✓ 5.02 to 51.9 feet of water

THE HI-RES REALTIME ATMOSPHERE SENSOR!

Gradual pressure changes, like a barometer, can show you gradual changes in the weather. Instantaneous changes in air pressure can show you a whole lot more! Weather-wise, high resolution pressure changes can be used to anticipate and even estimate related wind gusts and speeds. This together with "on the fly" pressure changes will give you the upper hand in weather monitoring. Part of ARPS (Advanced Regional Prediction System) is to obtain and analyze realtime data to provide a prediction system for weather components. The UP24 is ideal as a source for highly accurate realtime data.

THEN THE ENGINEER SAID "WATCH THIS"!

But what if the air pressure changes that need to be sensed and recorded are ever so slight? You have the perfect ultra reliable sensor and heart of an alarm system for a building. When I first heard this I questioned it. Then the engineering staff said "watch this..." A hundred feet from the main entrance of Ramsey they called the front receptionist and asked her to open the front door to the building. WOW! An immediate change in air pressure registered on the UP24! From an open door, to a broken window, to wind damage, it's all detected and recorded in the UP24! The built-in alarm settings can be set for high or low limits to trip other equipment.

THE ULTIMATE ELEVATION METER!

We've talked about air pressure, now let's talk about elevation! The incredibly precise 24 bit A/D converter in the UP24 looks at the air pressure and converts it to elevation above sea level. Once again, there I was standing in the engineering office watching the LCD graph. The text at the bottom of the screen said 472' 3". I said yea, so what? They said raise it up a few inches and watch. As I raised it the display constantly changed...472', 8"; 473' 1" and so on. I couldn't believe it. The following day I took it to a tower site where I knew the ground elevation and it was dead-on... 1701', 6". Not only did I have the text display of the elevation but a chart graph of the elevation history!

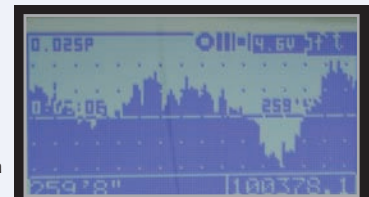
The applications for the super accurate elevation meter are endless. From watching and recording elevations during hiking trips to measuring and recording the wave heights on boats! Let your imagination take over from there!

SPECIAL AIRCRAFT MODE!

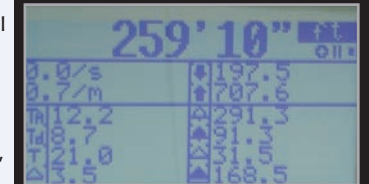
What about aircraft? Needless to say, as a handheld device measuring air pressure, aircraft applications are limited to un-pressurized cabins. But the UP24 provides valuable flight assistance in such cabins and smaller aircraft. In fact, a special "Pilots Mode" is included in the menu to set a min/max altitude window setting to use in conjunction with the built in high and low alarms! The window is easily set up by programming in the desired high and low altitudes. If these limits are exceeded the UP24 will sound an alarm.

LOCAL OFFSETS & ALARMS...NO PROBLEM!

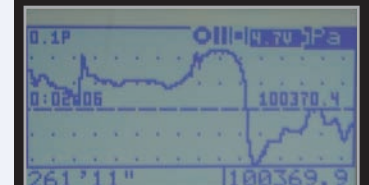
To accommodate site variances, offsets for pressure, elevation, and related hysteresis are also provided as a menu selected operation. Likewise, both high and low alarms can be enabled and set over a wide range of lows and highs for both pressure and elevation!



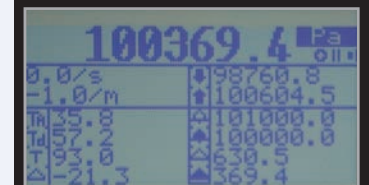
Elevation Graph



Elevation Statistics



Air Pressure Graph



Air Pressure Statistics



Unparalleled Accuracy And Resolution... Beyond Belief!

SMALL, LIGHTWEIGHT, THE SENSOR OF YOUR DREAMS!

While the UP24 is small enough to be kept in your coat pocket it boasts a large 2.78" x 1.53" 128x64 pixel LCD display screen making viewing easy. Display modes include both realtime pressure and elevation graphs as well as pressure and elevation statistics. There are 12 user selectable sample rates from 1/10th of a second all the way up to every 15 minutes.

What if you're in the field and want to save data captured in your UP24? No problem there either! The built-in FLASH storage provides 13,824 samples of storage. That's equivalent to 3 hours and 50 minutes at the 1 second sample rate! Of course it's about 20 minutes at 1/10th of a second sample rate but that's probably faster than anybody, other than Wile E. Coyote, would need! When you get back you can transfer your data to your PC through a standard USB interface. A simple set of commands sent via your USB port can be used to set up many of the parameters of the UP24 directly from your computer using a terminal type interface or your own program. The data is comma delimited so it can easily be loaded into a spreadsheet.

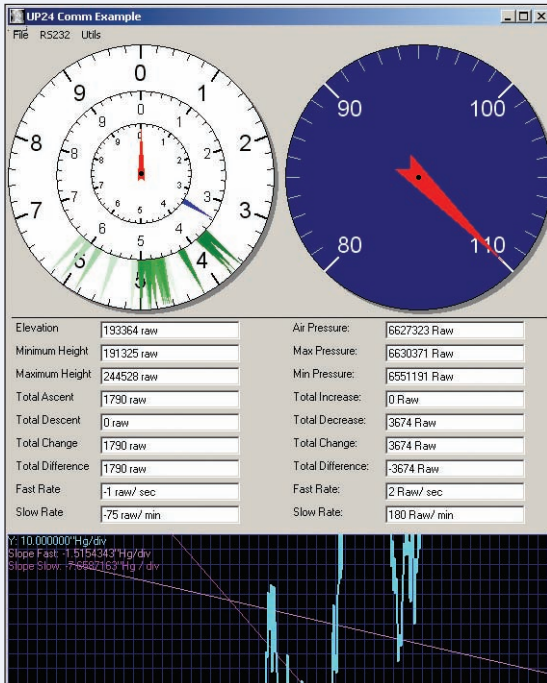
Does all of this sound too good to be true? It comes close! And it all fits in a small handheld case that measures 5.5" x 3.6" x 1.5" and weighs slightly over half a pound with batteries. It runs on three internal NiMH AA rechargeable batteries and includes an external charger that can be operated on the supplied 110VAC adaptor or from a 6 to 15VDC source (like your car battery). Operating time on a full charge is over 4 days of continuous operation.

Want to run 24/7 even during power outages? Just connect the charger and turn on the UP24. It will charge the batteries and then trickle charge as long as necessary. If the power goes off the batteries will take over. Once the power is restored the batteries will be recharged for the next time. Because we use NiMH batteries they are not subject to the memory effect problem that older NiCAD batteries had so the battery life is very long. If you're looking for the finest air pressure and elevation sensor, check out the UP24, truly a marvel in the industry!

SIMPLE VISUAL BASIC APPLICATIONS!

A Visual Basic application available on our web site enables you to have a dial type graphic display of pressure, altitude and statistics in real time on your computer and update the data on-the-fly as text data into a custom spreadsheet.

Want to design your own interface? We even supply the Visual Basic source code for the graphics display application. You are free to use it to customize your own application. Routinely updated interface software is available FREE at our website 24/7! Got an application you'd like to share? We'll be glad to make it available to other UP24 users!



UP24 Visual Basic software application screen display

SPECIFICATIONS

Pressure Range:	15kPa to 155kPa
Pressure Units:	KiloPascals, pascals, millibars, bars, pounds per square inch, atmospheres, millimeters of mercury, inches of mercury, feet of water (-308.4 to 13,504 meters)
Elevation Range:	-1,000 feet to 44,300 feet
Elevation Units:	Feet/inches, meters, kilometers
Display Modes:	Pressure graph, pressure stats, elevation graph, elevation stats
Resolution:	Better than 1/3 of an inch (8.5 mm)
Sample Rates:	12 selectable rates: 1/10 sec, 1/5 sec, 1/2 sec, 1 sec, 10 sec, 15 sec, 30 sec, 1 min, 5 min, 10 min, 15 min
Offsets:	Selectable pressure, elevation, pressure hysteresis, elevation hysteresis
Offset, pressure:	14kPa to 114kPa in 1/10Pa increments
Offset, elevation:	-3,298.4' to 45,639.4' in 0.1' increments
Offset, pressure hysteresis:	0Pa to 10Pa in 0.1Pa increments
Offset, elevation hysteresis:	0' to 32.8' in 0.1' increments
Alarms menu:	Low and High Pressure, Low and High Elevation, low/high on/off
Alarm, high pressure:	100kPa to 114kPa in 0.1Pa increments
Alarm, low pressure:	14kPa to 100kPa in 0.1 increments
Alarm, high elevation:	158.6' to 45,639.4' in 0.1' increments
Alarm, low elevation:	-3,298.4' to 45,639.4' in 0.1' increments
Storage:	13,824 samples or 3 hours 50 minutes at 1 second sample rate
Pilot elevation window:	0.0' to 45,639' in 0.1' increments
User interface:	Single rotary/momentary push knob with graphical drop down menus, power push on/push off
Computer interface:	USB 2.0
Utility menu, calibrate:	-1,000Pa to 1,000PA in 0.1PA increments
Utility menu, resets:	Reset stats, reset chart data, reset to default settings
Display:	LCD, 128W x 64H pixels Viewing Area: 2.78"W x 1.53" H (70.7mm x 38.8mm) Dot Pitch: 0.02" W x 0.02"H (0.52mm x 0.52mm) Dot Size: 0.019" W x 0.019"H, (0.48mm x 0.48 mm)
Power Requirements:	Battery: 3x internal NiMH AA cells; Provided external charger that requires 110VAC or 6 to 15 VDC input
Color:	Black
Dimensions:	5.5"L x 3.6"W x 1.5"H, (139.5mm x 91.4 mm x 38.1mm)
Weight:	Less than 0.6 lbs, 0.27 kg including batteries

Command Description

G EL	Get elevation
G PR	Get pressure
G OP	Get offset pressure
G OE	Set offset elevation
G VB	Get supply voltage
G CH	Get entire chart (in CSV format)
G PS	Get pressure stats (in CSV format)
G ES	Get elevation stats (in CSV format)
G PU	Get Pressure Units and index
G EU	Get Elevation Units and index
G SR	Get Sample Rate and index
G SD	Get Screen dump
S PU #	Set pressure units index
S EU #	Set elevation units index
S RE	Set reset elevation stats
S RP	Set reset pressure stats
S SR #	Set sample rate index
S RM #	Set report mode (send data per sample mode, 0 off, 1 on)

UP24 GET and SET commands

Aviation...Mountain Climbing...Hiking...Wave Heights, Land Elevations...Pressure Alarms... Burglar Alarms...Air Movement Detection...Structure Heights, Weather Changes... And a Whole Lot More!



Programmable Message Board

KIT 

- ✓ Includes backlit LCD display!
- ✓ Serial interface!
- ✓ 8 inputs!
- ✓ Non-volatile EEPROM memory!
- ✓ No programming skills needed!

Add A High Tech Display To Your Own Project!

DISPLAY MODES

1. Display the status of all inputs simultaneously
2. Display all active inputs
3. Display active input with highest priority
4. Display text messages in a "tickertape" display

If you have never experimented or used an LCD message display, this kit is for you! You can use this as a stand-alone display that is remotely programmed or as an integral display for one of your own projects! With a very nice supertwist backlit 16 character LCD display, you can provide alphanumeric displays in four display modes.

There are 8 separate inputs and each input accepts dry contacts, open collectors or logic levels. The non-volatile EEPROM memory can store up to 9 sixteen character messages! A default message can be displayed to signal that no inputs are active. RS232 interface is based on 2400/N/8/1 with no handshaking to make for a simple interface.

Message transfer software is available online to transfer messages from your PC to the message board. Messages can be recalled by a simple pushbutton. This is the perfect kit to get your hands dirty with alphanumeric displays and their control circuits. It's fun, you learn, and you have a really great display when it's built!

Board measures 4.9" x 2.9" x 1.2". If you're looking for a really nice finished display, order the custom case/bezel kit. From Velleman.



K8045 Programmable LCD Message Board Kit
B8045 Custom Enclosure With Matching Bezel

\$54.95
\$29.95



KIT 

Learn How USB Works... Then Put It To Work!



USB Experimenter's Interface Board

- ✓ 5 digital input channels!
- ✓ 8 digital output channels!
- ✓ 2 analog inputs and outputs!
- ✓ Diagnostic software & DLL included!

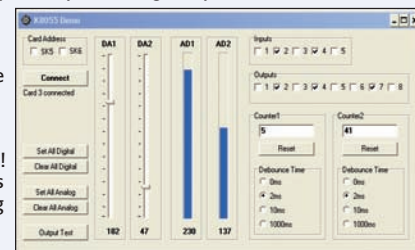
Not so long ago the universal answer for external control from a PC was the serial port. It was easy, it was simple, and you really couldn't mess anything up! Then came parallel port outputs for higher speed connections and transfers. What came next? The "Universal Serial Bus" or USB.

Everything has gone to USB connections due to the speed, reliability, and plug and play simplicity. In fact, go to an office store and try to find a printer with a parallel port these days! They call those Legacy products... and legacy technology!

Well it's time to get hands-on experience developing USB interfaces! This board provides everything needed. All communication routines are contained in a Dynamic Link Library (DLL) that is provided along with Windows based diagnostic software.

You can also write custom Windows applications in Delphi Visual Basic, C++, or any other 32-bit Windows development tool that supports calls to a DLL.

A variety of inputs and outputs are provided that are controlled and monitored with the diagnostic software. Learn USB the fun way, and watch it work! From Velleman. (No dreaded blue screen of death with this one!)



- SPECIFICATIONS**
- 5 Digital Inputs: 0=ground; 1=open, on board test buttons
 - 2 Analog Inputs: Attenuation and amplification, internal test
 - 8 Digital Outputs: Open collector, 50V/100mA, LED indication
 - 2 Analog Outputs: 0-5V at 1K Ω PWM 0-100% open collector
 - Gen Conv. Time: 20ms per command
 - Power Supply: Through USB, 70mA approx.
 - Software: Diagnostic Windows software with DLL
 - PC Requirements: Pentium class or higher, USB1.0 or higher, Win98SE, WinME, Win2K, XP
 - Dimensions: 5.7" x 3" x .8"

K8055 USB Experimenter's Interface Board Kit

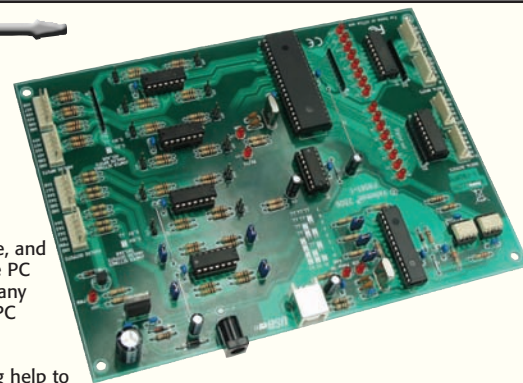
\$49.95

Extended USB Experimenter's Interface Board

KIT 

- ✓ 33 total inputs and outputs!
- ✓ Digital, analog, & PWM
- ✓ Isolated computer connection!
- ✓ Communications routines!
- ✓ 0-10V or 0-5V selection per input/output
- ✓ Includes diagnostic and testing software
- ✓ Advanced features

Go To The Next Level Of USB Experimenting!



- SPECIFICATIONS**
- 8 analog 10 bit inputs: 0-5 or 0-5V at 20kOhm
 - 8 analog 8 bit outputs: 0-5 or 0-10V at 47 ohm
 - 8 digital inputs: Open collector, gnd=0, LED indication
 - 8 digital outputs: Open collector, 50V/100mA, LED indication
 - 1 PWM output: 0-100% open collector, 40V/100mA, LED
 - General response time: 4ms per command
 - USB port: USB1.1 and USB2.0 compatible
 - USB cable: Included A-B
 - USB power: 60mA, up to 8 cards to one PC
 - External power: 12VDC at 300mA (not included)
 - Software: Diagnostic Windows software with DLL
 - PC Requirements: Pentium class or higher, USB1.1 or 2.0, Win98SE, WinME, Win2K, XP, Vista
 - Dimensions: 2.7" x 5.6" x 0.8"

This interface board is the big brother of the K8055 above, and is packed with even more features, making it the ultimate PC interface tool for hobbyists. The ability to control almost any device imaginable and get real-time feedback from your PC means virtually unlimited possibilities!

The high throughput possible with this board will be a big help to anyone working with bandwidth limitations of serial and parallel port interfaces, and since the USB is handled in hardware, communication between your computer and the device generates very little CPU overhead!

Like the K8055, all communication routines are contained in a Dynamic Link Library (DLL) that is provided along with Windows based diagnostic software. You can also write custom Windows applications in Delphi Visual Basic, C++, or any other 32-bit Windows development tool that supports calls to a DLL. This advanced interface has a total of 33 inputs and outputs that include both digital and analog inputs and outputs as well as one PWM output.

Connection between the interface board and your computer is galvanically-optically isolated so damage to the computer is impossible. This provides an even greater level of secure implementation. Get ready to take your USB development to the next level. From Velleman.

K8061 Extended USB Experimenter's Interface Board Kit

\$139.95



PIC Programmer & Experimenter



- ✓ Supports 8, 14, 18, & 28 pin PICs
- ✓ Includes a PIC16F627 Microcontroller!
- ✓ On-board programming switches and LEDs!
- ✓ Software included!

**Don't Just Program Them...
Learn All About Them!**

Unlike the stand-alone programmer K8076 below, this programmer also acts as an advanced experimenters board for PIC microcontrollers. Separate 8, 14, 18, and 28 pin sockets accommodate a wide variety of controllers. This eliminates the need for patching a universal ZIF socket.

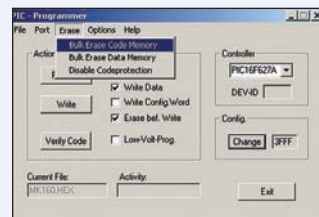
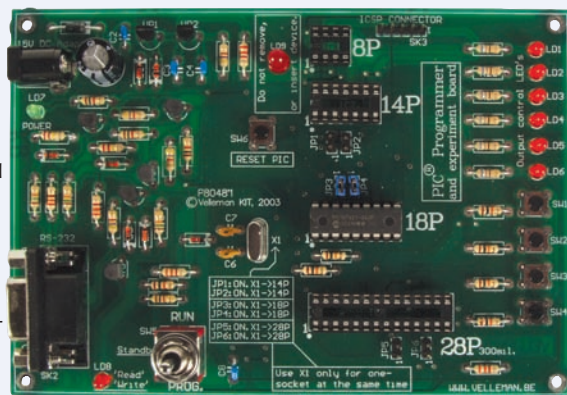
SUPPORTED CONTROLLERS

Supported Controllers: PIC12F629, PIC12F675, PIC16C83, PIC16CR83, PIC16F83, PIC16C84, PIC16CR84, PIC16F84, PIC16F84A, PIC16F870, PIC16F871, PIC16F872, PIC16F873, PIC16F873A, PIC16F874, PIC16F874A, PIC16F876, PIC16F876A, PIC16F877(A)(ICSP only), PIC16F627, PIC16F627A, PIC16F628, PIC16F628A, PIC16F648A, PICF630, PIC16F676, PIC16F818, PIC16F819, etc.

Serial Connection: DB9
Power supply: 12-15VDC, 300mA
Dimensions: 5.75" x 4" x .79"

In addition, programming switches and LED status and feedback indicators help you with your programming, so there's no need to move the PIC to another board to test it. This makes the K8048 a great teaching tool for PIC programming. Also includes a standard PIC 16F627 PIC to experiment with over and over again!

Code can be created in any ASCII word processor (i.e. notepad) or using Microchip's MPLAB development package (available at www.microchip.com). After writing and compiling, your code can be written directly to the microcontroller! The ICSP function allows you to reprogram controllers still in-use/powered by another board by simply connecting the chip to the ICSP bus on the programmer!



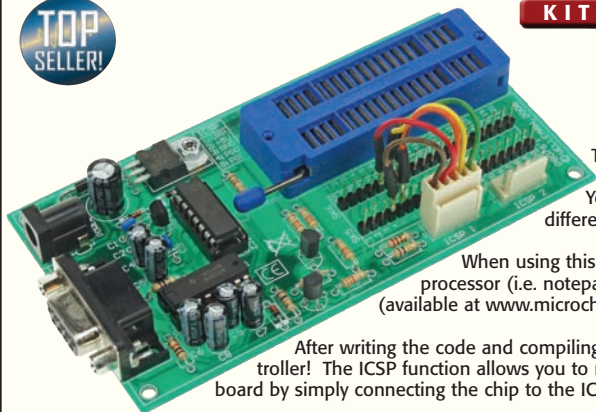
All the software you need to get started is included, and with a basic knowledge of ASM and this kit, the possibilities are endless! Check out the screen shot of the included software, which is compatible with Win95/98/ME/NT/2K/and XP. If you are looking for a quick PIC microcontroller programmer only, without the advanced experimenter features, check out the K8076 below. From Velleman. *Note: this product requires a standard RS232 serial connection, and is NOT compatible with USB to RS232 serial adaptors or converters.*

K8048 PIC Programmer & Experimenters Board Kit
AC125 110VAC Power Supply

\$42.95
\$9.95



**Program Your Own
Flash Microcontrollers!**



This multifunctional programmer for PIC microcontrollers will let you take advantage of their flexibility. You can reprogram them up to 1000 times to perform different functions, upgrade device firmware, or just play!

When using this programmer, code can be created in any ASCII word processor (i.e. notepad) or using Microchip's MPLAB development package (available at www.microchip.com).

After writing the code and compiling, your code can be written directly to the microcontroller! The ICSP function allows you to reprogram controllers still in-use/powered by another board by simply connecting the chip to the ICSP bus on the programmer!

All the software you need to get started is included and with a basic knowledge of ASM and this kit, the possibilities are endless! To get more hands-on training and experience with PIC controllers, check out the K8048 programmer and experimenters board above, it gives you all the programming capabilities plus extra onboard experimentation capabilities. From Velleman. *Note: this product requires a standard RS232 serial connection, and is NOT compatible with USB to RS232 serial adaptors or converters.*

K8076 PIC Programmer Board Kit
AC125 110VAC Power Supply

\$42.95
\$9.95

PIC Programmer Board

- ✓ Configurable 40 pin ZIF socket!
- ✓ Supports multiple PIC controllers!
- ✓ DB9 serial interface for PC's!
- ✓ Includes PICprog2006 software!

SUPPORTED CONTROLLERS

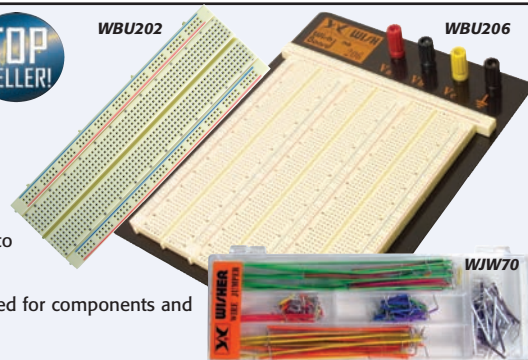
Supported Controllers: PIC10F200, PIC12C508A, PIC12CE518, PIC12F629, PIC12F675, PIC16F54, PIC16F84A, PIC16F870, PIC16F871, PIC16F872, PIC16F873, PIC16F874, PIC16F876, PIC16F877, PIC16F627, PIC16F627A, PIC16F628, PIC16F628A, PIC16F648A, PIC16F630, PIC16F676, PIC18F2550, etc.

Serial Connection: DB9
Power supply: 12-15VDC, 300mA
Dimensions: 5.23" x 2.57" x .79"

Prototype Design Breadboards

- ✓ Color coded design for easy breadboarding!
- ✓ Guaranteed for 5,000 insertions!
- ✓ Aluminum ground plates for high speed and low noise designs!
- ✓ Additional jumper wire kit available

**Prototype it without
Soldering it!**



If you're looking for prototype breadboards for your design and engineering projects, we've got you covered! These breadboards are the highest quality design that are guaranteed for 5,000 wire and component lead insertions! Each block is premium non-warping design with non conductive self adhesive backing. Aluminum ground plates are used to provide the best prototyping of high speed and high frequency designs while maintaining low noise.

Each breadboard has an easy to read color coded letter/number matrix to make tie point connection a breeze. Designed for components and wire jumpers with 20-29 AWG (0.3-0.8mm) wire leads.

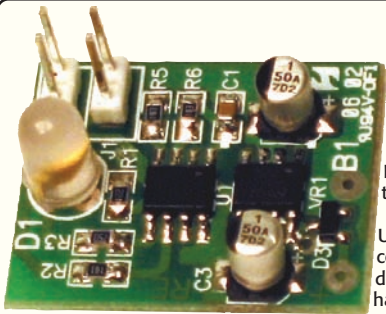
The WBU206 is mounted on an aluminum back plane with rubber bench top rubber feet. 4 coded binding posts are provided for power or signal connections of your choice. 3 terminal strips, 5 bus strips, 2,390 tie points are included and provide a breadboarding area of 6.9" x 5.8".

Its smaller brother, the WBU202 breadboard block, consists of 1 terminal strip, 2 bus strips, 830 tie points, and provides a breadboarding area of 6.5" x 2.1".

Order jumper wire kit WJW70 that includes 140 various jumper wire pieces in 5 different sizes. Each jumper is color coded and insulated with preformed ends.

WBU202 Prototype Breadboard, 1 Terminal Strip, 2 Bus Strips, 830 Tie Points
WBU206 Prototype Breadboard, 3 Terminal Strip, 5 Bus Strips, 2,390 Tie Points
WJW70 Jumper Wire Kit, 140 Pieces

\$7.95
\$23.95
\$5.95



KIT 

Learn SMT With The Latest Technology LEDs!

Don't let the old "blinky" name scare you away from this marvelous little kit! It was originally designed as a way to show off the latest technology in RGB (Red, Green, Blue) full color LEDs while providing kit builders with a fun and economical SMT practice kit.

Uses PWM methods to generate any color with a simple 8-pin microcontroller, and features switchable speed selection! The dual jumper control system tells the microprocessor what scanning speed is desired for a full cycle of 16,777,216 possible colors from the LED! It randomly selects different color scanning modes to wow any observer to the point of distraction. This little attention getter is fun to build and has loads of possible applications.

The SBRGB is a perfect attention getter for sales displays, name badges, and beanies. Operates from 6VDC to 12VDC and will run continuously on a standard 9V battery for several days! And if you're new to SMT technology, don't worry, we include extra SMT components to cover your mistakes! You may wonder why you would pay 30 bucks for a blinky kit... but wait till you see the LED smoothly change colors in front of your eyes! (Yes, there are over 16 million possible colors!)

SBRGB1 SMT Multi Color Microprocessor Blinky Kit

\$29.95

High Intensity SMT Blinky

KIT 

- ✓ Super bright SMT LEDs
- ✓ Subminiature board, perfect for displays
- ✓ Operates from 6 VDC with included cells
- ✓ Learn SMT the FUN WAY!

Super Bright... Super Small!

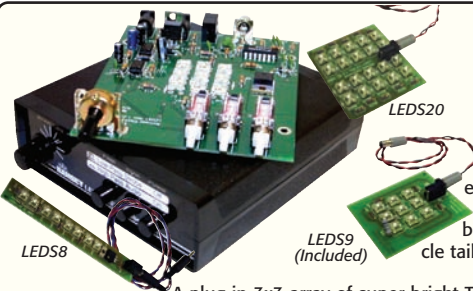
What can be said about a Surface Mount blinky kit? The BL2 is the revival of our classic BL1 blinky kit in a new, modern form! Yes, two LEDs that blink, just like our original blinky kit that has made us famous! This one, however, is subminiature and designed with SMT components! Why, you ask? Besides the obvious, a really neat, super bright attention grabbing display, there's no better way to learn how to work with SMT components! Don't worry, we even include spare SMT chips for when you goof up!

When complete, the BL2 provides alternating super bright red and blue LEDs. Runs on 6VDC and includes two LR55 button cells and a cell holder to mount on the backside of the board. It's one complete unit! If you don't want SMT LEDs you can also use regular T1¾ LEDs (included). If you want to learn what SMT is all about, the BL2 is for you! While you're at it, you might want to check out the magnifiers in our tools section, you'll need them! (You'll definitely want to keep your reading glasses handy when you build this one!)



BL2 High Intensity SMT Blinky Kit

\$17.95



TOP SELLER!

KIT 

Dance To the Beat!

Everyone has seen Xenon strobes "stop" a spinning quarter or flash to music. Now you can get the same effect without the expense and hassle of high voltage Xenon tubes! That's right, a strobe without a Xenon flash tube to break! The price of super bright LEDs keeps falling as their light output keeps increasing, making them affordable for everything from traffic signals to vehicle tail lights... and now, flashing strobe lights!

High Power LED Strobe Light

- ✓ Everlasting LEDs won't burn out!
- ✓ Variable flash rate or audio trigger!
- ✓ Bass or treble trigger modes!
- ✓ Use as a strobe scope for stop action effects!
- ✓ Safe low voltage construction-no high voltage or fragile Xenon tube to break!

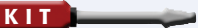
A plug-in 3x3 array of super bright Telux™ LEDs creates a brilliant, sharp flash similar to a Xenon flash tube. The LEDs can also be mounted directly on the main PCB Board if desired. In the standard flash mode, a variable rate control varies the flash frequency from approx 1 to 220 flashes per second. In the audio sync mode, the flash is triggered by any audio input you provide into the standard RCA audio input connector. Built-in low and high pass filters allow you to select either bass or treble music triggering! An external trigger in/out connector lets you connect multiple units together for simultaneous flash.

Optional plug-in display boards with 8 or 20 LEDs are available for even more strobing power! Just imagine surrounding your room with a few of these, triggered to your stereo! Runs on 12-15 VDC and unlike the high voltage Xenon strobes of the past, the LEDS1 is safe for the kids to build! The plug-in display boards may be mounted on top of the case, or remotely located. Be one of the first to experience the new high output LEDs! (No, an 8-track of disco music and a leisure suit aren't included with this kit!)

LEDS1C High Power LED Strobe Light Kit With Case
LEDS8 Display Board, Inline Array Of 8 LEDs
LEDS20 Display Board, 5x4 Array Of 20 LEDs
AC125 110VAC Power Supply

\$44.95
\$17.95
\$29.95
\$9.95

Blinky-Eyes Animated LED Display

KIT 

- ✓ Blinking Eye display of 66 super bright LEDs!
- ✓ Microprocessor controlled
- ✓ Changes brightness with ambient light levels
- ✓ Animated with constant motion!

A Real Eye Catcher!

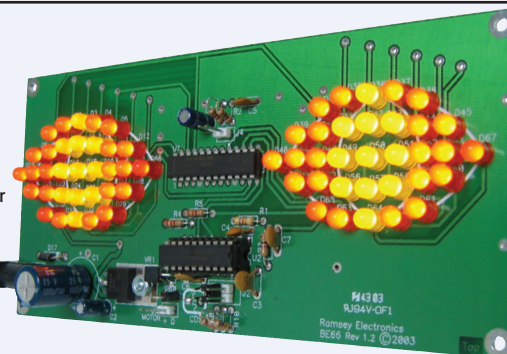
The ultimate animated LED kit that will dazzle you and delight your friends! Uses a microcontroller to randomly select from many different animations such as a long pause before a wink or a twinkle of the eye to startle passers-by. Great for Halloween applications.

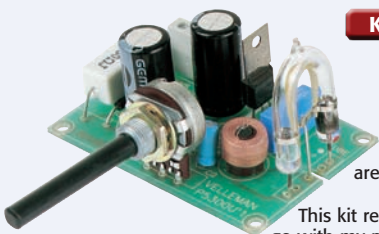
Four animation modes: 1. Off for long random periods, then blinks or winks. Designed to scare! 2. On for long periods before performing an animation, perfect for costumes and displays! 3. Animates all the time for constant motion, perfect display attention-getter. 4. Random fire! When placed in a pumpkin, will light the pumpkin like there is a fire within! Truly awesome!

As if all that weren't enough, the BE66 can also control a small hobby motor to shake bushes at random intervals or signal an external player to make a scary sound! Also has a CDS cell to control various modes of automatic light control. Runs on 12VDC or optional AC power supply. (No boring twinkle kit here! You have to see it to believe it! Hide it in the bushes for great scares!)

BE66 Blinky-Eyes Animated Display Kit
AC125 110VAC Power Supply

\$59.95
\$9.95





KIT

Oh No... We're Back To The 70's!

Light up the dance floor, create lightning effects for Halloween, or pretend like you're in a silent film from the 1920s! The possibilities are endless with this compact and easy-to-build strobe kit. All you need is the disco ball, a place to hang it, and some old 8 track tapes!

This kit reminds me of my early Popular Electronics kit days in high school! Yep, one of the projects was a Xenon tube strobe kit and I built it... to go with my polyester leisure suit, paisley shirt, and white shoes! Decades later, these strobes are as popular as ever!

Simple board construction includes a variable flash rate control from 2-20 flashes per second. Runs on standard 110-120VAC. From Velleman. *(Do I still have the leisure suit? No... but it's probably still at the Salvation Army where I last left it!)*

K5300

Xenon Tube Strobe Kit

\$19.95

Laser Light Show

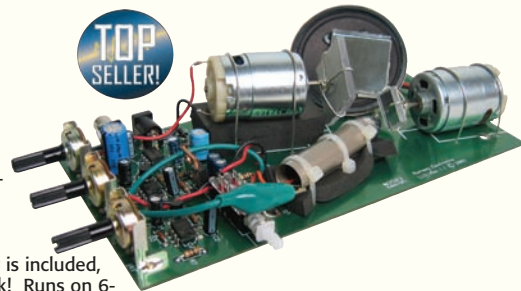
KIT

- ✓ Audio input modulates pattern!
- ✓ Adjustable pattern and speed
- ✓ Projects neat motorized patterns
- ✓ Uses safe plastic mirrors

**True Laser Beam Patterns...
With Audio Modulation!**

You've probably seen a laser show at concerts or on TV. They're pretty impressive to say the least! Knowing that you can't afford a professional laser display we challenged our engineers to design one that's neat and easy to build, yet inexpensive. The result? The LLS1 Laser Light Show! This thing is sweet! It utilizes two small motors and a small standard laser pointer as the basics. Then we gave it variable pattern and speed controls to customize the pattern!

Not enough, you say? How about a line level audio input to modulate the pattern with your music? You bet! Everything is included, even the small laser pointer. And to make the kit absolutely safe we used plastic mirrors instead of glass that could break! Runs on 6-12 VDC or our standard 12VDC AC Adapter (not included). If you're looking for a fun and neat little laser kit, the LLS1 is for you!



**TOP
SELLER!**

LLS1

**Laser Light Show Kit
110VAC Power Supply**

\$44.95

AC125

\$9.95



KIT

Say It... In Mid Air!

LED Magic Message Wand

- ✓ Message floats in air!
- ✓ Fun at concerts, events
- ✓ High visibility red LEDs

This is as close as it comes to a "Magic Wand"! Shake it back and forth and brilliant messages seem to appear in mid-air! Six high intensity LEDs are microprocessor controlled to display messages and graphics that are pre-programmed into the wand.

You can also custom program a message of your choice! From amazing your friends, to making a statement at a concert or simply telling your loved one how you feel, the message wand can't be beat! Runs on two AAA batteries (not included), and the auto power off circuit gives you long battery life. Measures 6.4" x 1" x .9". From Velleman. *(I tried to program it to say "I'm tired of writing catalog copy" but it was too many digits!)*

MK155

LED Magic Wand Kit

\$13.95

LED Flickering Tea Lights

Wired & Tested

- ✓ Simulates a flickering candle!
- ✓ Set of two!

**Sit Back And Relax...
To The Flickering Candles!**

These little lights simulate the pleasing effect of a flickering candle, but without the smoke, flame, or hot candle wax on your fingers! They are powered by one Lithium 2032 button cell that's included with the lights. Measure 1.42" x 1.18". Assembled and ready to go. From Velleman. *(Recommended for indoor use, not because of the wind outdoors, but because you won't see them in bright sunlight!)*



XMCL3

LED Flickering Tea Light, Factory Assembled

\$2.95

**New For
2008**



KIT

Let There Be Lights!

Light Computer Control Module

- ✓ Sixteen different patterns
- ✓ Seven outputs
- ✓ Adjustable speed
- ✓ External oscillator output
- ✓ Daisy-chainable
- ✓ Special two-unit link mode for 14-channel operation
- ✓ Pattern indication via LEDs

Light up the dance floor at a club or brighten up any party with this light control computer module. It's got outputs to control seven independent lights and you can choose from sixteen different programmed patterns! Clubs, parties, advertisements, sign installations, Christmas lights... the possibilities are endless!

The circuit is designed so that once installed, it can easily be controlled from the front panel. You also get on-unit visual feedback with the built-in status LEDs. If you need to control more than seven lights, no problem! The K5201 can be operated in a unique dual-unit mode specially designed to make two modules operate as one, and for additional flexibility an unlimited number of units can be daisy-chained for synchronous operation!

For use with resistive loads such as regular incandescent light bulbs. Not for use with transformer operated or fluorescent lighting. Dimensions: 5.3" x 3.1" From Velleman.

K5201

Light Computer Control Module

\$59.95



Classic Nixie Tube Clocks

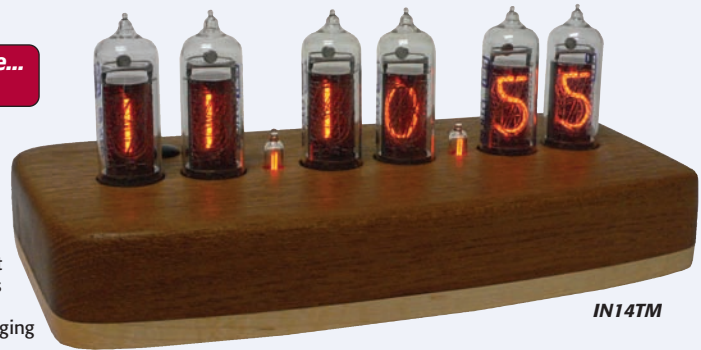
- ✓ .7" bright orange Nixie display
- ✓ Soft fade display!
- ✓ 12 or 24 hour format!
- ✓ Top face or side face Nixie tubes
- ✓ Today's technology with yesterday's display!
- ✓ The ultimate conversation piece!
- ✓ Unique and attractive case designs

**New For
2008**

**It's Time To Go Back In Time...
With Time!**

Wired & Tested

KIT



IN14TM



IN12AL

THE HISTORY

The Nixie tube made its debut in 1954 and quickly found its way as a digital display in high end test equipment, frequency counters, military applications and research projects. Soon they were used as the very first electronic digital display in consumer products like calculators, and the very first digital clocks. For those that were there, who could forget that warm golden glow of digital numbers changing before your eyes!

In the early 70's, seven segment vacuum fluorescent displays quickly replaced the Nixie because they did not require the complex cathode structure and also provided higher resolution graphics. As technology grew, vacuum fluorescent displays were quickly replaced with LED displays because they were much smaller, less fragile, had lower power consumption, and could rival the brightness and intensity of VCD's. Not requiring high voltage, LED seven segment displays quickly became the standard display for virtually all digital display products. Subminiature versions even found their way into the early Pulsar wristwatches!

Ironically, Ramsey Electronics started up in the early 70's and one of our first products was a neat and very high tech 7 segment LED clock kit in a nice extruded aluminum housing. It became extremely popular and we became famous for bringing state-of-the-art IC driven LED display technology to the hobbyist! Now, more than three decades later, we are proud to bring not only a piece of history, but a piece of Ramsey history back to the hobbyist... The Nixie Tube Digital Clocks!

RETRO AT IT'S FINEST!

Designed to pay homage to the era which birthed the Nixie, these clocks won't pick up radio stations, won't dock your iPod, and certainly won't play CDs. They won't even wake you up in the morning! But what they will do is display the time, beautifully and simply, like no other clock today can! Once utilized for military and high-end test equipment, Nixies are now prized for their modern aesthetics. The warm neon glow of a Nixie clock adds a cool retro touch to any office, home or work area.

Since their "demise", Nixie tubes haven't been manufactured domestically for decades. However they were still being manufactured in high volume in the mid 80's in the former Soviet Union. These Nixie tubes are the only ones readily available today and are the tubes used in the clocks. These space-race era Russian manufactured tubes also feature a great conversation starter... the number "5" is an upside down "2" reflecting an efficient and cost effective design philosophy from the cold war superpower! Both unexpected, effective, and thought provoking!

THE CLOCKS

IN14TM Features six IN14 Nixie tubes mounted in a beautiful hand crafted Teak and Maple base. The base finish is hand rubbed varnish and linseed oil. The Hours, Minutes, and Seconds are separated by an NE2 Neon bulb matching the era of the clock. Advanced features include brightness control and auto-dim. From the two setting buttons you can increase or decrease the brightness of the Nixies from 0 (off) to 10 (full brightness). You can also set the clock to lower the brightness between two specified hours in the day (such as 08 to 17 when you are not home) to extend tube life or to customize your display for nighttime use. The IN14 is powered by a provided 110VAC to 12VDC power supply, and utilizes a crystal oscillator for the time base that is accurate to 20ppm. A simple calibration procedure can achieve an accuracy even better than 10ppm! The IN14 can be used overseas the optional SPS15U power supply. It can also be used with a 12VDC source. Measures 8.25"W x 3"H x 4"D.

IN12AL Features six IN12 Nixie tubes mounted in an attractive aluminum housing with black bevels to match any modern desk decor. Dual rear buttons set the time and select your choice of 12 or 24 hour mode. The clock runs on 120VAC, 60Hz. It uses the 60Hz line frequency as the time base, so it cannot be used outside domestic 120VAC/60Hz power sources. Measures 6.5"W x 3"H x 1.75"D.

Both clocks perfectly mesh today's technology with the Nixie era technology of the 60's. The brain of the clock is the MicroChip PIC16FXXX PIC series micro-controller which controls all functions of the clock. The Nixie tube display is driven with a surface mount (SMT) Supertex HV5522 high voltage serial to parallel converter. From there, either "top face" IN12 or conventional "side tube face" IN14 Nixies are used. Both feature a very unique soft fade display for an incredibly smooth transition as the numbers change. They also support 12 or 24 hour display format.

WHAT IS A NIXIE TUBE?

The Nixie tube is a cold-cathode tube filled with neon gas and equipped with a wire mesh anode and multiple cathodes in the shape of numerals. Applying power to one of the cathodes creates the characteristic and appealing soft orange glow. Although the technology was pioneered in the early 20th century, nixie display tubes weren't brought to market commercially until 1954 by the Burroughs Corporation. The name "Nixie" was derived by Burroughs from "NIX I", an abbreviation of "Numeric Indicator eXperimental No. 1".

Nixie tubes were always designed to have an extended life. It is not uncommon to expect a tube life of 5 years or more. The new Russian Nixie tubes used in these clocks are hand selected and tested for brightness, flaws, and irregularities. They are warranted against failure (not breakage!) for 30 days. If a tube in a new clock fails within 30 days, send us the clock and we will replace it free of charge. Replacement tubes are available with clock purchase, see below for terms. (Note, they are not plug-in like miniature vacuum tubes, soldering/desoldering is required). Beyond the tubes, our standard product warranty applies.

THE ULTIMATE CONVERSATION PIECE!

Show your nostalgic fondness for yesterday's technology with a Nixie tube clock. It is rather ironic that in their heyday the use of Nixies was considered too expensive for consumer products like clocks, and here we are today! The unmistakable soft orange glow and the remarkable fade display feature in an incredibly beautiful hand rubbed teak and maple base! Then there's the discussion of Russian tubes made during the cold war, with an upside down "2" as a "5"... It just doesn't get any better than that! Get on the retro bandwagon with your very own Nixie classic clock!

SEE IT IN ACTION!

If you want to see these clocks in action, visit www.ramseykits.com/nixie. You will see that warm golden glow of digital numbers changing before your eyes!

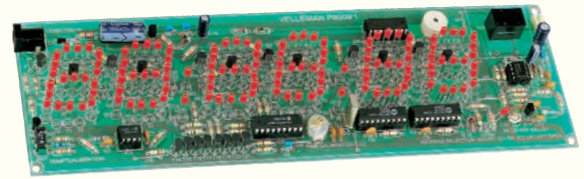
IN14TM	Nixie Tube Clock, IN14 Tubes, Teak Maple Base, Kit	\$329.95
IN14TMWT	Nixie Tube Clock, IN14 Tubes, Teak Maple Base, Factory Assembled & Tested	\$369.95
IN12AL	Nixie Tube Clock, IN12 Tubes, Aluminum, Kit	\$169.95
IN12ALWT	Nixie Tube Clock, IN12 Tubes, Aluminum, Factory Assembled & Tested	\$209.95
SPS15U	Optional Switching Power Supply For IN14TM, 80-280VAC, (Required For International Use Only)	\$24.95
IN12	IN12 Spare/Replacement Nixie Tube *	\$3.95
IN126	IN12 Spare/Replacement Nixie Tube, Six Pack *	\$23.95
IN14	IN14 Spare/Replacement Nixie Tube *	\$3.95
IN146	IN14 Spare/Replacement Nixie Tube, Six Pack *	\$23.95

* Spare Nixie tubes are only available with the purchase of a clock or within 1 year of a purchase (there are only so many!)



Multifunction Digital Clock

- ✓ Time, date, & temperature!
- ✓ Countdown, lap, scoreboard, and more!
- ✓ 6 1.42" high digits!
- ✓ Keychain RF remote control included



The Digital Clock... That Simply Has It All!

This clock kit features a mind-boggling array of functions! Set a timer, count down to a special date (a wedding, or more importantly the release of the new Indiana Jones movie?!) hook up a relay and use it as a temperature control... the possibilities are endless! Six IC's control 132 LEDs to form six eye-catching 1.42" tall digits that display practically any function you could expect from a clock radio type device -- and even some you wouldn't!

Features include: Time, date & temperature indication, selectable with toggle option. 1 second resolution chronometer with lap function. Count down function to a specific date (on the last day H:M:S are displayed.) Scoreboard function (two players or teams, count up to 199). Random generator from 00 to 99. 2 digit dice. Count function. Chime beep option. Relay output for temperature control or time alarm. US and European display options for time, date, and temperature (Celsius or Fahrenheit).

All functions and settings are done through the included 433MHz RF wireless keychain remote control! Battery backup provided by a standard 9V, power supply is 12V DC / 300mA. Circuit board measures 10" x 3.2" Order the matching B8009 custom enclosure and faceplate for a really nice finished looking kit. (I'm going to get one of these and set the count-down clock to when I have to write next years catalog... then leave on vacation the day before!)

K8009	Multifunction Digital Clock Kit	\$84.95
B8009	Matching Custom Case Set & Faceplate For K8009	\$27.95
AC125	110VAC Power Supply	\$9.95



LCD Mini Message Board

- ✓ 124 character Eprom message memory
- ✓ Built-in editor
- ✓ RS232 interface

Create Your Own Message!

This is a neat little kit that comes complete with the attractive tilting enclosure and mount. A 16 character 1 line backlit LCD display shows everyone your custom message! The built-in Eprom message memory handles up to 124 characters and scrolls with adjustable speed.

The message can be created with the built-in message editor or via the RS232 interface for simple uploading and displaying. This little kit is perfect for exhibitions, advertising, greeting messages, serial display for equipment and much more. Runs on standard 9VDC battery at 100mA. Case measures 4.5" x 1.7" x 3". RS232 software available at our website, www.ramseyelectronics.com. From Velleman.

MK158	LCD Mini Message Board Kit	\$21.95
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LED Digital Clock

- ✓ Automatic timebase selection!
- ✓ 12/24 hour mode
- ✓ Battery backup



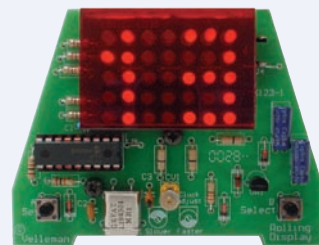
Digital Clock Kits Are Back!

Not your everyday clock kit! This digital clock kit features red 7 segment LED displays in a modern attractive case. Automatic timebase selection gives you the option of internal or line-frequency controlled 50/60 Hz.

Internal timebase has a fine tuning adjustment for precision time keeping. It can also be set for either 12 or 24 hour mode and features battery backup (3 AA batteries, not included) in case of a power failure. Runs on 9V AC or DC. Order our AC125 power supply. Comes complete with the custom designed case to give your clock a great finished look. From Velleman.



MK151	LED Digital Clock Kit	\$29.95
AC125	110 VAC Power Supply	\$9.95



**Put The Clock In Motion...
Scroll The Date & Time!**

Rolling Clock Display

- ✓ Scroll the time of day!
- ✓ 35 LED display
- ✓ Adjustable speed

This this scrolling timepiece shows the date and time in alpha numeric characters in a smooth rolling animated display. A typical display would be "Jun-23 12:57".

No external editor is needed to set the date/time. Just select hours, minutes, month or day with the "select" key and enter the values with the "set" key. Time is set in the 24 hour mode and displayed in the 12 hour mode. Runs on 9-12VDC and uses a Type 6LR61/6F22 backup battery if required. Measures 1.8" x 3.5" x 2.6". From Velleman.

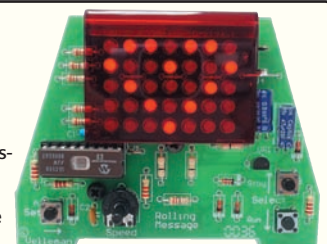
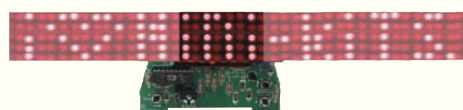
MK123	Rolling Clock Display Kit	\$16.95
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Rolling Message Display

- ✓ 35 LED display!
- ✓ 16 character message
- ✓ Adjustable speed



Scroll Your Message!



Create your own scrolling or rolling message with this high visibility LED display! Contains 35 brilliant LEDs to light up each character of your custom message, which can be up to 16 characters.

Built-in message editor is simple to use. Press "set" to change a character, then use the "up/down" key to select the character and end with the "<" key. Includes a standby/run mode to restart the display. Runs on 9-12VDC and uses a Type 6LR61/6F22 backup battery if required. Measures 1.8" x 3.5" x 2.6". From Velleman.

MK124	Rolling Message Display Kit	\$16.95
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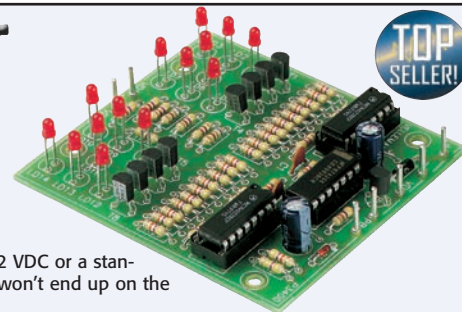


Dual Electronic Dice

- ✓ Displays two separate dice!
- ✓ Single or dual selection!
- ✓ Can't cheat with these dice!

These Dice Won't Fall Off The Table!

KIT



A lot of board games require a roll of the dice. And a lot of dice rolls end up on the floor, knocking over the board tokens, the little green houses, or even worse, the red hotels! Not anymore, problem solved! Just hit the switch and the dice randomly cycle and slowly come to rest displaying the number! You can select either one die or a pair of dice, depending on the game. Bright LEDs display the same patterns as regular dice. And this pair of dice won't allow cheating!

When the game is over, don't worry, the auto power saver switches them off after 30 seconds to save battery life. Runs on 8-12 VDC or a standard 9V battery. Board measures 3" x 2.8" and can be mounted in your own special enclosure. You can be sure that the dice won't end up on the floor! From Velleman. *(Well, when the cheater isn't happy I guess he **could** throw it on the floor!)*

K3400 Dual Electronic Dice Kit
AC125 110VAC Power Adapter

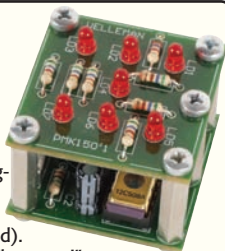
\$17.95
\$9.95

Shaking Electronic Dice

- ✓ Just give it a shake like real dice!
- ✓ Microprocessor controlled!

Shake, Don't Roll!

You don't have to throw it, just shake it and it acts just like regular dice! It rolls out slowly and flashes the last combination or "winning number!" It's microprocessor controlled circuit is fun to learn! Runs on one 3V Lithium button cell (not included). Get two to simulate a pair of real dice to get "snake eyes" or "box cars!" Measures 1.4" x 1.4" x 1.3". From Velleman.



MK150 Shaking Electronic Dice Kit

KIT **\$13.95**

Electronic Roulette

- ✓ Spinning sound!
- ✓ Winner tune!

Easy To Spin This One!

This electronic version of roulette features a neat round PC board with 37 LEDs simulating a real spinning Roulette game! And when it spins, you hear the spinning sound with microprocessor technology! When the spinning stops and there is a winner you hear a winning tune! Easy assembly makes it a cool beginner kit that uses ICs. Runs on 3 AA batteries (not included). Board measures 3.6" diameter. From Velleman.



MK119 Electronic Roulette Kit

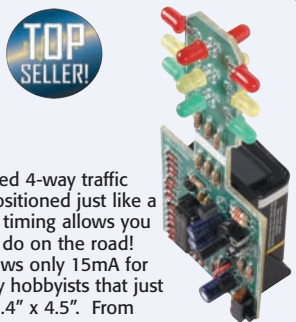
KIT **\$16.95**

LED Traffic Signal

- ✓ 4-way traffic signal!
- ✓ Automatic switching!
- ✓ Adjustable delay!

Sure To Stop The Traffic!

Impress your friends by building a really neat, simulated 4-way traffic signal light! Bright red, green, and yellow LEDs are positioned just like a 4-way signal and automatically sequence. Adjustable timing allows you to change the delay, something we all wish we could do on the road! Runs on a standard 9V battery (not included) and draws only 15mA for long life. Perfect for model railroads, models, and any hobbyists that just want to build something really neat! Measures 2" x 1.4" x 4.5". From Velleman.



MK131 LED Traffic Signal Kit

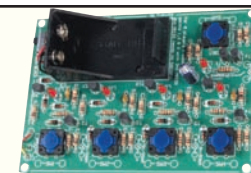
KIT **\$7.95**

4 Player Quiz Table

- ✓ Shows first button pushed!
- ✓ Quizmaster reset!

The Correct Answer Is?

Just like the TV game shows, you can have up to 4 players "on the ready" just waiting to be the first one to answer the question. But how do you know who's first? That's simple with the MK133! 4 player push buttons are provided. The first player to push their button is indicated with a latched on LED. Just like on TV! The "Quizmaster" button resets it for another round! If you have more than 4 players you can even daisy-chain two MK133s together for up to 8 players! Runs on a standard 9V battery (not included). Measures 4.3" x 3.1". From Velleman.



MK133 4 Player Quiz Table Kit

KIT **\$10.95**

SMT LED Smiley Face

- ✓ Alternating flashing SMT LEDs!
- ✓ Can be worn as a pendant!

Smile...And Learn SMT!

Build this little attention grabber and learn about SMT at the same time! Measuring only 1" this smiley face can be worn as a pendant or just as a conversation piece. And don't worry about losing or damaging the parts, as we give you extras! Requires a 3V Lithium Ion button cell. Measures 1.1" x .3". From Velleman.



MK141 SMT LED Smiley Face Kit

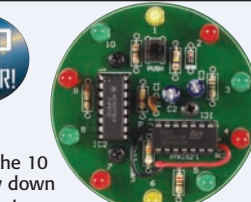
KIT **\$9.95**

Wheel Of Fortune

- ✓ Electronic LED spinning action!
- ✓ Spinning gradually decreases!

Where She Stops...

Acts just like the casino game! Just push the button and the 10 LEDs start showing a spinning action. They gradually slow down until the "winning" one remains lit. Push the button to start over again. Auto on/off assures a long battery life. Measures 2.6" x 1.3". Requires a standard 9V battery (not included). From Velleman.



MK152 Wheel Of Fortune Kit

KIT **\$7.95**

Tri-Field "Sci-Fi" 3-Way Meter

- ✓ SEE RF, electric, and magnetic fields!
- ✓ Watch the magnetic field of the earth!
- ✓ Sense different magnetic poles!
- ✓ Detect RF transmitter fields
- ✓ Runs on 6 VDC

Detect It ALL With the SCI-FI Detector You Can Build!



We realize you can't "beam down" to the surface of the planet, but you CAN have our Tri-Field Meter to detect and sense the fields around you! This really neat project actually senses and detects magnetic fields, RF fields, and electric fields! Even Mr. Spock would like this one!

The TFM3 has three separate field sensors that are user selectable to provide a really cool readout on two Sci-Fi styled LED bargraphs! Utilizing the latest technology, including Hall Effect sensors, you can walk around your house and actually "SEE" these fields around you! You will be amazed at what you see. How sensitive is it? Well, you can see the magnetic field of the earth... THAT'S sensitive! Also detect radiation from monitors, TV's, electrical discharge, and RF emissions.

You will have fun finding and learning about these fields! Runs on 6VDC (4 AA batteries, not included). Includes a stylish matching case that will impress even the most fussy Klingons! Live long and prosper! *(Our project engineer told me I could detect static in my hairbrush several feet away... But I don't have any hair!!!)*

TFM3C Tri-Field Meter Kit With Case

\$64.95



Laser Beam Audio Communicator

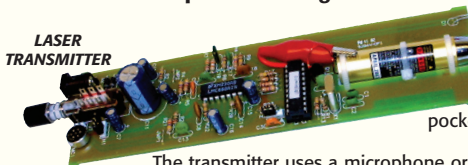
KIT

Send Audio Over That Laser Beam!

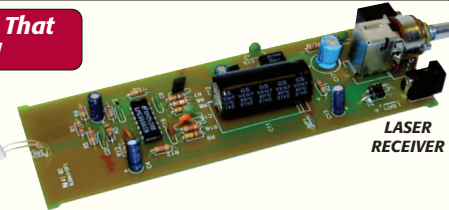
- ✓ Modulated at more than 16kHz for excellent voice audio fidelity
- ✓ Uses standard pocket laser module for ¼ mile maximum range (included)
- ✓ Each kit includes one transmitter and one receiver
- ✓ Includes microphone and digital AGC circuit for full audio range control

TOP SELLER!

LASER TRANSMITTER



LASER RECEIVER



Now you can talk to your friends over one of the most secure long-distance transmission types available, a laser beam! Our new laser beam communicator allows you to talk with pretty good fidelity to your friends up to ¼ mile away just using a pocket laser pointer.

The transmitter uses a microphone or external audio to modulate a laser beam on and off at a rate of more than 16kHz so the audio fidelity is much better than that of a telephone. A telephone is limited to 3kHz, but the LBC6K is limited to 6kHz. The receiver includes filtering to remove the 16kHz carrier and leave behind the high quality audio, and then boost its level for use with earphones. To improve the fidelity of the system, the transmitter employs audio AGC on the microphone to boost weak audio, and reduce loud audio so that the listener never misses a word.

Each kit includes a transmitter, receiver, and pocket laser pointer. This gives you a complete one-way audio path. If you need full duplex, or two way, buy two at the special price! Receiver and transmitter are designed to fit in two pieces of 2" PVC pipe for easy mounting and alignment. Each runs on a standard 9V battery, DC adapter or AC adapter (not included). Audio output drives a standard personal stereo headset. Your friends will be amazed when they see you talking over that red laser beam! (*My kids built a couple of these and were really amazed! But then they asked me why they couldn't see their voice change the laser beam light... I told them "Um... ask your Mom!"*)

LBC6K Laser Beam Communicator Kit (Includes Receiver, Transmitter and Pocket Laser Pointer) \$39.95
LBC6K2 TWO Laser Beam Communicator Kits, for Duplex or Two-Way Audio (Save \$5.00!) \$74.95



KIT

Voice Over An IR Beam!

Infrared Light Beam Communicator

- ✓ Send your voice over light - even through windows!
- ✓ 30' to ¼ mile range!
- ✓ Receiver drives a speaker or earphone!

Transmits a modulated infrared light beam up to 30 feet without lenses, up to ¼ mile using simple lenses. Since the beam is modulated with a 30 KHz carrier (like AM radio) there is no effect from 60 Hz hum that is produced by indoor lighting. Easily transmits through windows - ideal for "bugs" or listening to IR television remote controls. The transmitter can use any type of mic and is very sensitive. The receiver employs an IR PIN diode detector and there is enough power to drive any loudspeaker or earphone.

The PC board is cleverly "scored" so you can easily separate the Transmit and Receive sections so they can be used individually to transmit at one location and receive at another. Units run on 9 to 12 VDC and will use a standard 9V battery. The LB56 has been a popular kit for years and makes a great science fair project to show how you can send audio over Infrared! Custom case set measures 5"W x 1 ½"H x 5 ¼"D.

LB56C Infrared Light Beam Communicator Kit With Case \$34.95

Speedy Personal Speed Radar Gun

KIT

TOP SELLER!

- ✓ Direct readout in miles/hour, kilometers/hour or feet/second
- ✓ 1/8 mile range for average car-sized object
- ✓ Earphone output to hear actual Doppler shift
- ✓ The nation's #1 science fair project!

YOU Be The Cop!
How Fast Was HE Going!

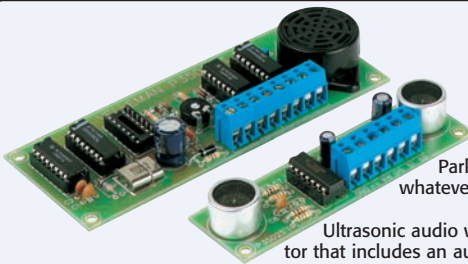


Here's a kit that's not only a ton of fun for everyone, but is useful too! This low cost microwave radar uses the same principle found in police units costing thousands more. You'll turn heads when you clock cars, planes, runners, boats, horses, bikes, races, or virtually any large object that moves.

Speed readout is on two LED displays which can be set accurately (better than 1%) to show MPH, kilometers-per-hour, or even feet-per-second. An earphone output allows you to hear the actual Doppler frequency shift of moving objects - the theory upon which all radars operate.

Uses two 13 oz. coffee or juice cans for antenna (not included)... so start drinking! Antenna unit can be remotely placed up to 300 feet away. The SG7 is easy and informative to build, with a detailed manual that not only carefully guides you to a finished unit but also tells you the hows and whys of Doppler radar. Even though the kit employs microwave circuitry no exotic tuning is needed. All critical sections are PCB stripline and calibration is as easy as pointing the SG7 at a fluorescent lamp! Your Speedy kit includes a deluxe black ABS plastic case with SPEEDY graphics for a neat professional look. Operates on 12 VDC. Electronics case: 3 5/8" x 5 3/4" x 1 1/8". (*Yes, the coffee needs to be in cans!*)

SG7 Speedy Personal Speed Radar Gun Kit \$59.95
AC125 110VAC Power Adapter \$9.95



KIT

Don't Hit It...
Detect It!

Ultrasonic Parking Radar

- ✓ Detects how close you are!
- ✓ Adjustable range!
- ✓ Audible alert BEFORE the crash!

If you have problems parking your vehicle without running into things (like the garage, another car, a wall, etc) then the Parking Radar kit is for you! Mount the sensor board on the rear of your car, truck, or trailer and it will detect the proximity of whatever you're getting close to!

Ultrasonic audio waves, outside the range of human hearing, are used to "measure" the distance! The sensor board is connected to the detector that includes an audible alarm. The proximity can be adjusted anywhere from 2" to 5' and has a detection angle of 5 degrees. The uses of this handy little detector are endless, and it will save you a lot of crumpled metal!

Running on 10-15VDC the Parking Radar is ideal for 12VDC vehicle power. Just connect a lighter plug cord and you're all set! The small sensor board measures 1.1" x 3.7". The main board measures 1.9" x 4.9". The boards can be custom installed in your vehicle, in your own case, or you can order the recommended enclosures below. From Velleman. (*My car needs one of these on both sides plus the front and rear bumpers!*)

K3502 Ultrasonic Parking Radar Kit \$36.95
G416 Recommended Case Set For Main Board \$8.95
G407 Recommended Case Set For Sensor Board \$6.95



Wired & Tested

KIT

**Crank It Up Baby...
Crank It!**



Personal Practice Guitar Amplifier & DI

- ✓ Practice your guitar or bass without disturbing others!
- ✓ Standard 1/4" guitar audio plug input!
- ✓ CD/MP3 player audio headphone input to practice to your favorite music!
- ✓ Switchable bass boost!
- ✓ Great as a DI to your home stereo amplifier!
- ✓ Standard 3.5mm "Walkman" headphone jack!
- ✓ Uses a standard 9V battery

CRANK UP THE AUDIO AS LOUD AS YOU NEED!

So you're a guitar player, and you live in an apartment... need we say more?! You would love to plug into your 100 watt HiWatt (*my favorite!*) amplifier and let it crank, but the neighbors probably wouldn't share your enthusiasm! The PGA1 was designed to give you hours of enjoyment playing your favorite electric guitar while isolating your family, friends, and neighbors from your music and your passion.

FOR USE WITH ALL TYPES OF GUITARS!

Whether you use an acoustic electric, electric, or bass guitar, the PGA1 gives you an adjustable volume output to your favorite headphones. Unlike a lot of practice amps, the PGA1 has a special bass boost to enhance bass guitar use. One practice amp for all your guitars! If you want to practice to your favorite music, the PGA1 has a standard style audio input to play to your favorite music! Just plug in your Walkman style CD player, MP3 player, or even the headphone output on your mixer board and you'll hear both your music source and your guitar in your headphones!

ONE WATT OUTPUT!

The PGA1 uses a powerful LM386 power amplifier to provide one watt of power to your headphones or even a small speaker! It gets even better...use the PGA1 as a cheap and easy direct inserter box to match your guitar into an aux input of a stereo receiver amplifier or PA amplifier! It sounds great! A standard 1/4" audio input connector is used for your guitar input, matching your standard guitar cables. A top mounted on/off/volume control adjusts the headphone output level through the full range. The small belt clip pocket size device runs on a standard 9V battery (not included). An LED indicates power-on and relative battery condition. The attractive compact case measures 4.5"H x 2.7"W x 1.1"D and can be worn on your belt or carried in your pocket. Available in kit to "learn as you build" or factory assembled and tested to get playing right out of the box! (*I've got an SG with P90's and one of these now stays in the case with it!*)

PGA1 Personal Practice Guitar Amplifier Kit **\$64.95**
PGA1WT Personal Practice Guitar Amplifier, Factory Assembled & Tested **\$99.95**

Stereo Headphone Amplifier

KIT

Wired & Tested

**No Headphone Jack?
NO Problem!**



- ✓ Make your headphones sound GREAT!
- ✓ Use with table radios, CD players, tuners, and more
- ✓ Great as a basic preamp for any line level signal

So, you buy a really good radio or CD player, go to plug in your headphones, and there isn't a headphone jack! You find a line level jack, plug in your headphones, and they sound terrible. Sound familiar?

Most good quality gear lacks an earphone output, or if there is one, it is woefully poor quality. We developed this kit to help us listen to our mixers, reverbs, voice recorders and other audio goodies. We took a pair of LM-386 250 mW audio amplifiers, added volume controls, power supply and a handy, switchable, high-cut filter. A common 1/4" stereo earphone jack is used for the output - assuring compatibility with all stereo headphones - and RCA phono jacks accept standard line level input signals. There's plenty of volume and of course, the "Fi" is quite "Hi". Available in money saving kit form or fully wired and tested. Runs on 9 to 15 VDC. Includes an attractive matching case measuring 5"W x 1 1/2"H x 5 1/4"D. (*Did you know the leading and most well known manufacturer of high-end table radios recommends the SHA1 to all of their customers?!*)

SHA1C Stereo Headphone Amplifier Kit With Case **\$29.95**
SHA1WT Factory Assembled & Tested SHA1 With Case And Power Supply **\$64.95**
AC125 110VAC Power Adapter **\$9.95**



KIT

Wired & Tested

**The New Generation
Stereo Headphone
Amplifier!**

Super Stereo Headphone Amplifier

- ✓ The next generation headphone amp!
- ✓ Separate volume, treble, bass, balance and loudness controls!
- ✓ Signal level clipping indicator LED!
- ✓ Stereo loop-through for multiple feeds with separate controls
- ✓ CD quality audio!

A few years ago we designed the SHA1 stereo headphone amplifier to provide an audiophile quality headphone signal from a radio or amplifier that only had a line output. The success was overwhelming! As described in previous catalogs and on our website, the largest manufacturer of high quality table radios recommended the SHA1 to their customers who wanted to use headphones with their radio.

Well, it's been a couple of years and the need has been proven so we decided not to rest on our laurels with the success of the SHA1. We put our engineers to work, asking them questions like... what if a band wanted multiple headphones with separate level controls? And what about controls... how about the ability to tailor the audio characteristics to each user's preferences? What about multiple headphones from just one unit? When they got tired of all our questions they said "OK... you've got it, the new SHA2... the next generation headphone amplifier kit!"

Standard 3.5mm stereo audio headphone connectors are used for both looping input and dual outputs for simple Walkman style headphones. That was decided when I recently bought a hundred dollar set of Sony professional headphones that had the 3.5mm plug on them and an included 1/4" adapter. I figured it's time to concede to 3.5mm! And before you ask, we provide a dual RCA to 3.5mm stereo input cable with the SHA2 to match up with your standard unbalanced RCA line out connectors!

From there LM386's and LM1036's are used for audio processing providing nearly 1 watt of output to the normal 4-40 ohm headphones or speaker circuits. The loop-through inputs are properly isolated to prevent ground loop and hum problems when daisy chained or used in multiples. The dual outputs are great for that other person that just has to listen in too! We covered it all with the SHA2!

Runs on a built-in standard 9VDC battery and also has a rear power jack for 12-20VDC if you don't want to bother with a battery! If you're looking for a great headphone amplifier to simply listen to the line output of a radio, CD player, tape player, or receiver, our proven SHA1 is the answer. BUT... if you're looking for multiple outputs, looping inputs, daisy chained amplifiers, and bass, treble, loudness control, then try the SHA2, the next generation stereo headphone amplifier! Like the SHA1, it includes an attractive matching case measuring 5"W x 1 1/2"H x 5 1/4"D.

SHA2 Super Stereo Headphone Amplifier Kit With Case **\$44.95**
SHA2WT Factory Assembled & Tested SHA2 With Case And Power Supply **\$79.95**
AC125 110VAC Power Adapter **\$9.95**



New For 2008



KIT

Subminiature 40W Stereo Audio Amplifier Module

40 Watts, 87% Efficient, No Heat, All On A 2 1/2" Board!

- ✓ The EXTREME big brother of the UAM2 in stereo!
- ✓ 2 independent 20W amplifiers in one SMT package!
- ✓ Super efficient Class D spread spectrum design!
- ✓ Built-in click and pop suppression!
- ✓ Balanced & unbalanced hi-Z inputs!
- ✓ Logic level mute and shutdown functions!
- ✓ Selectable gain from +22dB to +36dB!
- ✓ Built-in thermal protection!
- ✓ Programmable device shutdown with LED indicator!
- ✓ Runs cool, no heat sink required!
- ✓ All this on a 2 1/2" square board!

When we released the UAM2, it became the most popular audio amplifier product in our history. The novel Class D design, providing a clean 20 watts in such a tiny package, set the hobbyist world on fire! And that's a pretty tough task when it didn't even produce any heat at its full output! Because of the popularity of the UAM2, we put the engineering staff into overdrive and the result is the brand new UAM4!

The UAM4 is the big brother to the extremely popular UAM2. It uses the latest spread spectrum amplifier technology to bring you clear, crisp, high-power audio without any of the heat which is normally associated with such an amplifier. It's extremely clean Class D design produces two independent 20 watt outputs! This can also be bridged to an extremely efficient (87%!) single channel (mono) 40 watt amplifier. And at 40 watts, you're probably already wondering about the heatsink requirements to dissipate the heat, right? Stop wondering, there's no heat, so there is no heatsink required! And all that power is generated in a single SMT device the size of your thumbnail on a small 2 1/2" square board!

The high impedance input is designed to use your choice of either a balanced line input or an unbalanced signal source using easy to connect Euro terminal blocks. Logic connections to ground are also provided to mute and/or shut down the amplifier. You can also enable the built-in over temperature signal to activate one of these controls automatically! Easy to use board jumpers offer selectable gain of +22dB, +25dB, +29.5dB or +36dB to match your input levels. Board jumpers also enable protection and shutdown options as well as stereo/mono/bridge mode. The amplifier also features built-in click and pop suppression to protect not only your ears and sanity, but your speakers and equipment! Power input for maximum rated output is 18VDC at 2.64A. Input voltage can be reduced to a minimum of 10VDC with reduced output. If required, use our switching power supply below which provides 18VDC at 3.3A with an input of 100-240VAC, 50/60 Hz. It doesn't get much easier than that!

If you're looking for an incredible stand-alone stereo (or mono) amplifier to build into your equipment, speakers, or application, the UAM4 is the latest and the greatest! Remember, this is an SMT kit so you will need tweezers, a magnifier, some pretty good eyes, and a fine tip soldering iron or station. Check out SMT related tools in our Tools section. (Think back to the components, power supplies, and heatsinks it used to take to get 40 watts!)

UAM4 20 Watt Audio Amplifier Module Kit
SPS183 18VDC, 3.3A Switching Power Supply, 100-240VAC, 50/60Hz

\$69.95
\$49.95

SPECIFICATIONS

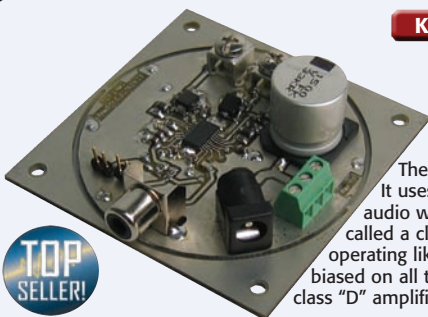
Audio Output:	2 x 21W stereo mode, 8 ohms 1 x 42W mono mode, 4 ohms
Signal/Noise:	91dB into 8 ohms, 22Hz-22kHz
THD+N:	0.1%
Audio Input:	Balanced, unbalanced, hi-Z
Gain Adjust:	Jumper settings, +22dB, +25dB, +29.5dB, +36dB
PSRR:	90dB at 1kHz
Efficiency:	Up to 87%
Protection:	Short circuit, thermal overload Programmable thermal flag Auto short together shutdown Auto thermal shutdown
Power Input:	10-18 VDC, 2.1mm connector (18VDC for full rated output)
Dimensions:	2.5" square

KIT

Subminiature 20W Audio Amplifier Module

22 Watts..And NO Heat!

- ✓ 20 Watts from one SMT package!
- ✓ Super efficient Class D design!
- ✓ Super clean output!
- ✓ No heat/heatsink concerns!



The UAM2 is probably the neatest audio kit to come along in quite a while! It uses the latest amplifier technology to bring you clear, crisp, high-power audio without any of the heat which is normally generated! This is what is called a class "D" amplifier or as the media calls it, a "Digital" amplifier. Instead of operating like a classic class "A" or class "AB" amplifier which leaves transistors biased on all the time, losing energy whether they are producing audio or not, the class "D" amplifier only produces power into the load of your speaker!

This means that a small SMT part can deliver a full 20 watts of power without getting so much as warm! YES, I said SMT or Surface Mount! Now you can install this amplifier right inside your speaker enclosures, or wherever this nifty kit will fit without worrying about a heatsink! Just look at the specs! The unique board can be "snapped" out into a small circle to be double face tape mounted directly to the back of a speaker! This IS a Surface Mount (SMT) kit, so you will need fine tweezers, magnifier, and a decent fine tip soldering iron! See assorted tools and accessories on page 71. (Who ever imagined 20 watts in a single SMT device; I still remember fighting with vacuum tubes to get 20 watts!)

UAM2 20 Watt Audio Amplifier Module Kit
SPS18 18VDC Switching Power Supply, 1.7A

\$34.95
\$39.95

SPECIFICATIONS

Audio Output:	20W max
Signal/Noise:	102dB into 8 ohms
Total Harmonic Distortion:	Less than 1%
Audio Input:	Line level
Gain Adjust:	4 input gain settings
Protection:	Auto short to ground shutdown Auto short to Vcc shutdown Auto short together shutdown Auto thermal shutdown
Power Input:	8-18 VDC, 2.1mm connector (18VDC for full rated output)
Dimensions:	2.6" square, 1.43" diameter

2 x 30 Watt Audio Power Amplifier

KIT

The Super Easy Stereo Power Amplifier!

- ✓ Dual channel, 30W max per channel!
- ✓ Latest IC circuitry, fully protected
- ✓ Includes heatsink
- ✓ Perfect drop-in power amplifier

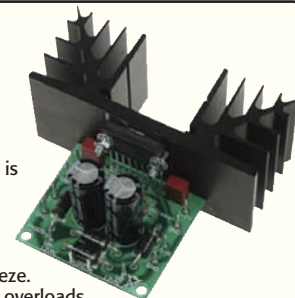
SPECIFICATIONS

Audio Output:	2x30W max (2x15W RMS)
Signal/Noise:	98dB into 4 ohms
Total Harmonic Distortion:	Less than 0.07%
Channel Separation:	70dB
Frequency Response:	7Hz to 60kHz
Audio Input Sensitivity:	300mV/150k ohm
Protection:	Transient suppression on/off Auto overload protection Auto short circuit protection Auto thermal shutdown
Power Input:	2x12V AC/DC@ 50W/2A
Dimensions:	2.6" square, 1.43" diameter

This unique small audio power amplifier is designed around the TDA1521 IC. The IC is thermal, short circuit, and overload protected for reliable operation. One of the neat features of this amplifier is that it needs no additional rectifier and smoothing filter because it can also run on AC!

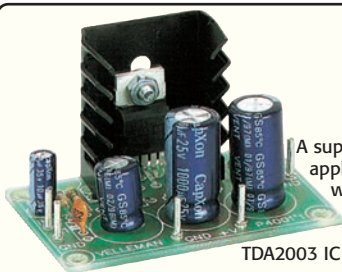
The small board and custom heatsink design make installation and connection a breeze. Just connect your inputs, your speakers (4 or 8 ohm) and power. Don't worry about overloads, or shorts on your outputs because it has automatic protection.

In addition, transient suppression is switchable on/off as desired. If you're looking for a sweet little inexpensive stereo amplifier, this is for you! Board, less heatsink, measures 2.8" x 2". From Velleman.



K4003 2x30 Stereo Audio Power Amplifier Kit

\$27.95



KIT

The Easy Audio Amplifier!

A super amplifier to use stand-alone or as part of a system. The small circuit board and heatsink make it easy to integrate this into any of your applications requiring a good amplifier. 7 watts maximum audio output (3.5W RMS into 4 ohm) provides a Total Harmonic Distortion of .05% with a Frequency Response between 20Hz and 20kHz. Input sensitivity is 40mV at 150k ohm.

Supply voltage is 8 to 18VDC at .5A (15VDC for rated output). Automatic protection for shorted output and overload. Uses the newest TDA2003 IC for ultimate reliability. Includes the small but efficient heatsink shown. Board measures 2.2" x 1.4". From Velleman.

7 Watt Audio Power Amplifier

- ✓ 7 Watts output maximum power
- ✓ Overload and short circuit protected
- ✓ Includes heatsink

K4001 7 Watt Audio Power Amplifier Kit

\$13.95

Karaoke Audio Interface

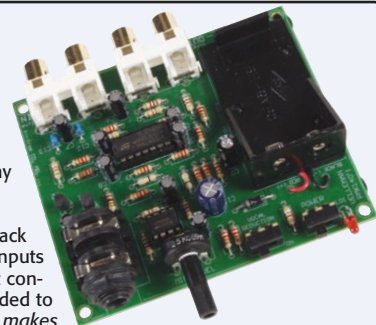
KIT

- ✓ Sing along with your favorite music!
- ✓ Easy connections to your equipment!
- ✓ Automatic vocal reduction!
- ✓ Runs on a standard 9V battery!

How Do You Think All Those Idols Started!

Get in tune with this simple yet full featured Karaoke "machine"! Just hook it between your amp and your CD player (or MP3 player, or any other line level source...) and get ready to sing!

Built-in vocal reduction circuit lowers the vocal tracks of most recordings automatically! That means you don't have to buy special soundtrack only CD's! Use any music from your existing library! Connections are simple. Standard RCA connectors are used for left and right music inputs as well as left and right outputs to your amplifier or receiver aux input. A standard 1/4" microphone jack is used that is common with most consumer microphones. Just hook it up, plug your microphone in, and start singing! A board mounted microphone level control is also provided to match your levels to the music. Measures 3.9" x 3.3" x 1". From Velleman. (Note: it has been proven that beer and alcohol consumption makes everyone sound better... at least in their own minds!)



MK140 Karaoke Audio Interface Kit

\$14.95



KIT **Wired & Tested**

Feature Packed Digital Storage!

The Bullshooter-II Digital Voice Storage

- ✓ Multiple message storage and selection
- ✓ Full function controls with 7 segment display!
- ✓ Variable output levels to match your equipment!
- ✓ Great for telephone hold announcements, broadcast announcements, and much more!

The BS2 provides up to 8 minutes of digital voice storage that can be broken down into a maximum of 8 separate stored messages. The message number is displayed on the 7 segment LED front panel display! Recording/playing/stopping is similar to a standard recorder, and you can start/stop/pause your message during both record and playback! The BS2 has a built-in, highly sensitive electret condenser microphone for recording your voice messages. You can also plug in an external microphone and even an external line level input for that professional studio sounding recording.

Playback-wise, the BS2 features adjustable line level outputs (two mono outputs for stereo inputs) to properly feed any application! You can also directly drive a speaker with the built-in amplified speaker output and monitor the levels with the built-in headphone jack. Whatever your application, the BS2 has you covered! Runs on 12-15VDC.

BS2C Bullshooter-II, Multi-Message Digital Voice Recorder Kit With Case Set
AC125 110VAC Power Adapter
BS2WT Factory Assembled & Tested BS2 with Case Set and Power Supply

\$69.95

\$9.95

\$99.95

Peak Hold LED Bargraph Meter

KIT

- ✓ Linear, log, or semi-log response scales
- ✓ Perfect for audio monitoring

Fast Response... PLUS Hold!

The PH14 series of LED bargraphs capture peak signals with great results! You can consider these bargraph units to actually be two complete LED bargraphs in one! There is the standard 10 segment bargraph with quick response and a second set of circuitry expressly designed to catch the peaks and hold them for easy display.

We offer 3 models of the PH series bargraphs: the PH14 Linear display for voltage indication and general use, the PH15 Logarithmic 3 dB/step model for audio and RF power displays and the PH16 Semi-Logarithmic model, which is ideal for audio VU meters. Includes the custom case set for a neat and professional finished look. Case size: 5"W x 1 1/2"H x 5 1/4"D.

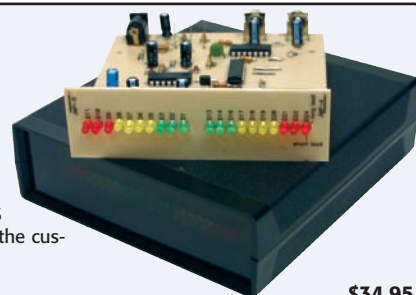
PH14C Linear Peak Hold Bargraph Meter Kit With Case
PH15C Log Peak Hold Bargraph Meter Kit With Case
PH16C Semi-Logarithmic Peak Hold Bargraph Meter Kit With Case
AC125 110VAC Power Adapter

\$34.95

\$34.95

\$34.95

\$9.95



Pocket Audio Generator

- ✓ Digital waveform generation
- ✓ Stereo out, dual RCA plugs

Test Those Inputs!

A perfect test source for stereo line inputs. Provides 50Hz, 100Hz, 1kHz, 10kHz, & 20kHz tones, plus 32 bit digital pink noise. Output is line level to two standard RCA plugs. Runs on two CR2016/2025 batteries not included. Measures 3.4" x 2" x 1". From Velleman.



K8065 Pocket Audio Generator Kit **KIT** **\$32.95**

Pocket Vu Meter

- ✓ LED bargraph display
- ✓ Built-in microphone

Watch That Music!

Hand held audio level meter that fits in your pocket! Built-in mic picks up music and audio and displays it on an LED bargraph. Includes enclosure shown. Runs on one 3V Li-Ion button cell, not included. From Velleman.

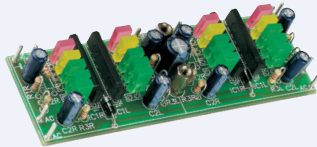


MK146 Pocket Vu Meter Kit **KIT** **\$8.95**



Dual Stereo Vu Meter

- ✓ 4 channels, 5 LEDs per channel!
- ✓ Great sensitivity!
- ✓ Compact PC board
- ✓ Runs on 14-18VDC



Match Stereo Levels At A Glance!

A VU meter displays the average volume level of an audio signal, providing a good indication of just how loud something is, and with its dual stereo LED indicators, this kit is a great way to compare two sets of levels side by side.

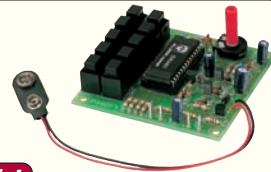
A total of 4 display channels indicate relative levels all on a small compact PC board ready to install in any of your audio applications. Standard green, yellow and red square LEDs are used throughout.

SPECIFICATIONS	
Indication:	-13, -8, 0, and +3dB
Sensitivity:	0dB = 0.775Vrms (adjustable)
Supply Voltage:	14-18VDC at 62mA
Dimensions:	1.1" x 3.9"

K2668 Dual Stereo Vu Meter Kit **\$19.95**

Effects Sound Generator

- ✓ 10 different sound effects!
- ✓ Speaker and line level outputs!
- ✓ 1 watt audio output
- ✓ Runs on 8-10VDC



Annoy Your Enemies, Amuse Your Friends!

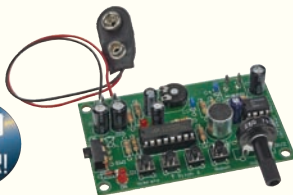
This pocket-sized kit is a great attention-getter! Just attach to any speaker and select from any of the following sound effects: machine gun, european siren, "phaser" gun, racing car with motor howl, screeching car tires on a curve, explosion, machine gun fire followed by explosion, "wild charge tune," "snake charmers tune," and a US siren! Ideal for DJs, parties, etc.

Powerful 1 watt output drives any speaker and line level output feeds any standard amplifier aux input. Runs on 8-10VDC or a standard 9V battery. From Velleman. Kids love this kit. *(A little more than their parents do after it's completed and operating!)*

K4401 Special Effects Sound Generator Kit **\$29.95**

Digital Voice Changer

- ✓ Alter your natural voice!
- ✓ Hi pitch, low pitch, vibrato, etc!
- ✓ Built-in microphone!
- ✓ Great for parties!



You Aren't Who You Are!

This voice changer kit is a riot! Just like the expensive units you hear the DJ's use, it changes your voice with a multitude of effects! You can sound just like a robot, you can change the pitch of your voice variably from low to high. For even more effect, add vibrato to your voice! Great for parties, recordings, bands, and the ever popular prank phone calls! Not that we endorse those incredibly funny prank phone call CD's, TV shows, and DVD's! Speaker output provides a powerful 1.5W output at 4 ohms. A line output is also provided to interface into your audio equipment... or telephone coupler! Runs on a standard 9V battery (not included). Board measures 3" x 1.8". From Velleman *(No, I only have all those CD's and DVD's for research purposes!)*

MK171 Voice Changer Kit **\$13.95**

Siren Sound Effects Generator

- ✓ Generates 4 separate sounds!
- ✓ Includes on/off switch!
- ✓ Includes PC mounted speaker!
- ✓ Runs on a standard 9V battery!



This Little Kit Is A Riot!

This fun little sound generator is more than a siren. Once assembled you can create your choice of 4 different sound effects: Police siren, fire brigade, emergency vehicle, and laser gun! Use the laser gun to go on a rampage and then just call in the police and fire vehicles to clean up your mess! Wow, how's that for catalog writing imagination?!

Variable pitch control allows you to customize the sound! Built-in PC board mounted speaker makes this kit ready to go when you're done. Runs on a standard 9V battery (not included). Measures 2.4" x 1.6". From Velleman. *(Did I say imagination?!)*

MK113 Siren Sound Effects Kit **\$12.95**

Electronic Metronome

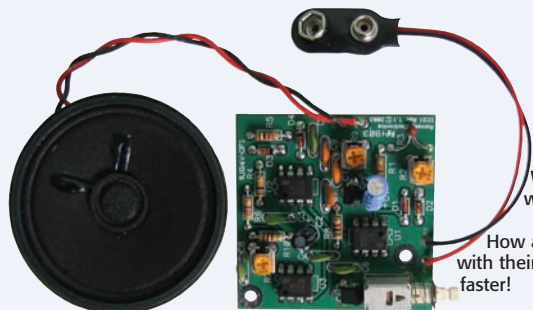
- ✓ Audible and visual indication!
- ✓ Adjustable volume and BPM!
- ✓ Built-in speaker!
- ✓ Compact size!



Keep Perfect Time!

For centuries musicians have used metronomes to keep a standard tempo, but mechanical wind-up metronomes are bulky and require winding. On the flip side, newer pre-assembled electronic metronomes tend to be pricy and cluttered with unnecessary features. This kit is perfect for anyone looking for a simple, compact, and inexpensive metronome that they can build themselves! Features controls for volume and beats per minute. The PC mounted speaker gives you a pleasant timing beat and a board mounted LED gives you visual indication for the "silent mode" of operation. Runs on a standard 9V battery (not included). From Velleman.

MK106 Electronic Metronome Kit **\$10.95**



KIT

Doesn't Crawl... Just As Annoying!

With the incredible popularity of the "Electronic Dripping Faucet" kit (EDF1, page 33) we figured we had to come up with something equally unique! Well, this one is unique... to say the least!

How about an electronic cricket? Sounds just like those little black critters that seem to come from nowhere and annoy you with their chirp-chirp! And just like the little critters, we made it sensitive to temperature so when it gets warmer, it chirps faster!

That's right, you can even figure out the temperature by the number of chirps it generates! Just count the number of chirps over a 15 second interval, add 40, and you have the temperature in degrees Fahrenheit! Not as fancy as a digital thermometer but much more unique! And unlike its little black predecessor, the ECS1 operates from around 50°F to 90°F! I don't think there are too many real crickets chirping away at 90°F! A unique thermistor circuit drives a few 555 ICs providing a variable chirp that is guaranteed to annoy everyone around you! But just watch their faces when you tell them the temperature outside!

Runs on 9-12VDC or a standard 9V battery (not included). Includes everything shown, including the speaker and battery clip, to make your cricket project a breeze. *(If it drives you nuts you probably can squish it under your feet to make it stop... but that voids the warranty!)*

ECS1 Electronic Cricket Sensor Kit **\$24.95**

Electronic Chirping Cricket Sensor

- ✓ Chirps like a real cricket!
- ✓ Senses temperature and changes its chirp accordingly!
- ✓ You can actually determine the temperature and amaze your friends!



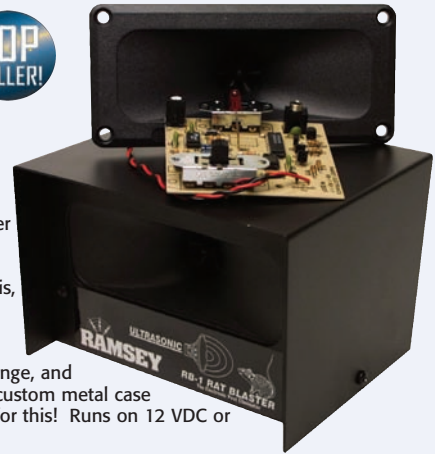
Rat Blaster Varmint Repeller

- ✓ Covers over 3,000 square feet
- ✓ Programmable frequencies for optimum repulsion
- ✓ Comparable to commercial units costing \$150!
- ✓ Build in your own case or wall, or use our custom case!
- ✓ Runs on 12VDC or our 110VAC power supply

KIT

**Eliminate Them...
Without Any Harm!**

**TOP
SELLER!**



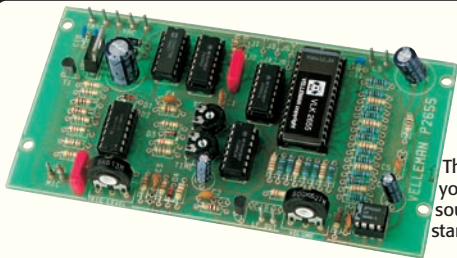
Sure, you've seen these things advertised before. Big claims and a huge price! Well we won't carry on about how you'll be able to keep Godzilla out of your garbage cans but we will say that this unit will do a nice job of keeping the neighborhood dog, cat, or deer away!

Here's the story. We had a problem at the boss's house keeping the deer out of the garden. The boss, being the electronic nut he is, bought one of these things and tried it. It worked pretty well so he planned to get another for protecting the shrubs but at \$150 a box he figured it was cheaper to build his own.

Here it is, cheaper and better! We've increased the power, put in a top-quality transducer (by Motorola), upgraded the frequency range, and made it affordable! A lot of customers prefer to build it into their own case (or even a garage, shed, or barn wall!) so we offer the custom metal case shown as a separate option. We're not thrilled by the price increase in the custom case... but the manufacturing costs skyrocketed for this! Runs on 12 VDC or use our AC adapter. (Hmmm, I wonder if this will work on kids...)

RB1 Rat Blaster Rodent and Animal Repeller Kit
CRB Matching Case & Knob Set for RB1
AC125 110VAC Power Adapter

\$59.95
\$39.95
\$9.95



KIT

**Automatically "Barks" At
The Sound Of Noise!**

Electronic Watch Dog

- ✓ A barking dog on a PC board!
- ✓ Two barking sounds!
- ✓ Automatic sound detection!
- ✓ Eats very little and never sleeps!

There are many times when it's nice to have a barking dog react to someone at your door or a strange noise in the house when you're gone, but not all of us can have a dog! The answer... the Electronic Watch Dog! This unique circuit generates two different sounds of barking dogs. You can select which "dog" you would like! Then when your electronic dog "hears" a strange noise it starts barking!

Unlike a real dog, the super sensitive microphone has adjustable sensitivity to control what activates it (I mean makes it bark!) The "dog" produces 2 watts audio output at 4 ohms. This dog doesn't eat dry or moist dog food, instead it eats 2-8VAC or 9-12VDC! And it's a little guy: only 5.6" x 3"! You can order the handy power supply below. If you're not building the doggie into your own case or application you can also order the custom case set below. From Velleman.

K2655 Electronic Watch Dog Kit
WCAH2851 Matching Case Set
AC125 110VAC Power Supply

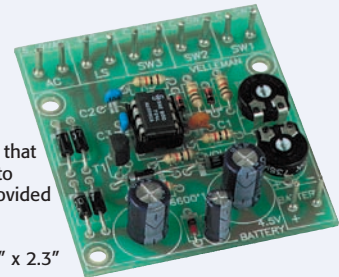
\$39.95
\$6.95
\$9.95

Electronic Multi-Tone Chime

KIT

- ✓ 1, 2, or 3 tone selectable!
- ✓ Adjustable tone and volume!
- ✓ Uses batteries or doorbell supply!

Replace That Old Bell!

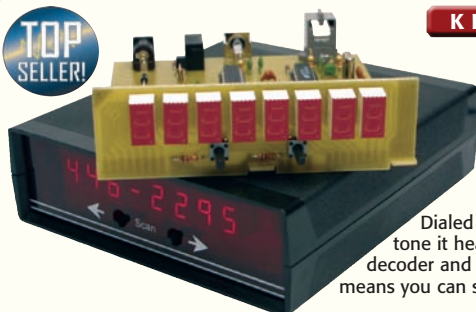


This electronic chime generates three different available chime tones which can be selected by individual switch closures. Perfect for replacing that old doorbell buzzer or bell. It can also handle three separate door sounds! The IC design provides a clean audio output of a third of a watt into any standard 8 ohm speaker (not included). The circuit runs on 4.5VDC (three 1.5V batteries, not included) or 6 to 9VAC which is normally provided by the old doorbell transformers! Just use that if you have one.

Terminals are included for three separate switch contacts, speaker output, AC, and 4.5V battery connections. The compact board measures 2.1" x 2.3" and can easily be installed in any suitable location. For a great finished look, order the recommended case set below. From Velleman.

K6600 Electronic Multi-Tone Chime Kit
G416 Recommended Case Set For K6600

\$24.95
\$8.95



KIT **Wired & Tested**

**Grab Those Numbers
Right Off The Air!**

Tone Grabber Touch-Tone Reader

- ✓ Built-in RJ11 phone jack for easy hook-up and line monitoring
- ✓ Super fast-capture numbers off the radio, repeater, phone line, etc.
- ✓ Big, bold 8-digit display with automatic insertion of dashes between number groups

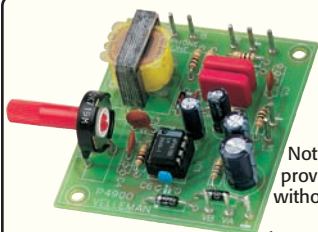
Dialled phone numbers, repeater codes, control codes, anywhere touch-tones are used, your TG2 will decode and store any DTMF tone it hears. A simple hook-up to any radio speaker or phone line is all that is required. Since the TG2 uses a central office quality decoder and a FLASH microprocessor it will decode digits at virtually any speed! The FLASH storage capability of the microprocessor means you can store 640-digits for 10 years - even with the power turned off!

The bright 8-digit LED display lets you scroll through the stored numbers at your leisure. To make it easy to pick out numbers or codes, a dash is inserted between any group or set of numbers that were decoded more than 3 seconds apart. Added features from its TG1 predecessor include an onboard RJ11 phone jack for easier phone line interfacing and an output latch jack offering an external trigger source when a user specified number (1 to 60 digits!) matches the monitored input!

The TG2 runs on any 8 to 15 volt DC power source and is both regulated and crystal controlled for the ultimate in stability. Includes the matching professional case set shown, measuring 5"W x 1 1/2"H x 5 1/4"D. (What a riot to watch the numbers come up as they dial them on the radio or TV!)

TG2C Tone Grabber Touch-Tone Reader Kit With Case
AC125 110VAC Power Adapter
TG2WT Factory Assembled & Tested TG2, With Case And Power Supply

\$69.95
\$9.95
\$119.95



KIT

Drives Speakers Or Mixers!

Group Listen Telephone Amplifier

- ✓ Connects directly to a phone line!
- ✓ Speaker and line outputs
- ✓ High performance, small size

Not a speakerphone, but a high performance isolated input amplifier that connects directly to a telephone line. Unlike a lot of amplifiers, this one provides both speaker output and line output. Speaker output is perfect for "group listen" applications with standard telephones for group gatherings without the inconvenience and interruption of vox operated speakerphones.

The K4900 also features line level output designed to be connected to the aux input of any standard audio mixer or amplifier. This makes it perfect for radio stations, home broadcasters, and larger applications that need to connect their phone line into their systems. Features a standard isolation transformer input for zero loading of the phone line. Speaker output is a half watt into 8 ohms. Line output is 0dB (.775Vrms). The circuit runs on 7-10VAC or 9-12VDC at 150mA. Board measures 2.5" x 2.1". This unit can be built into existing equipment, or as a stand alone amplifier with the optional G416 housing. From Velleman. (*Group listen is great, no speakerphone interruptions yet everyone in my office can hear!*)

K4900 Telephone Amplifier Kit
G416 Recommended Case/Housing For K4900

\$14.95
\$8.95

Phone Recorder Controller

- ✓ Undetectable on phone line
- ✓ Needs no battery, operates on telephone line power

KIT

Wired & Tested

Telephone Line Powered Automatic Control!

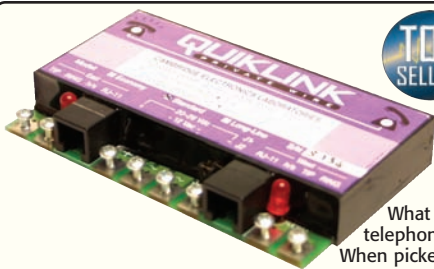


Keep a record of all your telephone calls - automatically. The TT1 connects anywhere on the phone line and will control any battery powered tape recorder that has standard microphone and control jacks. The recorder automatically starts and stops whenever the phone is used and records both sides of the conversation with excellent fidelity. Simply plug the TT1C into your recorder's microphone/control jacks, push "record" and you're all set. The moment there is activity on the phone line your recorder will start up and record both sides of the conversation. When the conversation is over, it will automatically stop your recorder!

Super-easy one hour assembly and a manual that tells you not only how to build the kit, but how it works as well. The controller is easy to use and looks great in the included custom case shown. Case size: 5"W x 1 1/2"H x 5 1/4"D. The TT1C is also available factory assembled and tested and ready-to-go! (*I had something like this connected to my 3" reel-to-reel portable recorder from Lafayette... Yikes am I old!*)

TT1C Tattle-Tale Recorder Controller Kit With Case
TT1WT Factory Assembled & Tested TT1 With Case

\$29.95
\$59.95



TOP SELLER!

Wired & Tested

Fully Automatic, Just Go Off-Hook!

Automatic Telephone "Ring Down"

- ✓ Instant off-hook ringdown access between two telsets
- ✓ Private full duplex intercom with selectable ringdown
- ✓ Instantly generates call on offhook, no dialing!
- ✓ Test ringing, answering, and signal-path functions of any telecom device

What is a telephone ring down, you may ask? They have been used for years as dedicated communications paths between two standard telephone sets. Over a single pair, with a phone at either end, merely going off hook with one phone immediately rings the other phone. When picked up you have a complete intercom path to talk. No dialing necessary! What are they used for?

Well, on the intercom or communications side they are commonly used for elevator phones, guard post hotlines, door entry phones in homes and offices, and on commercial job sites for rugged intercoms. But that's just the beginning!

They can also be used to test ringing, answering, and signal path conditions of devices, two-wire off premises extensions, PABX to Key System tie lines, and more. Ringing pattern is selectable to continuous ring; 1 on 1 off; 2 on 2 off; 2 on 4 off. Runs on 12 VAC at 500 mA (Power Transformer is included) or 20-28 VDC at 300 mA.

If you work on telephone equipment or are just looking for an ultra reliable telephone, the QLRD1 can't be beat! Measures 5/8 x 4 1/4 x 2 1/2 inches and is totally encapsulated in UL 94V-0 flame-resistant epoxy resin for long, reliable operation. (*I used to install ring-downs with rotary dial 500's! I guess I'm REALLY dating myself!*)

QLRD1 Automatic Telephone Ring Down, Factory Assembled & Tested

\$89.95

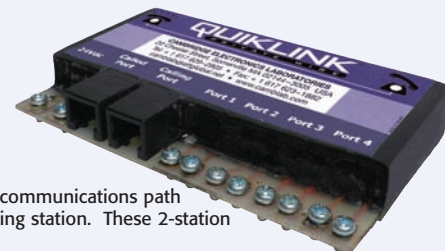
Call-All-Stations "Ring Down" Extender

New For 2008

Wired & Tested

- ✓ Extends your ring down to multiple stations
- ✓ Any off hook rings all stations
- ✓ Meets legal requirements for backup communications!
- ✓ Compatible with standard and electronic telephones
- ✓ Runs on 24 VDC or 12VAC

Calling All Stations... Calling All Stations!



The QLRD1 above is the ultimate (and very popular) telephone ring down. As described, it provides an ultra reliable dedicated communications path between two standard telephones while providing an automatic ring of the called station by merely going off hook with the calling station. These 2-station ring downs have been used for years.

But now the plot thickens! What if you needed to have multiple stations in the path? What if you needed up to 4 stations to simultaneously ring with an off hook of any one station? No problem with the new QLRD4 Call-All-Station Extender! Add it to the QLRD1 Ring Down and you now have a complete 4 station automatic ring down. If any station of the 4 goes off hook, it rings the other three stations. When a ringing station goes off hook to answer, a full duplex intercom path is established between all 4 stations!

It gets even better! With both units designed to run on 24VDC, the pair can provide the legal requirement for some public locations (ski lodges, etc.) to have a battery backed emergency communications system between several points. Use standard gel cells, telco batteries, even two car batteries in series to provide a complete stand-alone system. Use AC chargers or even solar chargers to keep the system charged. The extender can also be run on the 12VAC power source from the QLRD1!

The extender is compatible with standard and electronic telephone sets. Just connect the stations, use modular RJ-11 cables to connect to the QLRD1, provide 24 VDC, and you are all set. Just like the QLRD1, the extender measures 5/8 x 4 1/4 x 2 1/2 inches and is totally encapsulated in UL 94V-0 flame-resistant epoxy resin for long, reliable operation. Makes it easy to mount in a small outdoor call box or other suitable enclosure.

QLRD4 Call-All-Stations Ring Down Extender, Factory Assembled & Tested

\$69.95



Full Control From Any Telephone!

DTMF Remote Control Interface

- ✓ Remote control from any DTMF device!
- ✓ Call from your cell phone to turn on your lights!
- ✓ User configurable security code for your protection
- ✓ User tones confirm remote operation success!

This microprocessor controlled DTMF decoder fits the bill for multiple applications. Remotely control almost any device with the built-in relay circuitry. The DCI series unit continually monitors your phone line and looks for the proper user programmed security code. Once it is heard, the user may select which of the trigger relays to turn on or off. For your convenience, the DCI1C features four outputs.

Feedback tones from the DCI are then sent back over the line to confirm your selection. No more wondering if your commands are carried out as is commonly found with other similar devices! Now you can call home and when your answering machine picks up, control lights, security systems, or just about any number of other custom applications!

Provides four 5 Amp (1250VA AC/150W DC) relay outputs, each with its own sure grip screw terminal. Requires 9-18VDC at 300 mA. Our standard AC125 110VAC power adapter is available. The matching case & knob set is included to make your kit look professional and attractive in any setting.

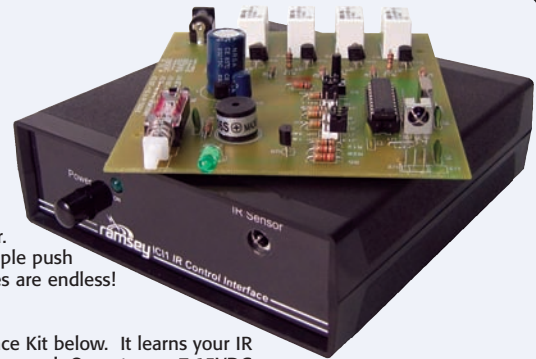
DCI1C DTMF Controller Interface Kit With Case **\$39.95**
AC125 110VAC Power Adapter **\$9.95**

Infra-Red Switch Remote Control Interface



- ✓ "Learns" the signal from your existing IR remote controls!
- ✓ Controls up to 4 separate relay outputs at 3 amps!
- ✓ Provides latch on/latch off functions
- ✓ Includes matching case set

Push On, Push Off... ANYTHING!



One of the latest in the series of ICI Infra-Red interfaces from Ramsey! Now it's a breeze to control any on/off function with any button of your existing IR remote control! That's right, any button of your EXISTING 38 kHz remote control!

Using the latest Motorola microcontroller as its "brain," the IC11 learns the IR code from any existing IR remote controller. An IR photodiode detects the IR remote and controls up to 4 separate relays. The relays turn on and turn off with a simple push of the remote control button programmed! The heavy duty relays are rated to switch up to 3A, so the control capabilities are endless! The relay outputs are brought out to 2-pin headers on the rear of the case to accept standard wire connections.

If you are looking to control audio volume with a standard IR remote control, check out our IC12 IR Audio Control Interface Kit below. It learns your IR remote control functions and can be programmed to provide a variable "volume control" to control any line level audio source! Operates on 7-15VDC or our optional AC125 power adapter. (*push on, push off... the pusher!*)

ICI1C Infra-Red Switch Control Interface Kit With Case **\$39.95**
AC125 110VAC Power Adapter **\$9.95**



Control ANY Audio Equipment!

Infra-Red Audio Remote Control Interface

- ✓ Controls audio levels from any of your equipment!
- ✓ "Learns" the signal from your existing IR remote controls!
- ✓ 2-Channel RCA audio in/out connections
- ✓ Includes matching case set

We took our IC11 IR Switch Control Interface (above) and went one step further! What if you want to control the audio level of something and there is no existing remote control function? Now it's simple! The IC12 simply goes in line with any audio source to give you full variable control with ANY existing IR remote control! Dual channels with separate controls give you the option of stereo or two separate audio sources!

Using the same Motorola microcontroller brain as the IC11, the IC12 learns the IR code from any existing 38 kHz IR remote controller. An IR photodiode detects the IR remote and provides a variable up/down control of your audio source. The IC12 has dual RCA line level input and output connectors on the rear panel for easy connection. Connect it in line with your audio component and you're all set!

Check out our IC11 (above) if you're looking to control on/off functions like lights, fans, etc. Also check out our IC16 (below) that provides a digital 4-bit output for customized applications! At Ramsey, we give you full control... of your remote control! Operates on 7-15VDC or our optional AC125 power adapter. (*One of our guys runs his 2-meter and 440MHz amateur receivers into his house intercom and separately controls the volume!*)

ICI2C Infra-Red Audio Remote Control Interface Kit With Case **\$39.95**
AC125 110VAC Power Adapter **\$9.95**

Infra-Red Digital Remote Control Interface



- ✓ Generates a digital output from any IR remote button!
- ✓ "Learns" the signal from your existing IR remote controls!
- ✓ Plugs into your existing projects and applications
- ✓ The perfect experimenters kit!

Create Any Digital Output!



We gave you on/off switch control with our IC11 (above) and we gave you variable audio control with our IC12 (also above) but now we've taken IR remote control one step further! The IC16 gives you a custom digital output from your IR remote control buttons! Using the same Motorola microcontroller brain as the IC11 and IC2, the IC16 learns the IR code from any existing 38 kHz IR remote controller. Once learned, a push of the button generates a 0-15 coded output on 4 lines depending on 16 different unique codes learned from the IR controller!

The board uses two standard 6-pin 0.1" center connectors for easy mounting, plug-in, and wiring. Out of IR range and want to get really creative? Use the IC16 with our RRW1AC which converts your IR to RF. The IC16 receives the RF and converts it to a 1 of 16 digital signal output! Just use your technical imagination (*The heart of Ramsey's 35 year history!*). Operates on 7-15VDC.

IC16 Infra-Red Digital Remote Control Interface Kit **\$39.95**



KIT

Don't Be A Control Freak!

Have you ever been frustrated with the range of your remote controls? Tired of having to bounce your IR remote off ceilings and walls? Do you want to run your system from another room or floor? This is the answer to your prayers! Extend the range of your remote controls through walls, around corners, and even from outdoors. Unlike store bought units, error correction can be turned on for pulse width regeneration. The foolproof IR repeater!

Take advantage of wireless technology with this practical kit that almost anyone can use! The RRW1A and RRW1B pair allow you to rebroadcast your AV Infrared 38 kHz remote controls wirelessly on 433 MHz up to 100 feet. Broadcast through walls, doors, floors, and ceilings. Use the pair to control the satellite receiver downstairs and watch it upstairs! Be outside and control the tunes on your stereo system in the living room!

Use multiple RRW1As to broadcast from multiple locations in the house to the single RRW1B receiver near your equipment. Feed the control freak in all of us! Both units operate on 7-18V AC or DC. For continuous operation, use our AC125 AC power adapter. Sleek matching cases measure 5"W x 1 1/2"H x 5 1/4"D.

Wireless IR Remote Control Repeaters

- ✓ Works with almost any remote control, does not need to be programmed!
- ✓ Transmitter converts your IR remote to RF
- ✓ Receiver converts transmitted RF back to your IR signal
- ✓ Operate from 7V to 18V AC or DC

RRW1AC	Wireless IR/RF Transmitter Kit With Case	\$29.95
RRW1BC	Wireless RF/IR Receiver Kit With Case	\$34.95
AC125	110VAC Power Adapter	\$9.95
RRW1P	Complete Package, RRW1A With Case, RRW1B With Case, Two AC125 Power Adapters (\$84.80 Value)	\$74.95

Wired IR Remote Receiver/Repeater

KIT

Don't Rearrange Your Room!

- ✓ Control those components anywhere in the house
- ✓ Works with any 38 KHz carrier IR remote
- ✓ Indicator shows IR reception
- ✓ Operates from 6V to 16V AC or DC

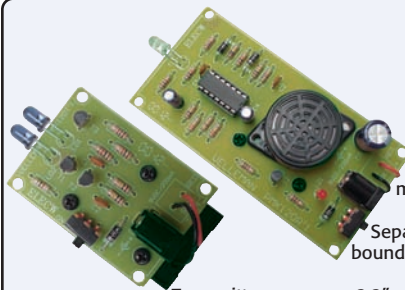


Have you ever been so frustrated with the range of your remote that you have to go through the effort of rearranging your entertainment room? Tired of having to bounce your IR remote off ceilings and walls? Do you want to control your system from another room?

The RR1 is the answer for you. We use a super integrated IR detector with bandpass filtering, AGC, and RFI shielding. Receiving range is easily over 35 feet! It extends the range of your IR remote controls to distances limited only to the wire length you use!

Locate the IR receiver in a convenient location reachable with your existing remote control and run the IR LED extender cable near the front of the equipment you wish to control. It's that easy! Keep your expensive components safely locked away and let the RR1 be the key to control them! While you're building this kit, learn the theory of how IR remotes work and how we use the power of a microprocessor to provide you with flawless performance and the added benefit of error correction! The included matching case set measures 5"W x 1 1/2"H x 5 1/4"D.

RR1C	Wired IR Receiver/Repeater Kit With Case	\$29.95
AC125	110VAC Power Adapter	\$9.95



KIT

Just Break The Beam!

IR Light Barrier Alarm

- ✓ Up to 13' range!
- ✓ Invisible light beam!
- ✓ Audible and visible alert

Create an invisible beam of light that will sound (and light) an alert whenever it is broken! Uses IR emitting LEDs for the transmitter to send a powerful beam up to 13 feet! Once setup and armed a break in the IR beam will sound a built-in 85dB audible alarm and illuminate a red alert LED on the receiver.

Separate transmitters and receivers are provided and both run on standard 9V batteries (not included). Great for store entrances, setting boundaries, and science fair projects to demonstrate how IR light works.

Transmitter measures 2.2" x 1.6". Receiver measures 3.9" x 2.0". On/off switches are included on both. Because IR light is used, this is not recommended for outdoor use. From Velleman. (*I'm putting one by my office door so I can look busy writing catalog copy when the boss walks in!*)

MK120	IR Light Barrier Alarm Kit	\$8.95
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15 Channel IR Hand Held Remote Transmitter

KIT

Control A LOT Of Stuff!

- ✓ 15 channels with 4 separate addresses!
- ✓ Professional rubber keypad!
- ✓ Compatible with multiple receiver kits
- ✓ Includes stylish case

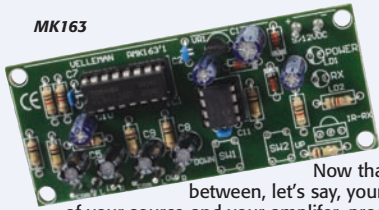


IR remote control is here to stay! Virtually all consumer electronic equipment is equipped with its own IR remote. So why not use IR to control your own projects, circuits, or household functions? Well, up to now there was no easy and "stylish" way to have a consumer attractive remote to use with your equipment. Consider that problem solved with the K8049 remote!

It features 15 separate channels that can be programmed to control anything using compatible receivers and receiver circuits. In addition, the K8049 features 4 separate addresses to allow the use of multiple receivers in one room!

You can use this single remote with the MK161, MK163, M164, K6712, and K8050 receivers featured on the following pages. It really doesn't get much easier than that! Includes built-in LED function indicators and runs on three standard AAA batteries (not included). From Velleman.

K8049	15 Channel IR Transmitter Kit	\$44.95
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KIT

Control Line Level Stereo Levels Between Units!

IR Stereo Volume Control

- ✓ Control line level stereo audio!
- ✓ Range 0dB to -79dB in 62 steps!
- ✓ Mute, up, down, and auto fade-in



Now that you have your K8049 remote control, look how simple it is to control stereo audio levels between, let's say, your PC and your stereo amplifier! Just put this little board in line with the line level audio output of your source and your amplifier, program it, and you're all set! Provides continuous "up" and "down" control from 0dB to -78dB attenuation in 62 steps! Also features audio "mute" with "auto fade-in". The tiny board is small enough to be built inside any existing unit you wish to control audio levels on. Runs on 9-12VDC for easy connection to existing power supplies or even a 9VDC battery. Measures 3.1" x 1.4" x 0.6".

If you want a stand-alone unit, check out the MK164! Built in a sweet little enclosure with an IR viewing window, it has audio input, output, and power jacks to make external connection a breeze. Just plug the unit between the audio source and the amplifier or destination and you're all set! Includes the slick little housing shown. Measures 3.2" x 2.2" x 1.3". From Velleman.

MK163 IR Stereo Volume Control Board Kit
MK164 IR Stereo Volume Control, External Kit With Enclosure

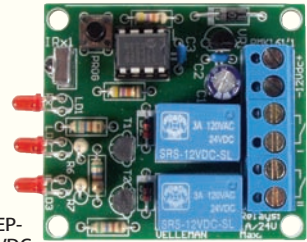
\$16.95
\$17.95

2 Channel IR Remote Receiver

- ✓ Two channel relay output!
- ✓ 'Learn mode' settings are stored in EEPROM
- ✓ Toggle or pulse selection for each channel

Program Two Functions!

KIT

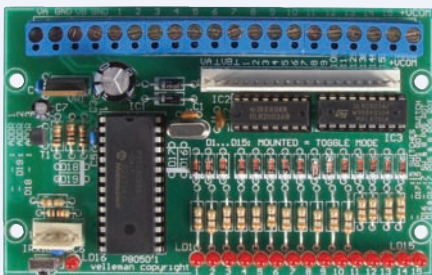


Use the sleek K8049 as the main remote for your IR control. Perhaps add an automatic light dimmer with the K6712. With 15 channels available on your remote, you'll have plenty of control room to spare! This tiny little receiver gives you two separate channel functions, providing relay closures for each!

Each control function can be set for either toggle or pulse mode to fit your specific application. Plus, all settings are stored forever in the built-in EEPROM! Channel and acknowledgement of reception are indicated on the attached LEDs. Relay outputs are rated at 24VAC/VDC at 1A. Runs on 12VDC at 0.75mA and measures a small 1.7" x 1.9" x .6". From Velleman.

MK161 IR 2 Channel Remote Receiver Kit

\$19.95



KIT

15 Channels, 3 Addresses... In A Single IR Receiver!

15 Channel IR Receiver

- ✓ 15 separate open collector outputs!
- ✓ 3 separate addresses!
- ✓ LED indicator of each output
- ✓ 4 separate modes
- ✓ Small compact board

Use this 15 channel IR receiver with your K8049 transmitter and control multiple devices in several rooms! Provides 15 channels of control with 3 possible separate addresses for use in multiple rooms. 4 operating modes provide 15 independent outputs, 15 rotary outputs, 7 independent outputs and 8 rotary outputs, or 7 rotary outputs and 8 rotary outputs independent from each other! Each output is an open collector rated at 50V/50mA.

Runs on 8-14VDC, 10mA all outputs off, 150mA all outputs on. Comes complete with one LED IR sensor. Order up to two additional LED IR Sensors below for up to 3 separate receive locations. PC board measures 2.8" x 4.5" and has easy to connect terminals for all outputs. From Velleman.

K8050 IR 15 Channel Receiver Kit
IR38DM LED IR Sensor

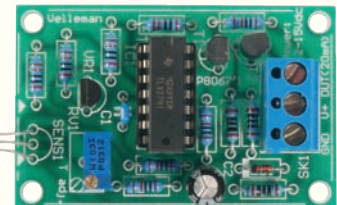
\$34.95
\$3.95

Temperature Sensor Module

- ✓ Measures -4° to +158° Fahrenheit!
- ✓ Highly accurate!
- ✓ Simple adjustment

Quick & Easy Temperature Sensor!

KIT

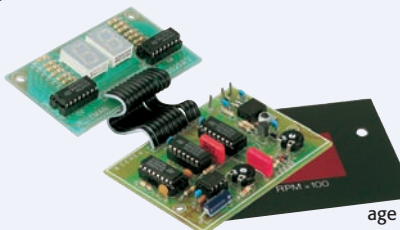


Looking for a general purpose, easy to interface temperature sensor for your projects? This is it! Whether you need to control heating and cooling of rooms or equipment, monitor temperatures in circuits, monitor your pool temperature, or simply put a temperature readout on your website, the K8067 fits the bill. With an accuracy of 2° over the full range!

The small board makes integration into your project or equipment simple, and the sensor device can be board-mounted or placed remotely. The temperature range is -20°C to +70°C (-4°F to +158°F). The output is a standard 0-20mA current loop for easy interfacing. Input voltage of 12VDC provides 0-5V output while an input voltage of 15VDC provides 0-10V output. Current consumption is 30mA max. Board measures 2.2" x 1.4" x 0.6". From Velleman.

K8067 Temperature Sensor Module Kit

\$19.95



KIT

The Easy Way To Display RPM!

Digital Tachometer

- ✓ 100 to 9900 RPM!
- ✓ Easy calibration!
- ✓ Includes front bezel

What a simple, neat, and "custom" way to add a tachometer to your vehicle! This digital tachometer includes two bright 7 segment LED displays to provide a unique digital display of your RPM! Range is 100 to 9900 RPM to cover a slow idle to a leadfoot (usually followed by a blown engine!). An attractive red filter front bezel is included to give you a perfect custom look! Runs on vehicle voltage (10-15VDC) at 200mA.

The small main board measures 3.2" x 2.4" and the display PCB measures 3.2" x 1.8". The matching red filter bezel measures 2.8" x 3.5". If you're looking for a super looking tachometer for your vehicle, the K2625 does the trick. From Velleman.

K2625 Digital Tachometer Kit

\$32.95



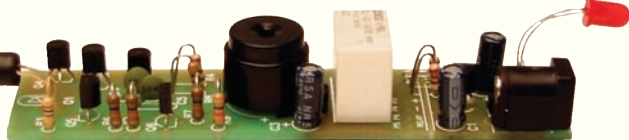
Laser Light Trip Sensor

KIT 



- ✓ Set up a security fence for over 500 yards of continuous coverage
- ✓ Includes both audible and visible alert indicators!
- ✓ 5 Amp external trigger relay for custom applications!
- ✓ Detector standby current draw of only 10 uA!!!

TOP SELLER!



Build It Tonight, Sleep Tight!

For years hobbyists have been intrigued by the possibility of using a 'beam of light' to control other devices! The abundance of inexpensive laser elements that have now become available has further pushed the demand for useful products and experimental kits. The LTS1 Laser Trip Sensor was developed with the intention of providing a fun and educational kit that can actually be used constructively upon completion.

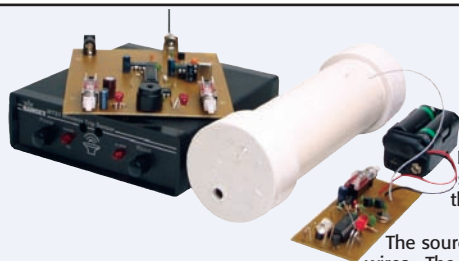
The kit comes with all you'll need to set up your own laser fence: the laser element (small keychain type high power laser pointer!), the PVC enclosure, and the laser detector with built-in Audible and Visible Alert indicators. *(And yes, you can put the laser pointer on your keychain instead, and get thrown out of concerts, no problem!)*

The LTS1 can be used in a number of different ways. The break-away circuit board gives the user the flexibility of remotely mounting the detector circuit (optionally powered with a standard 9 Volt battery) over 500 yards away without the need for mirrors. If mirrors are used, arrangements in a doorway or as a perimeter fence can almost guarantee detection of any unwanted guests.

For added functionality, the relay output (5 Amp rating) can be used to drive other devices such as an event counter, lights, or even camera modules! Operates from 9 - 18 VDC @ 90 to 100 mA. Detector portion can use a standard 9V battery with long life. Board dimensions: 4" L x 1" W (max component height: 5/8"). Includes a 6" length of 1/4" ID PVC to conveniently house and mount the board assembly. *(Now all you need is a fog machine so you can see the laser beams just like those spy movies!)*

LTS1 Laser Light Trip Sensor Alarm Kit
AC125 110VAC Power Adapter

\$29.95
\$9.95



KIT 

Wired & Tested

Remotely Detect Motion!

Wireless Trip Sensor Alarm

- ✓ Our popular Laser Trip Sensor...**NOW WIRELESS!**
- ✓ Remote sensing up to 300' away
- ✓ Provides both audible and visible alarms

Following up on the popular Laser Trip Sensor, we now bring you the Wireless Trip Sensor! We combined a very low power sensor along with a powerful UHF transmitter that can send from over 300 feet away. Each transmitter and receiver can be set for their individual code allowing you to protect various "zones" and telling you which zone was violated!

The source is generally placed near a continuous power source and the remote transmitter can be placed anywhere without running any wires. The transmitter is typically effective for up to 600 feet. The WTS1 will constantly look at the ambient light in the room or area you wish to protect and sense any blockage of the light. Once that happens it sends its wireless signal to the matching receiver to alert you! No definitive trip paths and no wires!

The sensor/transmitter mounts in a standard piece of 1/2" PVC pipe (included) for easy and inconspicuous mounting. Being battery powered, there are no wires or plugs attached. The receiver includes a visible LED alarm as well as a built in audible alarm. Once tripped, the alarm remains on until it is reset by the front panel reset switch. Transmitter and receiver work at 433MHz and are designed around our proven RF modules. Receiver includes a built-in wire whip antenna and the attractive black custom case set shown. The transmitter operates on four AA batteries (not included) and the receiver runs on 9-15 Volts DC, or our AC125 power adapter (optional). Case size 5"W x 1 1/2"H x 5 1/4"D. Find out when someone goes into that room with the Wireless Trip Sensor!

WTS1C Wireless Trip Sensor Kit With Case
AC125 110VAC Power Adapter
WTS1WT Factory Assembled & Tested WTS1 With Case And Power Supply

\$64.95
\$9.95
\$104.95

Microwave Motion Detector

- ✓ Great introduction to microwave basics
- ✓ Ideal for home alarms

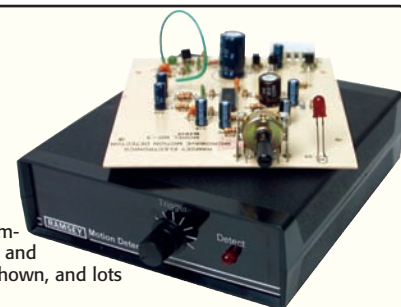
TOP SELLER!

KIT 

Don't Cook... Detect Motion!

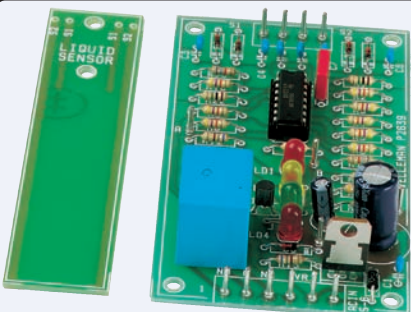
This unit sends out a microwave signal and looks for a return (a moving object that will reflect back some microwave energy) and then detects it. Since microwaves *(no, you won't get cooked or burned by them!)* are used - heat, light, sound or vibration will not affect the sensor!

This makes it ideal for car and home alarms, outdoor and garage light operators, animal in-your-garbage alarms, and tons more ideas limited only by your imagination. The MD3C is a great introduction to the basic principles of our SG7 "Speedy" Personal Speed Radar Gun and you can use it to investigate the properties of microwaves. Kit includes detailed instructions, theory of operation, the custom case set shown, and lots of applications and hook-ups. Runs on 9 to 15 VDC. Case size: 5"W x 1 1/2"H x 5 1/4"D.



MD3C Microwave Motion Detector Kit

\$34.95



KIT 

Check The Water Level Remotely!

Liquid Level Controller

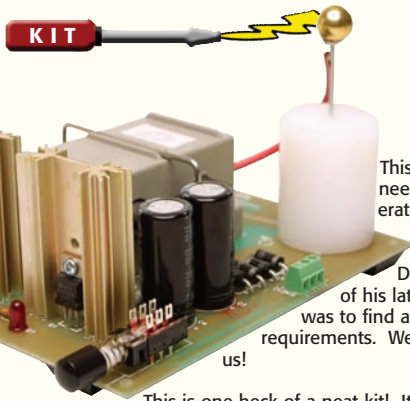
- ✓ LED level indicators!
- ✓ Relay switch output!
- ✓ Selectable alarm output!

If you have a reason to monitor the level of water or other liquids, the K2639 Liquid Level Controller is just the kit! Not just an alarm like its little Mini-Kit brother the MK108, it gives you an LED display of LOW, MIDDLE, or HIGH levels. You can also have it turn on a pump or switch open a valve with a 240VAC, 3A relay output. Plus, there is an alarm output that you can selectively set to sound under a HIGH or LOW condition.

Runs on 12-14VAC or 16-18VDC. Relay output is rated 3A at 240VAC. Main controller board measures 4.1" x 2.4". Separate sensor board measures 4.1" x 1.0". If you're looking for a nice matching power supply, get the matching PWR25. Now there are no excuses for a wet basement! From Velleman. *(Well, actually there IS an excuse for a wet basement... I never put one of these down there and what a mess!)*

K2639 Liquid Level Controller Kit
PWR25 12VAC Power Supply

\$23.95
\$10.95



Shocking Results... Literally!

This new kit was conceived by one of our engineers that likes to play with things that can generate large, loud sparks, and other frightening devices.

During the process of looking for parts for one of his latest experiments he discovered how difficult it was to find a high voltage transformer that met his requirements. Well, we had a super unit designed expressly for us!

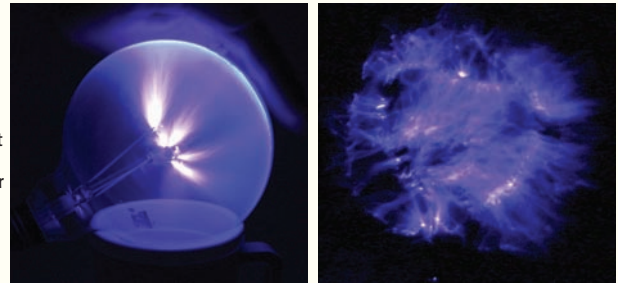
This is one heck of a neat kit! It really serves no purpose other than producing stunning lighting displays, drawing big sparks, scaring the neighbors and performing lots of high voltage experiments. But sometimes that's a great purpose for a kit!

In the picture to the right we took a regular clear "Decora" style light bulb and connected it to the PG13. WOW! A storm of sparks, light tracers and plasma filled the bulb! Holding your hand on the bulb doesn't hurt a bit and you can control the discharge!

It can also be used for powering other experiments... let your imagination be your guide! The high voltage at the terminal won't electrocute you, so it's relatively safe, but it can burn you, so use caution. Can also be run from 5-24VDC so the output voltage can be directly adjusted by simply adjusting the input voltage! This is for advanced experimenters only and not for the faint of heart! (Unless you buy the ECG Kit, then it's OK!)

Spark Generating HV Plasma Generator

- ✓ Generate 2" sparks to a handheld screwdriver!
- ✓ Light fluorescent tubes without wires!
- ✓ Build your own Plasma Balls!
- ✓ Generates up to 25kV @ 20 KHz from a solid state circuit!



PG13 Plasma Generator Kit \$64.95
PS21 16VAC Output Power Adapter \$19.95

Air Blasting Ion Generator

- ✓ Generate negative ions along with a blast of fresh air without any noise!
- ✓ Generates a steady state DC voltage at a constant current, not pulsed!
- ✓ Generates 7.5kV DC negative, 400uA. That's a lot of ions!

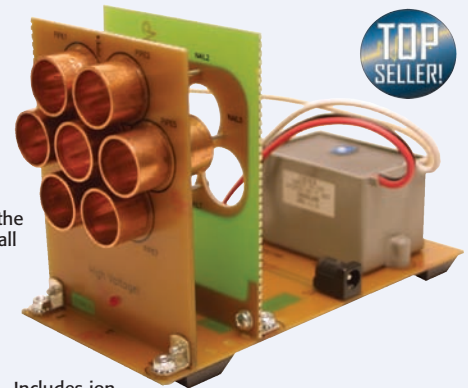


Generate A Breath Of Fresh Air!

This nifty kit includes a pre-made high voltage ion generator potted for your protection, and probably the best one available for the price. It also includes a neat experiment called an "ion wind generator". This generator works great for pollution removal in small areas (like after grandpa gets done in the bathroom!) and moves the air through the filter simply by the force of ion repulsion!

No fan blades, no noise, just swiftly moving, charged air! Gee, have we heard of this technology on a boatload of air cleaner infomercials lately? It's amazing when you get this built and actually feel the air flow and smell the very special clean ion smell. The first engineering prototype quickly went into the Ramsey employee restroom!

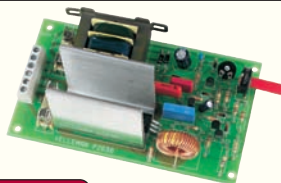
Learn how modern spacecraft use ions to accelerate through space and why ion engines are ideal for long-distance space travel. Includes ion power supply, 7 ion wind tubes, and mounting hardware for the ion wind generator. Runs on 12-15VDC at 500mA. (Caution...do not grab the output of the transformer, all the ions may be sucked out of your body! And don't you just hate it when that happens!)



IG7 Ion Generator Kit \$64.95
AC125 110VAC Power Adapter \$9.95

AC Motor Speed Controller

- ✓ Load 24-240VAC at 5.5 amps!
- ✓ Input voltage 110-240VAC!
- ✓ Speed range 5-95%
- ✓ Low RFI



Adjust Speed But Maintain Torque!

This controller was designed to control AC motors with carbon brushes, anything from drills to vacuum cleaners to saws. Unlike normal dimmers there is a phase-cut only once per period.

SPECIFICATIONS	
Voltage Supply:	110-240VAC
Load Voltage:	24-240VAC, 5.5A maximum
Speed range:	5-95% of rated motor speed
Dimensions:	5.1" x 3.0"

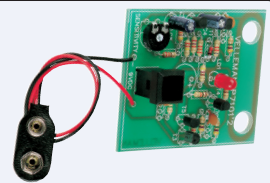
The moment of cutting determines the speed, which can be adjusted from 5-95%. Thanks to this control, this kit provides high torque even at low speeds! Not just for 110VAC and 220VAC motors, this kit can also be used for low voltage (24VAC) AC motor loads.

The supply and load circuits are electrically isolated from each other for both safety and reliability. Unlike a lot of AC controllers, RFI is suppressed to eliminate noise and interference. AC power input is 110-240VAC. Load voltage is 24-240VAC. Measures 5.1" x 3.0". From Velleman.

K2636 AC Motor Speed Controller \$32.95

Voltage Wire Detector

- ✓ Find wires up to 4" away!
- ✓ LED indicator shows wire proximity!
- ✓ Compact PC board
- ✓ Runs on a standard 9V battery



Find It Before The Nail Does!

How many times have you driven a nail or screw into a wire behind a wall? Well, I don't know about you, but I certainly have! Especially those long drywall screws that love to cut right through a chunk of romex cable!

SPECIFICATIONS	
Indication:	Flashing LED, buzzer optional
Sensitivity:	Adjustable, up to 3.9"
Supply Voltage:	9V battery
Dimensions:	2.2" x 2.5"

This detector kit will let you easily search for wires inside or behind walls, as well as track down interruptions. Simply hold the device around the area you wish to check and the LED will begin to flash when it gets near a wire with supply voltage. The faster the flashing, the closer you are to the wire!

If you would prefer an audible cue, the kit is built to work with an optional PC mounted buzzer as well. Board measures 2.2" x 2.5". From Velleman. (Yes, the wall was just finished, and yes, it was a 220V line for a baseboard heater, and yes, I had to open up the wall!)

K7101 Voltage Wire Detector Kit \$9.95
SV4125 Optional PC Board Buzzer \$4.95
G407 Recommended Case Set for K7107 \$6.95



200 kV Van de Graaff Generator

Wired & Tested

KIT

- ✓ 200,000 volt potential!
- ✓ Sparks up to 5"!
- ✓ Operates in high humidity!
- ✓ Available kit or assembled & tested

**Dazzle Them With Huge Sparks!
Make Their Hair Stand Up On End!**

Create your own lightning with these time-tested devices that have delighted students for decades! Named after the inventor Van de Graaff, a physicist who built the first generator in 1929 at Princeton University. This machine produces low-amperage static electricity that can be "shocking" but perfectly safe. Two different pulleys with 2 neoprene belts inside a 1 3/4" plastic column create and carry a static charge up to the 7" polished aluminum collector globe. You can draw out this static charge in a burst of lightning, sparks, or you can even set each hair on your head on end! It's an incredible display!

The entire unit is 18" tall, runs on 110VAC, and includes a ground clip for discharge wands. Our comprehensive instruction book tells you how to raise hair, produce lightning and electric wind, experiment with St. Elmo's fire or electrostatic attraction and repulsion. For a stunning display, use the matching "discharge wand" with your VG200 and watch the sparks fly between the two globes!

If you're looking for a really neat experience and want to learn the basics at the same time, the Van deGraaff generator kit is for you. If you can't wait to build it and just want to have a ball with the sparks, we even offer it factory assembled and tested! Your choice! If 200 kV isn't enough zap for you, check out our VG400 below! (So we got these in, our techs set one up, and they called me to make my hair stand up on end...wait, my hair fell out when I was 22!)

VG200W
Discharge
Wand



VG200 200 kV Van deGraaf Generator Kit
VG200WT Factory Assembled & Tested VG200
VG200W Matching Discharge Wand, 1.3' Rod

\$119.95
\$139.95
\$59.95

Wired & Tested

**When 200,000 Volts...
Just Isn't Enough!**



What's the matter, our 200 kV Van deGraaff doesn't have enough "stooch" for you? You want even more of your hair to stand straight up? You want long sparks? Well, for you die-hard shock fans, here you go; how does 400 kV sound? Just like its little brother the VG200, it can create lightning and make hair literally stand up on end! The VG400 produces up to 400,000 volts with special neoprene belts inside a 3" diameter transparent butyrate column to carry the 10 microamp charge up to the whopping 13" polished aluminum globe! It proudly stands 35.5" tall with a very heavy metal base for rock stable operation.

The foolproof brush assembly never needs adjustment to guarantee flawless operation... and lots of sparks! The VG400 runs on 110VA and includes a power cord, on/off switch, and a grounding terminal for discharge wands. Just like the VG200, we include a comprehensive instruction book that nicely describes all the experiments and displays you can produce.

If you really want to put on a show use the heavy duty matching VG400W discharge wand and watch the action between them! Grounded to the VG400WT the sparks really fly! It's incredible and produces a fantastic display! The high power VG400 is available factory assembled and tested only to assure you perfect and safe operation. When you receive it, just plug it in and you'll have a hair-raising experience... we guarantee it! If you have a hankering to safely play around with 400,000 volts, check out this high-power Van deGraaff generator!

VG400W
Discharge
Wand

VG400WT 400 kV Van deGraaf Generator, Factory Assembled & Tested
VG400W Matching Discharge Wand, 2.6' Rod

\$439.95
\$69.95

DC Motor Speed Control

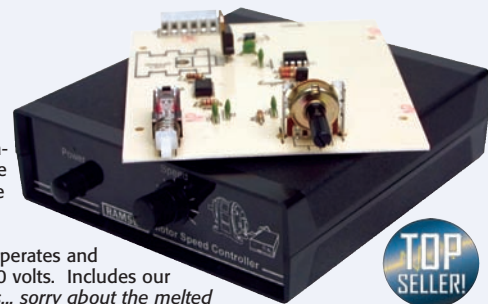
KIT

- ✓ Real pulse width modulation for accurate, stable motor control
- ✓ Controls DC motors from 3 to 50 volts - up to 10 Amps!

**Full Power...
Any Speed!**

Controlling a DC motor's speed is not as easy as just varying its supply voltage. The motor loses torque (power) as the voltage is lowered and it finally stops rotating. The MSC1C uses a technique known as "Pulse Width Modulation" - PWM - to control speed. This is the same system used on electric cranes, buses and subway cars. With PWM the motor receives full voltage whenever energized - however, the duration of the voltage changes; it's sort of like flipping an on/off switch very rapidly! The motor rotates smoothly and with full power - no matter what the speed.

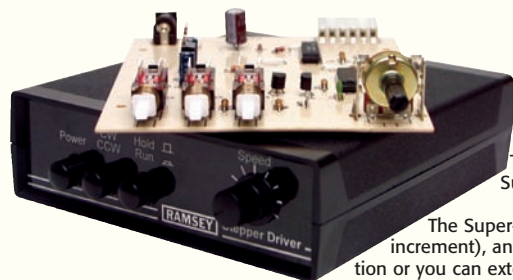
The MSC1 will control DC motors from 3 to 50 volts at up to 10 amps! Complete instructions detail how the PWM circuitry operates and some hook-up ideas. Assembly takes only an hour or two. Kit operates on 9 to 12 VDC and controls motor supply of 3 to 50 volts. Includes our custom case set measuring 5"W x 1 1/2"H x 5 1/4"D. (To our friend that tried to use this to control 480V/100A industrial motors... sorry about the melted case!)



TOP
SELLER!

MSC1C DC Motor Speed Control Kit With Case

\$34.95



KIT

**Finally...A Stepper For All
Those Surplus Motors!**

TOP
SELLER!

Stepper Motor Controller-Driver

- ✓ Controls direction, step size, and power to the motor
- ✓ Output drives 5 to 15 volts
- ✓ Uses Motorola Stepper Motor Driver IC Chip

The motors are top quality but how the heck do you drive them without shelling out a fortune? Easily, with the Ramsey Super-Stepper! Build an accurate positioner, X-Y controller, plotter or even a Robot!

The Super-Stepper will drive almost any stepper from 5 to 15 volts. You'll be able to control direction, speed, step size (rotational increment), and even power-down the motor after rotating it. An on-board clock generator is provided for easy hook-up-and-go operation or you can externally drive the kit for more exotic control.

We give complete details and ideas for additional uses. Put those versatile, first rate (and cheap!) motors to work with this exciting kit. Includes the matching black custom case set. Operates on 5 to 15 VDC. Case size 5"W x 1 1/2"H x 5 1/4"D.

SMD1C Stepper Motor Driver Kit With Case
AC125 110VAC Power Adapter

\$34.95
\$9.95



KIT

Wired & Tested

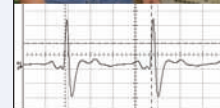
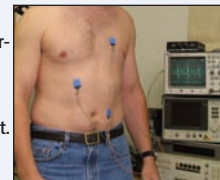


Check Your Own Heart & Stay Healthy!

Electrocardiogram ECG Heart Monitor

- ✓ Visible and audible display of your heart rhythm
- ✓ Re-usable sensors included; just like visiting the lab at the hospital!
- ✓ Bright LED "Beat" indicator for easy viewing
- ✓ Monitor output for professional display on your oscilloscope
- ✓ Simple and safe 9V battery operation

One of the main reasons we designed the ECG1 was to answer a long running debate here in the engineering department. We wired up the "Boss" and finally confirmed he does not have a heart! Use the ECG1 to astound your physician with your knowledge of ECG/EKG systems.



Enjoy learning about the inner workings of the heart while at the same time covering the stage-by-stage electronic circuit theory used in the kit to monitor it. The three probe wire pick-ups allow for easy application and experimentation without the cumbersome harness normally associated with ECG monitors.

The documentation with ECG1 covers everything from the circuit description of the kit to the circuit description of the heart! Multiple "beat" indicators include a bright front panel LED that flashes with the actions of the heart, an adjustable level audio speaker output supporting mono or stereo hook-ups, and a monitor output to view the traditional style ECG/EKG waveforms you see on Gray's Anatomy... or in the ER!

The fully adjustable gain control on the front panel allows the user to custom tune the differential signal picked up by the probes giving you a perfect reading every time! Includes the matching custom case set shown and operates on a standard 9VDC battery (not included). This is NOT a medical device; it is intended for hobbyist usage only. If you experience any symptoms, seek medical help immediately! (Editors note: This kit is not intended for catalog editors and webmasters of Ramsey Electronics; it's just way too late for us!)

ECG1C Electrocardiogram Heart Monitor Kit With Case
ECG1WT Factory Assembled & Tested ECG1 With Case And Power Supply
ECGP10 Set of 10 Replacement Reusable Probe Patches

\$44.95
\$89.95
\$7.95

Solar Generator Briefcase

Wired & Tested

- ✓ Powerful 13W generators!
- ✓ 14VDC, 750mA
- ✓ Folding briefcase design

Steal From The Sun!



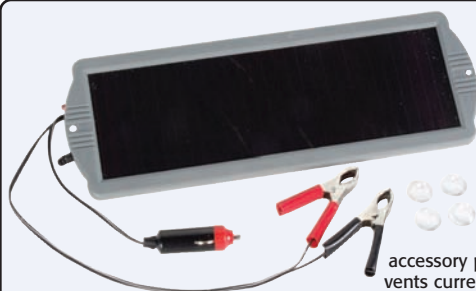
So you're outdoors away from the nearest electrical outlet and you need power. What do you do? Until now you had to have a small gas powered generator. That gets a tad bit bulky, heavy, and with the fuel needed, dangerous. Those days are long gone! Carry along your Solar Briefcase and capture the power from the sun... it's free!

This incredibly handy package of power is great to run laptops, small electric hand tools, DC refrigerators, GPS systems, portable electronics, and a whole lot more! It's also great to charge your batteries. The two powerful solar panels generate 13 watts of power. That's 14VDC at a working current of 750mA! That's more than the average plug-in power supply!

Detachable connectors are provided for a variety of applications. The briefcase design measures 20.1" x 14.7" x 1.6" and weighs a scant 9.7 lbs.

SOL8 Solar Generator Briefcase, Factory Assembled & Tested

\$149.95



Wired & Tested

Keep Your Battery Charged!



Solar Vehicle Trickle Charger

- ✓ Works with any vehicle!
- ✓ Easy window or visor mounting!
- ✓ Easy connections

We've all been there; your car sat in a parking lot for a week or so, you came back and the battery was flatter than a pancake! It doesn't take much to drain a battery down if the vehicle is not run, and today's vehicles have electronics draining the battery 24/7 whether the car is on or off!

Now you can rest assured you will never have a dead battery! Just keep this handy solar trickle charger plugged into your accessory power jack (cigarette lighter plug for those of you that don't know the new name!) and you are all set. Built-in protection prevents current reversal. Provides 14.5VDC at 125mA. Comes complete with cigarette lighter plug, battery clamps, and window suction cup mounts. If your car sees the sun, your car's battery will never be dead! (I was skeptical, so I put one in my seasonal car that's stored more than it's driven... it was never dead! And it normally is!)

SOL5N Solar Vehicle Trickle Charger, Factory Assembled & Tested

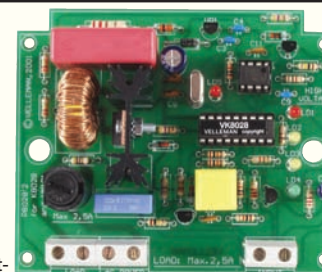
\$29.95

Multifunction Dimmer Kit

- ✓ Microcontroller technology!
- ✓ 13 different functions!
- ✓ Works with resistive & inductive loads!
- ✓ Soft start prolongs the life of bulbs!

The Ultimate Dimmer... With EPROM Backup!

KIT



SPECIFICATIONS	
Operating voltage:	110-125VAC or 220-240VAC
Frequency:	Automatic detection 50/60Hz
Maximum load:	2.5A (300W/120VAC)
Dimensions:	3.9" x 3.2" x 1.4"

Impulse switch, staircase light control, slow on/off dimmer, interval timer, and speed adjustment for fans are just some of the features you'll have at your fingertips when you build this dimmer kit!

Works with both resistive and inductive loads so you can control control light bulbs, high-voltage halogen lighting, or low-voltage halogen lighting with a ferromagnetic transformer. Also includes soft-start

technology to prolong the life of bulbs, fault protection, independent delay times, and EEPROM memory backup to save settings in case of power failure. 2 delay times (5 seconds to 2 hours) can be programmed through the learning mode. Board measures 3.9" x 3.2" x 1.4". From Velleman.

K8028 Multifunction Dimmer Kit

\$32.95



Mini-Kits...Fast, Easy, FUN!

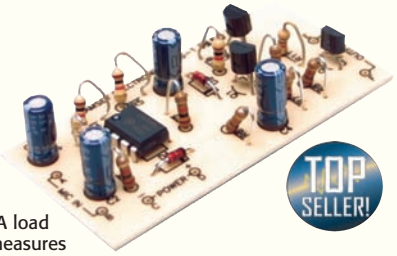
Mini-Kits are handy, easy-to-build, easy-to-use, functional kits that can be used alone or as building blocks in larger, more complex designs.

Automatic VOX Voice Switch

KIT

- ✓ Use your voice or noise to control!
- ✓ Directly switches relays or low voltage loads up to 100mA!
- ✓ Endless applications!

Automatic Voice Control!



TOP SELLER!

Our most popular Mini-Kit, the VS1 Voice Activated Switch (VOX) will provide a switched output when it "hears" sound. Use it to key a transmitter for hands-free PTT, turn on a tape recorder automatically when people are talking in a room, turn on lights, or anything else you can imagine... all controlled by the sound of your voice!

How about having your garage lights turn on when you beep your horn? The possibilities are endless! The output drives up to a 100mA load such as a relay, tape recorder control line, transmitter PTT line, etc. Runs on 6-12VDC for easy integration into any equipment. Board measures 2 1/2" x 1 1/2" x 1 1/4".

VS1 Automatic Voice Activated VOX Switch Kit

\$9.95

Super Snoop Amplifier

- ✓ High sensitivity, long distance listening!
- ✓ Powerful 2W audio output!



Super High Gain!

Here's a super sensitive amplifier that will pick up a pin drop at 15 feet! It's an ideal general purpose amplifier, too. Full 2 watts audio output is great for boosting low power receivers and radios.

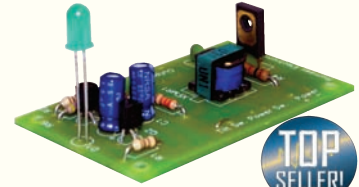
When wired for high gain, makes an excellent room monitor or "big ear" mic amp... easy to listen in on "wildlife" both in the field and in the city! Runs on 6-15VDC at 500mA. Drives any speaker. Measures 1 1/2" x 1 1/2" x 1 1/2".

BN9 Super Snoop Amplifier Kit

KIT **\$9.95**

Tickle-Stick

- ✓ Shocking but harmless fun!
- ✓ You'll let go quick
- ✓ Teasing LED indicator!



TOP SELLER!

Get The Shock Of Your Life!

Tickle or stimulator - take your pick... once you grab it, you'll let go quick!! Mount this little kit plus a secret switch - like a mercury tilt switch - in an ingenious can or box and watch the fun. Adding a bright ribbon bow is remarkably effective at baiting the unwary! The kit has a pulsing 80 volt tickle output and a mischievous blinking LED. And who can resist a blinking light!

Great fun for your desk, workbench, or coffee table... "Hey, I told you not to touch!". Runs on 3-6 VDC battery power (not included). This kit has become a fixture at our Hamfest displays, providing us, and others who are in the know, hours of fun! Measures 1 1/2" x 3/4" x 2 1/2".

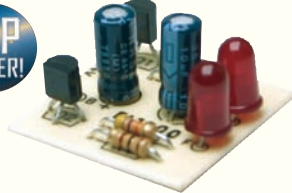
TS4 Tickle Stick Kit

KIT **\$12.95**

LED Red Blinky

TOP SELLER!

- ✓ Tweak a child's interest!
- ✓ Perfect 1st learning kit!
- ✓ Thousands and thousands sold!



Great Starter Kit!

Alternately flashes two jumbo red LEDs. This is the kit you've seen on name badges, buttons, hats, and toys, but there's more to it than that! Add a couple of relays and Christmas light strings and you've got yourself a super light chaser just like the theater marquee. Add a zener diode and make an attention getting overvoltage warning light!

Runs on 3-9 VDC, typically a 9V battery (not included). Used throughout the world as the first learning kit for students young and old. Measures 1" square.

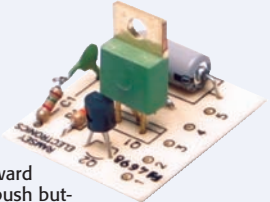
BL1 LED Red Blinky Kit

KIT **\$7.95**

Electronic Siren

TOP SELLER!

- ✓ Just like the police cars!
- ✓ 5W audio output!



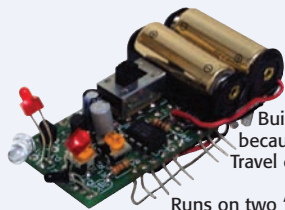
Here Come The Cops!

The SM3 siren exactly duplicates the upward and downward wail of an electronic police siren. A closure (typically a push button) generates the upward wail, releasing the switch makes it return downward.

Powerful 5 watt audio output drives any speaker but a "horn" type speaker provides the loudest results. Runs on 6-12 VDC, typically a small 9V battery. Great little kit to build into your projects or as a stand-alone fun generating siren!

SM3 Electronic Siren Kit

KIT **\$7.95**



KIT

THIS Bug Doesn't Eavesdrop...It Crawls!

Built around a couple of subminiature vibrating cell phone motors, the bug wanders around looking for things to bump into! Don't worry though, because sensors below his blinking eyes sense obstacles and make him turn away! Likewise, you can steer him around with flashlights or laser pointers! Travel direction and pattern are customized with separate speed and sensitivity controls.

Runs on two "N" batteries (not included). Has two brilliant blinking red LEDs as "eyes". This is a fun kit that is guaranteed to keep you amused, at least until the batteries die or the dog kills it! (*My Chocolate Lab would probably try to make friends with it!*)

WE1 Walking Electronic Bug Kit

\$29.95

Walking Electronic Bug

- ✓ Avoids obstacles!
- ✓ Turns in response to light!

Universal Timer

- ✓ Trigger or oscillator
- ✓ 555 timer IC design



IC Switching...\$10!

Add a time delay, keep something on for a preset time, provide timing or clock pulses, or provide an audio tone. The UT5 does it all using the famous 555 timer IC.

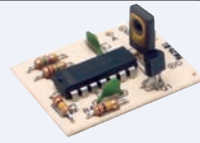
Comes with detailed learning instructions for many applications. Runs on 5-15VDC and controls up to 100mA.

UT5 Universal Timer Kit

KIT **\$9.95**

Warble Alarm

- ✓ 15W of power!
- ✓ Real attention getter!



Our "Mad Blaster"

If you need to simply get attention, the "Mad Blaster" is the answer, producing a LOUD ear shattering raucous racket! Super for car and home alarms as well.

Drives any speaker but a horn type provides the loudest sound. Runs on 9-12VDC. Measures 1 1/8" x 1 1/4" x 1/2".

MB1 Warble Alarm Kit

KIT **\$9.95**

Dripping Faucet

- ✓ Repeated "Plink" sound!
- ✓ A pleasant alarm!



Drip, Drip, Drip!

Somewhere between a dripping faucet and electronic "chime" in a new car! Just like a drip into a bowl of water! Use it where a unique sound is needed.

Learn how a simple oscillator works too! Drives any speaker. Runs on 4-9VDC. (*That O-Ring kit won't fix this one!*)

EDF1 Dripping Faucet Kit

KIT **\$12.95**



Wired & Tested

Let These Modules Do All The Work In YOUR Next Project!

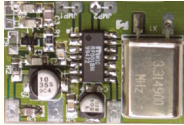


RF Wireless Link Modules

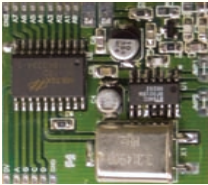
- ✓ The EASY way to send and receive data!
- ✓ 433MHz and 916 MHz units available!
- ✓ Transmitters, receivers, encoders, decoders
- ✓ Factory assembled & tested SMT design



TX Data Transmitter



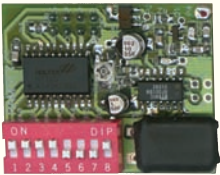
RX Data Receiver



RXD Receiver/Decoder



TXE Transmitter/Encoder



RXDA Receiver/Decoder



TXEA Transmitter/Encoder

Now you can build those special remote control projects in a flash and have the ultimate in reliability... and security! Unlike other units on the market, these units are crystal controlled for no frequency drift, yet are ultra small and very low power.

These wireless RF link boards are perfect for any wireless application - sending data, car alarms, door openers, home security, electronic monitoring... you name it! You can also monitor a test point or an alarm point on a circuit and have it alert you remotely. The applications are endless! Thousands of these have been provided to manufacturers for their OEM use! You may already have one of these and not know it!

Optional encoder/decoder models allow you to program each unit so that they only respond to your set code. Great for encoding sensors or controlling various functions wirelessly - no other processor or computing required! All modules are pre-assembled and tested so you can start your project today!

Two versions are available - 433 MHz and 916 MHz. 916 units can use shorter antennas (3 inches) and are better in high RF environments while the 433 units have better range but need larger antennas (7 inches). The A-Series modules include a programmable dip switch for encoder/decoder settings and common dual row pin-outs for easy integration into your equipment!

Because these are subminiature SMT designed circuits and boards, they are factory assembled and tested at Ramsey! Not a kit, these are immediately ready to use or integrate with your project! (No, these do NOT send audio or video!!! There, saved you the email!)

RXD433A	433 MHz Receiver/Decoder Module w/Dip Switch	\$39.95
TXE433A	433 MHz Transmitter/Encoder Module w/Dip Switch	\$37.95
RXD433	433 MHz Receiver/Decoder Module, Assembled	\$34.95
TXE433	433 MHz Transmitter/Encoder Module, Assembled	\$32.95
RX433	433 MHz Data Receiver Module, Assembled	\$29.95
TX433	433 MHz Data Transmitter Module, Assembled	\$24.95
RXD916	916 MHz Receiver/Decoder Module, Assembled	\$34.95
TXE916	916 MHz Transmitter/Encoder Module, Assembled	\$32.95
RX916	916 MHz Data Receiver Module, Assembled	\$29.95
TX916	916 MHz Data Transmitter Module, Assembled	\$24.95

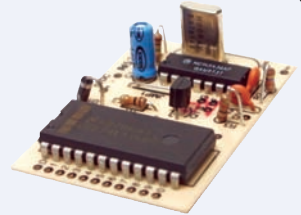
DTMF Touch Tone Decoder



KIT

Your Phone Is Your Encoder!

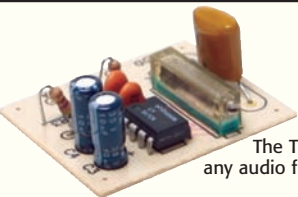
- ✓ Decodes DTMF Touch Tones from telephones, radios, etc!
- ✓ 20mA output drives relays, LEDs, digital devices and more!
- ✓ Decodes 0 through 9, *, #, plus A, B, C, D



You can set up the TT7 for detection of any single digit, including the secondary A,B,C,D digits. When the decoder detects the selected digit it will provide a closure to ground for driving a relay, lamp, sounder, or other load of up to 20 mA. A commercial central office quality decoder IC chip is used, which means the TT7 is extremely reliable, fast, and sensitive! You may connect the TT7 directly across the speaker or detector output on any receiver, and we even detail how it may be connected directly to a telephone line.

If your needs are single function remote tone control, the TT7 is for you. (For digital display of dialed touch-tone numbers, use our TG2 Tone Grabber, for remote control use our DCI series.) Runs on 5VDC. PC board measures 1 1/2" x 7/8" x 2 1/4".

TT7 DTMF Touch Tone Decoder Kit \$24.95



KIT

Encode and Decode With The Same Kit!

Tone Encoder/Decoder

- ✓ Encodes and decodes 40 to 5000Hz!
- ✓ Drives any load up to 100mA!
- ✓ Compact size and easy installation

The TD1 was engineered to provide all your tone control needs on a single PC board! The unique design will simultaneously encode and/or decode any audio frequency between 40Hz and 5000Hz. If you want to go even lower, we provide the documentation to change one capacitor to go down to 10Hz!

This little board is great for 2-way radio "PL" tones, remote controls, tone burst FSK or anywhere tones are involved. Frequency is easily set with the precision 20 turn trimpot and the circuit uses a voltage regulator and Mylar cap for the ultimate in stability. The decoder output will drive any load up to 100mA, making it simple to connect to your equipment. Runs on 5-12 VDC, will drive up to 100 mA load. Encoder output provides approximately 1V P/P output to easily drive your application. PC board measures 1 1/4" x 1/2" x 1 1/2".

TD1 Tone Encoder/Decoder Kit \$9.95

Cable Polarity Checker

KIT

Which Way Should It Go?

- ✓ Checks continuity & polarity!
- ✓ Auto power off!
- ✓ Pushbutton operation!



We've all been there. You're running speaker wires through your house and you don't know which wire is which for polarity. Well, this neat little kit takes care of it! Simply hook up the remote board to one end and the main board to the other end. LEDs show you opens, shorts, polarity OK, and polarity reversed!

It's that simple! A lot of uses besides speaker cables, think about it! Runs on a standard 9V battery (not included). Features auto power-off for long battery life. Main board measures 2.2" x 1.6" while the remote board measures 1.6" x .3". From Velleman.

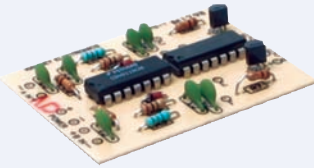
MK132 Cable Polarity Checker Kit \$8.95



Touch Switch

- ✓ Touch on, touch off, or momentary!
- ✓ Two circuits on one board
- ✓ Great CW Keyer

2 Separate Circuits!



The ultimate touch switch! Touch once - it's on, touch again - it's off, or use the momentary outputs that stay on only as long as touched.

Uses low power CMOS circuitry and functions on the principle of hum and noise pick-up when input is touched. There are two completely independent touch switch circuits on each board. It's like getting two for the price of one!

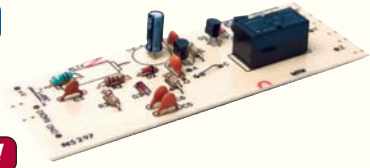
Will drive loads up to 100 mA such as a relay, bell, siren, etc. Includes project info for use as a CW keyer. Runs on 6-12VDC.

TS1 Touch Switch Kit **KIT** \$9.95

RF Actuated Relay

- ✓ Automatically senses presence!
- ✓ On-board DPDT relay
- ✓ Protects against RF input damage

Senses RF BEFORE The Damage!



This is just the unit you need when adding a preamp or power amp in line with an existing antenna.

It senses the RF power and closes an on-board DPDT relay which can be used to automatically switch in your added power amp or preamp. The relay is good up to UHF at 100W! Besides radios, many folks use one of these "lifesavers" in front of their expensive test equipment to prevent RF input damage!

Runs on 10-15VDC and senses power as low as 50 mW. Size: 1 1/2" x 1/2" x 4".

RFS1 RF Actuated Relay Kit **KIT** \$19.95

Light Actuated Switch

- ✓ On-board SPDT relay!
- ✓ On at dusk, off at dawn
- ✓ Adjustable sensitivity

Fully Automatic!



Tired of turning your lights on and off? Tired of paying the ever increasing cost of electricity because you forgot to turn them off in the morning? Consider it solved! The MK125 is a simple little kit that automatically senses light and automatically closes the on-board SPDT relay.

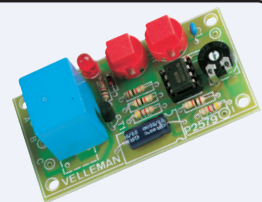
Light sensitivity is adjustable over a wide range, and a delay circuit prevents recycling. Relay contacts rated at 5A. Runs on 12VDC. Board measures 2.6" x 2". From Velleman.

MK125 Light Actuated Switch Kit **KIT** \$8.95
AC125 110VAC Power Adapter **KIT** \$9.95

Universal Start/Stop Timer

- ✓ Delay up to 60 minutes!
- ✓ On-board relay
- ✓ Runs on 12VDC

Start & Stop With Delay!



The K2579 is a miniature timer for any application that requires a start and stop function with a delay. Board mounted switches are provided for both start and stop.

Time interval is variable and adjustable from 0 to 15 minutes, and extendable to 60 minutes with a modification. LED status indicator is provided. Relay is rated at 2A/240VAC max. Runs on 12VDC. Board measures 1.5" x 2.7". From Velleman.

K2579 Start/Stop Timer Kit **KIT** \$12.95
AC125 110VAC Power Adapter **KIT** \$9.95

IR Remote Control Checker

- ✓ Just point and check!
- ✓ Confirms IR signal generation!
- ✓ Provides peace of mind!
- ✓ Runs on a standard 9V battery!

Check It Before You Wreck It!



We've all been there, sitting on the couch or easy chair and the TV doesn't seem to respond to your remote control. First you smack it, then you hold it in the air and aim it closer to the TV... but the channel still won't change! At that point there's three options: get up and change the channel (ha, that will never happen); change the batteries and see if that works, or take another Xanax!

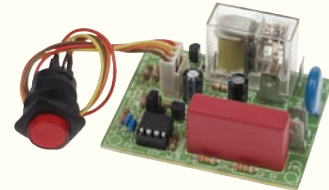
Before you go through all that, give yourself a treat and check the remote with this handy IR tester. Simply point your IR remote at the board, press a function button, and the 4 LEDs confirm proper IR receive! Runs on a standard 9V battery (not included). Measures 2.2" x 1.2" x 1.3". From Velleman. (I guess I forgot about option #4, throw the remote at the wall!)

MK137 IR Remote Control Checker Kit **KIT** \$7.95

Power Saver & Timer

- ✓ Single button operation!
- ✓ 1H, 2H, 4H, 8H, 24H options!
- ✓ On-board LED indicator!
- ✓ 10 amp relay output!

Set It, And Forget It!



This little timer kit can be easily added to any existing project to allow for automatic shutoff. Tons of applications like heating, cooling, lighting, entertainment systems, fans, pumps, sprinklers, cryogenic stasis tubes... well maybe not that last one!

Just set the jumper for short or long timers, use the push button to select your desired timer and the LED indicator will blink faster for the shorter timer, slower for the longer timer. It's that easy! 10A suppressed relay output, 100-240VAC power supply. Board measures 2.6" x 2" x 1". From Velleman. (Ramsey Electronics is not responsible for family members or pets lost due to cryogenic stasis failure!)

K8075 Power Saver & Timer Kit **KIT** \$24.95

Water Sensor Alarm

- ✓ Sounds alarm when water is present!
- ✓ Can be remotely located!
- ✓ Includes buzzer alarm
- ✓ Runs on a 9V battery

Find Out BEFORE You're Flooded!



So the sump pump quits and because you don't live in your basement you're never the wiser. The result? A flooded basement and a lot of damaged things that are *in* the basement! And once that happens, things never seem to be the same.

Now build a cute little water sensor alarm to let you know! Simply mount the alarm in the area you want to sense water and the moment it touches the contacts the included alarm will sound. No wires, no external alarm system, nothing but this tiny little board just waiting to alert you! The sensor can be remotely located by cutting that section of the board if desired. Runs on 9V battery (not included) Size: 1.8" x 2.8". From Velleman.

MK108 Water Sensor Alarm Kit **KIT** \$7.95

Assorted LED Package

- ✓ Red, green, and yellow LEDs!
- ✓ 80 to choose from!
- ✓ 3mm and 5mm sizes

Brighten Up Your Day!



Maybe you found a package with seventy-nine assorted LEDs and that wasn't enough... and maybe you found a package with eighty-one and that was too many... well I hope you're sitting down, because have we ever got a package for you!

You'll always have that missing LED needed for your project from now on, and no more trips to the electronics store (that probably isn't there anymore anyway)! Contains the following LEDs:

- 15 x: 3mm green, 4.0mcd
- 20 x: 3mm red, 1.0mcd
- 5 x: 5mm green, 6.0mcd
- 20 x: 5mm red, 2.0mcd
- 10 x: 5mm yellow, 3.9mcd

Nicely packed in a handy blister pack to keep them stored. From Velleman.

KLED1 80 Piece LED Assortment **KIT** \$10.95



Electronic Decision Maker

- ✓ No more coin flipping!
- ✓ Ideal for the indecisive!
- ✓ One button operation!

Make Up Your Mind Already!

KIT



When a decision is simply too important to rationally analyze, let this handy gadget make the tough calls for you with a simple push of a button! One push and the green "Yes" and red "No" LEDs begin to flash. Flashing speed gradually decreases and only one LED remains lit.

What will it be? Yes or No? Push the button and find out! Also features auto power-off to conserve battery life, which, by the way, is a standard 9V battery (not included). Measures 2.2" x 1.2" x 1.4". From Velleman. *(I wonder if these should be on the GSA contract!)*

MK135 Electronic Decision Maker Kit

\$6.95



KIT

**What Did He Say?
You'll Find Out!**



Stereo Ear Super Stereo Amplifier

- ✓ Super high gain, amplifies sound 50 times!
- ✓ Listen in stereo directly with headphones!
- ✓ Dual directional stereo microphones included!

The "Stereo Ear" is an ultra high gain stereo audio amplifier! And when we say high gain, we mean it! It boosts audio 50 times and you can listen to it in stereo besides! Miniature high sensitivity microphones are placed at 45 degree angles to give you maximum separation.

This little kit also includes an on/off switch, volume control and audio output connector. Runs on 3 AAA batteries (not included). Measures 2.4" x 2.1". From Velleman. *(Noisy tenants? Plug this into your PC audio in and record it all night, burn a CD, give it to your landlord... it works!)*

MK136 Stereo Ear Super Stereo Amplifier Kit

\$9.95

Steam Engine & Whistle

- ✓ Vintage steam engine on a PC board!
- ✓ Adjustable "speed" and volume!
- ✓ Push button steam whistle!
- ✓ Runs on a standard 9V battery!

Locomotive Breath!

KIT



This cute little project authentically simulates the sound of a vintage steam engine locomotive and whistle! The unique design also provides variable "engine speed" as well as volume, and at the touch of a button the steam whistle blows! Includes a small 8 ohm speaker so all aboard when you're done building the kit!

Great for model railroads, sound effects for radio and stage, or just plain fooling around! Runs on a standard 9V battery (not included). Measures 3.9" x 3.3". From Velleman. *(Could have used this with my old original Lionel set that was given away and is now worth a fortune!)*

MK134 Steam Engine & Whistle Kit

\$10.95

Mini Electret Condenser Microphone

- ✓ Extremely sensitive!
- ✓ Built-in FET preamplifier!
- ✓ Super small size, great fidelity!
- ✓ Runs on 3 to 15 VDC



You CAN Hear Me Now!

This little subminiature condenser microphone element kit is great as a replacement microphone in tape recorders, walkie-talkies, radios, CB microphones, telephones, and other audio products. Extremely sensitive element has a built-in high gain FET preamplifier. A lot of customers use these microphone elements together with our BN9 Super Snoop Amplifier to build super sensitive "electronic ears".

The preamp is powered from 3 to 15 VDC on the audio line to the microphone. The kit includes a coupling capacitor and current limiting resistor to make the connection to your circuit a breeze! Comes complete with detailed connection details, schematic, and diagrams. The microphone element measures 3/8" diameter x 3/8" high! And THAT is small!

MC1 Mini Electret Condenser Mic **KIT** **\$3.95**

Electronic Kitchen Timer

- ✓ 1 minute to 1 hour timing!
- ✓ Simple one button operation!
- ✓ Audible and visual alarm!
- ✓ Discrete pre-alarm!



For The Cookies We DO Like!

What good is the built-in timer on your stove if you're not there in the kitchen? It isn't, and the cookies will be burnt! Exactly!

This modern kitchen timer will not only save the cookies but will be a fun project to build and use. Times anywhere from 1 minute to 1 hour. Single button makes it a breeze to use with the following settings: 1 to 10 minutes in one minute steps; 10 to 30 minutes in five minute steps; 30 to 60 minutes in 15 minute steps. Measuring a mere 3" x 1.3" this little timer can go in your pocket outside with you while the cookies are in the oven! Even includes a pre-alarm to get you back inside in time! Runs on 3 AAA batteries (not included). From Velleman. *(Sorry, does not include the recipe of Ma Leo's famous chocolate chip cookies... that's a secret!)*

MK128 Electronic Kitchen Timer Kit **KIT** **\$16.95**

Multifunction Relay Switch

- ✓ 14 different functions!
- ✓ 2 pre-programmed delays!
- ✓ Pushbutton control!
- ✓ EEPROM storage!



Build Your Own Switches!

This versatile relay switch is packed with features and can be used for a variety of control applications, including incandescent lighting, halogen lighting, fluorescent lighting, fans, valves, buzzers, etc! Timers, switching, flashing, interval, random switching, and more! Other features include learning mode for delays anywhere from 2s to 12 days, EEPROM for delay time storage in case of power failure, and on-board transient filter for the relay contacts! From Velleman.

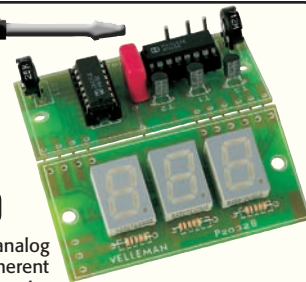
SPECIFICATIONS	
Operating voltage:	9-12VAC or 12VDC
Max load:	2.5A (275W at 110VAC)
Dimensions:	3.4" x 1.5" x 1.0"

K8015 Multifunction Relay Switch Kit **KIT** **\$22.95**
G410 Recommended Enclosure **\$7.95**

Digital Panel Meters

- ✓ Replace those analog meters!
- ✓ High impedance input
- ✓ Overload indicators
- ✓ High precision and stability
- ✓ Easy to read 7 segment displays

KIT



Replace Those Old Analog Meters...

This is the perfect little kit to replace old or broken analog meters in your equipment... and the end of their inherent problems! Three seven segment LED displays and a universal interface make the replacement a breeze.

A standard 5VDC supply voltage is used at 250mA. Displays +999mV and -99mV full scale complete with both positive and negative overload indicators. Resolution is 1mV with an input impedance of 100M ohms. The small size makes it simple to install in your existing equipment. Board measures 1.3" x 2.6". From Velleman.

K2032 Digital Panel Meter Kit **\$47.95**



Symmetric 1A Power Supply

- ✓ Plus & minus 1.2V to 24VDC!
- ✓ Thermal protection
- ✓ Just add a transformer & heatsink

Low Cost, Easy to Build!



The K8042 is a great little symmetric power supply designed to provide ± 1.2 to 24VDC regulated at 1A. Perfect for amplifiers, op-amps, and other applications requiring a nicely regulated \pm DC source. The circuit provides short circuit and thermal protection.

Just provide a suitable power transformer or AC source (up to 24V) and heatsink and you're all set. Features LED status indicators. Board measures 3.1" x 2" x .9" From Velleman.

K8042 Symmetric 1A PS Kit **KIT** **\$15.95**

Regulated 1A Power Supply

- ✓ 1.5 to 35VDC at one amp!
- ✓ LM317 regulator circuit
- ✓ Current and thermal overload protection

1 Amp Up To 35 Volts!



If you're looking for a small power supply regulator and don't want to build it up from scratch, the K1823 is just for you! Designed around the LM317 regulator, it will provide a variable regulated output between 1.5 and 35VDC. Continuous output current is conservatively rated at 1A with a maximum output current of 1.5A. Maximum input voltage is 40VDC for rated output. Both current and thermal overload protection is provided by the LM317. Heatsink is not included and is required for maximum rated output. Board measures 2.1" x 2.1". From Velleman.

K1823 1A Power Supply Board Kit **KIT** **\$12.95**

RF Preamp

- ✓ Broadband from 100 KHz to 1000 MHz!
- ✓ High Gain: 16 db
- ✓ Low noise, less than 4dB!

We're Talking Broadband!



TOP SELLER!

This is the famous preamp that's been written up in all the radio and electronics magazines. New low-cost microwave transistors make it possible to give performance unheard of a few years ago!

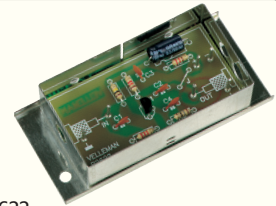
Provides 16dB gain from 100kHz to 1GHz and is unconditionally stable! Runs on 12-15VDC at 15mA. Input and output impedance is 50-75 ohm. Measures 1" x 3/8" x 1 1/2".

SA7 RF Preamp Kit **KIT** **\$19.95**

AM/FM RF Preamp

- ✓ 10MHz to 150MHz!
- ✓ Shielded metal housing
- ✓ Direct or line fed DC supply

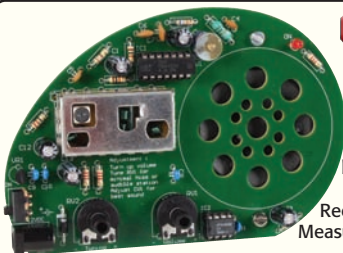
Amplify Those Signals!



Designed specifically for AM/FM radio reception, the K2622 provides 22dB gain between 10MHz and 150MHz. The sleek metal housing provides the necessary shielding and assures you of the least amount of interference.

Input power is 12-15VDC at 2mA and can be powered directly or up the coax. Input/output impedance is 50-75 ohm. Measures 3.4" x 1.4" x .9". From Velleman.

K2622 AM/FM Preamp Kit **KIT** **\$18.95**



KIT

**Build It...
Then Listen To It!**

The greatest part of building a kit is the enjoyment afterwards when you see and hear the results of your work! Now you can build yourself a little FM radio receiver, learn about FM receivers, and have a neat little radio in the end! The RF front end is preassembled to make it simple.

Receives the whole FM broadcast band of 88-108 MHz. Includes an on/off switch, volume control, speaker, and LED indicator. Runs on 12VDC. Measures 4.8" x 3.3". From Velleman.

MK118 Portable FM Radio Kit
AC125 110VAC Power Supply

\$21.95
\$9.95

Portable FM Radio Kit

- ✓ Preassembled front end!
- ✓ No coils to wind!
- ✓ Includes everything!

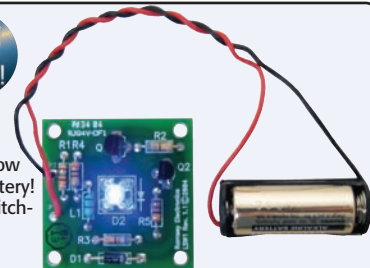
LED Switcher Blinky

- ✓ Run a 3V LED with 1.5V!
- ✓ Learn about switching supplies!
- ✓ Super bright Blue LED!

**See... It IS Possible...
And Learn How!**

KIT

TOP SELLER!



More than 30 years ago we came out with our ever famous BL1 Blinky kit. Thousands and thousands were built teaching people exactly how LEDs and transistor circuits work. Now we're going one step further! The LSW1 will show you how to light a 3V LED with a single 1.5V battery! The circuit is actually a very unique "switching power supply" which steps up the 1.5V battery voltage to around 5VDC! If you're new to switching power supplies this is the perfect little kit to get your feet wet!

If you're a serious hobbyist and want to see the neatest little circuit then you're in for a treat too! When you're all done you end up with a super bright Blue Telux™ LED running on 1.5V! But it doesn't blink you say? Sure it does... just at 140kHz! Requires a single AA battery (not included). Board measures 1.5" x 1.5".

LSW1 LED Switcher Blinky Kit

\$14.95

Handy LED Tester

Wired & Tested

- ✓ Compact hand-held tester!
- ✓ Normal test range 2-30mA!
- ✓ Hi current test range 20-150mA!

Check It Before You Solder It!



This handy LED tester will work with the most common types of LEDs including normal, bi-color, and superflux (spider) LEDs.

Runs on one 9V battery (included) and fits in the palm of your hand. Factory assembled & tested, ready to go! From Velleman. (For a fun time get one of these and our 80 LED package and test them all!)

VTESTL Handy LED Tester, Factory Assembled & Tested **\$12.95**

Dual Super Bright LED Display

- ✓ 2 super bright red LEDs!
- ✓ Auto-on at dark!
- ✓ Adjustable sensitivity!

Grab Their Attention Automatically At Night!



This little kit alternately flashes two super bright red LEDs that are extremely attention "getting"! But it goes beyond that. If desired, a built-in light sensor automatically turns it on at night and off at dawn. Light sensor is adjustable.

Runs on a standard 9V battery or external 9-15VDC power. Measures 2.2" x 1.3" x 1.6". From Velleman.

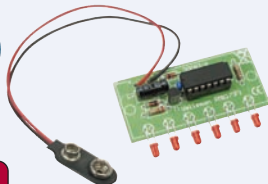
MK148 Dual Super Bright LED Kit **KIT** **\$8.95**



Mini LED Light Chaser

- ✓ 6 bright red LEDs!
- ✓ Sequentially flash in order!
- ✓ Great attention grabber!
- ✓ Runs on standard 9V battery!

TOP
SELLER!



Just Like Those Classic Turn Signals!

The K8032 gave us a high level output to sequentially flash incandescent lights but what if you just want a small attention getter to do the same with LEDs? We've got you covered! Remember the sequential flashing turn signals on the classic T-Birds and Cougars? Hey, if you can remember KITT you can also remember these! This little kit flashes 6 high intensity 3mm red LEDs sequentially in order. Great small attention getter for signs in stores, exhibitions, model R/C cars, and a whole lot more. Get flashing with the MK173 (*Eww, I'm old, I had one!*)



MK173 Mini LED Light Chaser Kit

KIT \$13.95

Crawling Light Sensing Microbug

- ✓ Hungry for light!
- ✓ Adjustable sensitivity and speed!
- ✓ LED eyes indicate travel direction!
- ✓ Runs on two standard AAA batteries!



Give Me Light, Give Me Light!

This bug isn't looking for food or water and it's not hanging around your burger at the picnic table, but it IS in constant search for light! Two open chassis sub-miniature motors drive this cute little guy in any direction it sees light. Adjustable light sensitivity sensors on the front search out the direction of the light source. Adjustable speed controls the motors to the speed you like. In addition, LED "eyes" blink indicating the direction it's traveling! What happens when it sees total darkness? It stops...of course! I guess it's scared of the dark! Runs on 2 standard AAA batteries (not included). Measures 5.2" x 3.5" x 2". From Velleman.

MK165 Crawling Light Sensing Bug Kit

KIT \$24.95

Electronic Brain Game

- ✓ Hours of fun with just 4 buttons!
- ✓ 4 difficulty levels!
- ✓ Audio or silent LED operation!
- ✓ Microprocessor controlled!



You Will Spend Hours!

The game is simple... repeat a pattern that is randomly generated by the built-in microprocessor. Sound simple? You'll be amazed! At power-up you choose from one of 4 difficulty levels. The pattern is displayed by the 4 LEDs, or by the built-in audible alert, or both. The speed of the game gradually increases to make it even more challenging! The sleek ergonomic design is easy to hold and the 4 oversized push buttons make it easy and fun to use. You'll find yourself addicted to this little game. Runs on 3 standard AA batteries (not included). Measures 3.3" x 2.6" x 1.6". From Velleman. (*The fun is in the challenge!*)

MK159 Electronic Brain Game Kit

KIT \$24.95

Jumbo Single Digit Clock

- ✓ One giant red 7-segment display!
- ✓ Time is displayed as a sequence of digits!
- ✓ The ultimate gadget!
- ✓ Includes the enclosure!



The Most Unique Clock You'll Find!

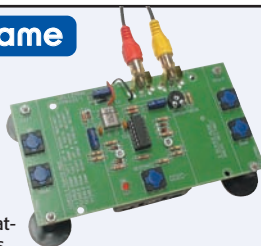
Now THIS is the ultimate gadget digital clock for the electronic enthusiast! It's just one single digit... but at least it's big! A huge bright red 57mm, 7-segment display displays complete 12-hour time format in a sequence of digits... one digit at a time! The display is mounted in a hi-tech attractive dark enclosure that features a single button to control all features. Also includes a "blank display" dark mode. Built-in clock accuracy is 30ppm. Runs on 9-12VDC at 150mA. Finished case measures 2.9" x 2.3" x 1.3". From Velleman. (*Only you will know it's the time!*)

MK153 Jumbo Single Digit Clock Kit

KIT \$26.95

Classic Table Tennis Video Game

- ✓ Build the classic game that started it all!
- ✓ 2-player head to head mode!
- ✓ Single player with 4 levels!
- ✓ RCA video and audio outputs!



Go Back In Time, After You Build It!

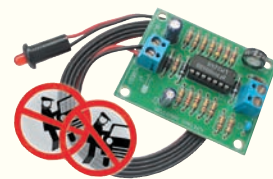
Today, videogames are a 10 billion dollar industry, generating even more revenue than the Hollywood film business, but it all started in 1972 with a simple table tennis simulation that soon found its way into bars, and later homes, all over the country! Now with the MK121 you can put together a fun kit that harkens back to the early days of gaming! Once complete, you can plug this kit directly into your TV for a fun retro gaming experience for the whole family! Control the paddles with one of four movement buttons, and your score is displayed on screen! Test your soldering skills then test your ping-pong skills! Powered by 3 AA batteries (not included). Measures 2.9" x 5.5". From Velleman.

MK121 Table Tennis Video Game Kit

KIT \$19.95

Car Alarm Simulator

- ✓ Activates automatically when engine is off!
- ✓ Easy to install, just two wires!
- ✓ Adjustable sensitivity!
- ✓ Includes pre-wired LED holder and labels!



Keep Them Away From Your Car!

When car thieves are scoping out prospective targets, sometimes all it takes is the appearance of an alarm system to deter them... and its certainly a heck of a lot cheaper than the real thing! With this nifty kit you can put your own "dummy" alarm together to save yourself some cash, and maybe your car in the process! This kit gives you a realistic-looking flashing LED sequence that simulates the appearance of an active car alarm system! For added convenience, it also hooks directly into your cars electrical system to automatically enable the alarm simulation when you shut your engine off! Give yourself a little extra insurance with this affordable kit from Velleman!

MK126 Car Alarm Simulator Kit

KIT \$7.95

Bright LED Keychain Light

- ✓ Bright white LED technology!
- ✓ 2 high power LED's!
- ✓ 11 year LED life!
- ✓ Automatic battery management!

The Handiest Light You Will Ever Have!



Flex your kit building skills with this quick and easy little kit, and you'll be rewarded with a super-cool high-powered LED flashlight that is small enough to fit on your keychain! With 2 extra bright high-power white LEDs this little kit packs a punch! Use it to find elusive keyholes in the dark, or anytime you need to brighten up the situation. This kit also boasts a built-in strobe light effect in case you need to draw attention to yourself fast! Use it in case of emergencies or simply to annoy co-workers. Efficient operation means ultra-long battery life, up to 10 hours of continuous operation on a single 12V battery! (a V23GA or compatible battery, not included.) To further conserve power, the unit features auto-battery timer shutoff, and a red warning LED when the battery gets low! Dimensions: 2.4" x 1.6" x 0.6" Weight: 1.1oz. (with battery). From Velleman.

MK143 Bright LED Keychain Light Kit

KIT \$11.95



KIT

You Didn't Actually Think This Was Going To Say It, Did You??

Clap-On Clap-Off Switch

- ✓ Operates your lighting with a simple handclap!
- ✓ Ideal for disabled or elderly people!
- ✓ Great ambient noise immunity!
- ✓ Microprocessor controlled!

You remember the annoying commercials, now you can build your own clap-activated switch with this fun kit! We've all had those moments, lying there in bed ready to fall asleep, but the light switch is all the way on the other side of the room! Or how about trying to find that elusive light switch in a dark room? Why get up and cross that freezing floor or stumble around in the dark, when you can just clap your hands?! The microprocessor controlled circuit in this kit features immunity to non-clap noises to prevent accidental activation of the switch, and it can be configured to act as either a toggle or send one pulse to the relay, so you can integrate it with any system. This clap activated switch is great for the disabled, elderly, or the just plain lazy! Relay power rating: 24V DC/AC 3A, Power supply: 12V DC / 150mA with DC adapter socket, Dimensions: 3.1" x 2.9" x 0.9". From Velleman.

MK139 Clap-On Clap-Off Switch Kit

KIT \$16.95



KIT

Wired & Tested



**Monitors The Entire Band For Activity...
Without Any Tuning!**

Passive Air Band Monitor Receiver

- ✓ **Monitors the entire aircraft band without tuning!**
- ✓ **Passive design, can be used onboard aircraft, no local oscillator, generates and creates no interference whatsoever!**
- ✓ **Great for air shows!**
- ✓ **Patented circuit and design!**

INCREDIBLE PATENTED DESIGN!

For decades we have been known for our novel and creative product designs. Well, check this one out! An aircraft receiver that receives all nearby traffic without any tuning. It gets better... there is no local oscillator so it doesn't produce, and can't produce, any interference associated with all other receivers with an LO.

That means you can use it onboard aircraft as a passive device! And what will you hear? The closest and strongest traffic, i.e. the plane you're sitting in! How unique is this? We have a patent on it, and that says it all!

NO TUNING, MONITORS THE ENTIRE BAND!

This broadband radio monitors transmissions over the entire aircraft band of 118-136 MHz. The way it works is simple. Strongest man wins! The strongest signal within the pass band of the radio will be heard. And unlike the FM capture effect, multiple aircraft signals will be heard simultaneously with the strongest one the loudest! And that means the aircraft and towers closest to you! All without any tuning or looking up frequencies! So, where would this come in handy?

1. **At an air show! Just imagine sitting there listening to all the traffic as it happens, even the unknown frequencies!**
2. **Onboard aircraft to listen to that aircraft and associated control towers**
3. **Private pilots to monitor ATIS and other field traffic during preflight activities (saves Hobbs time!)**
4. **Commercial pilots to monitor ATIS and other field traffic as needed at their convenience**
5. **General aircraft monitoring enthusiasts**

NO LOCAL OSCILLATOR, NO INTERFERENCE!

Wait, you can't use a radio receiver onboard aircraft because they contain a local oscillator that could generate interfering signals. We have you covered on that one. The ABM1 has no local oscillator, it doesn't, can't, and won't generate any RF whatsoever! That's why our patent abstract is titled "Aircraft band radio receiver which does not radiate interfering signals." It doesn't get any plainer than that!

THE HIT AT THE AIR SHOW!

What about an air show? The ABM1 is the perfect solution to communications monitoring! A lot of unknown frequencies are used between the ground and each plane flying. Listen to air-to-air, the air boss, PA talkthrough and the stunt planes with ease! With a normal receiver you need to know the frequency and tune into it. The ABM1 simply hears the activity as it occurs, perfect for an air show... should be standard equipment for all the spectators!

THE PILOT'S DREAM COME TRUE!

Then there are the private and commercial pilots! A lot of private pilots rent aircraft. With an ABM1 they can listen to field traffic and ATIS broadcasts before firing up the aircraft avionics; this saves on Hobbs time (inactive rental time!) and is convenient! Same with commercial pilots. Your access to ATIS and other broadcasts can be as close as your flight bag, briefcase, or pocket!

SIMPLE TO USE!

The receiver is in a compact case complete with a belt clip. Just plug your favorite pair of headphones or the provided set of ear buds into the receiver, turn it on, and you are now monitoring all local aircraft! A squelch control is even provided to mute background noise and interference! The receiver runs on a standard 9VDC battery (not included). You will hear all nearby aircraft, ground transmissions, local control towers, and any other traffic within the frequency range! Here in Rochester while I'm writing this catalog page I'm hearing local aircraft overhead calling Rochester Approach and Cleveland Center, and just heard the local News Chopper!

EVERYTHING INCLUDED, AVAILABLE AS A KIT OR READY TO GO!

Even with its compact design, we designed the ABM1 for easy construction by the electronic hobbyist. Thru-hole parts are used for all customer assembly. Several SMT components are part of the circuit, and they are pre-installed at the factory! Where's the antenna you ask? The headphone wire is your antenna! We even discuss a couple of component changes you can make to optimize performance with other than normal lengths of headphone wires.

A professional set of stereo ear buds is included with the ABM1 to get you listening quick! You can also use your favorite set of Walkman type headphones with the ABM1. A factory assembled and tested SMT version with additional shielding for adjacent channel overloading is also available for the aircraft professional that just wants to get listening quickly.

If you're a private pilot, commercial pilot, airport worker, aircraft enthusiast, attend air shows, or spend a lot of time in airports or onboard aircraft, the ABM1 is for you. (If I had an icon for "Super Top Seller" it would be right here!)

SPECIFICATIONS	
Frequency Range:	118 MHz to 136 MHz
Receiver Type:	Patented Passive Detector
IF Frequencies:	None!
Receiver Sensitivity:	Less than 2 uV for detectable audio
Audio Output:	700mW, 8-24 ohms
Headphone Jack:	3.5mm stereo phone
External Antenna:	Headphone cord coupled
Power Requirement:	9VDC battery
Dimensions:	2.25" x 2.8" PC Board 2.5" x 4.6" x .9" Case
Weight:	4 oz. with battery



The ABM1...Reviewed in the November 2006 Issue of Monitoring Times
Author Bob Grove reviews the Ramsey ABM1 Passive Airband Monitor...

"I can't see the planes anywhere, but the ABM1 can hear them, and obviously from many miles away"

"Ramsey provides a nice manual with an introduction to air-band monitoring, and which contains a complete schematic diagram of the monitor, along with stage identification"

For information on this article, visit www.monitoringtimes.com

**ABM1
ABM1WT**

**Passive Air Band Monitor Kit
Passive Air Band Monitor, SMT Construction, Factory Assembled & Tested**

**\$89.95
\$159.95**



Digital Tuned High Performance Aircraft Receiver

- ✓ Rock solid dual conversion PLL receiver!
- ✓ Airport runway lighting controller output!
- ✓ Full band scanner mode
- ✓ 4 user memory scanner banks, 20 frequencies each
- ✓ Full band skip scanner mode
- ✓ Adjustable skip scanner timing
- ✓ Internal front panel speaker
- ✓ External antenna input, speaker out, headphone out
- ✓ Stylish and shielded metal enclosure

Wired & Tested

KIT

TOP
SELLER!



**The Ultimate & Affordable Aircraft Receiver...
Even Controls Runway Lights!**

THE LEGACY CONTINUES!

Continuing the legacy of our famous AR1 we decided to design the ultimate aircraft receiver kit. Now you're not limited to an all band receiver or scanner that has substandard performance in the AM aircraft band. Instead, you can have a super performance receiver designed specifically for the best aircraft reception possible! To begin with, we designed it with the latest technology, utilizing a rock stable synthesized PLL dual conversion receiver. We gave it superb image and adjacent channel rejection to allow you to lock onto the signals you want and not to be bothered by those you don't!

ADVANCED FEATURES!

Once we got the RF portion designed we took a close look at the features desired in such a receiver. We gave it a neat 2x8 line LCD display to show you all the functions. Control of modes and setups is obtained through the front panel controls and confirmed on the LCD display. On/Off/Volume and Squelch controls are also provided on the front panel. We even gave it a front panel speaker in case you stack the lighting controller or something else on top of it!

So far we've described the ultimate aircraft receiver that's not only the perfect field monitor for a hangar or airport manager's office but for the serious enthusiast as well. Can it get any better than that? It sure can!

CONTROL RUNWAY LIGHTS!

The top request we've had for a professional aircraft receiver was to embed automatic runway lighting control. Consider it done! The lighting controller follows the standard protocol for remote runway lighting. The pilot "keys" his microphone on the local CTAF channel for the specified number of times. All you need to do is set the receiver for the lighting control mode and then make sure the squelch is closed and will open on a suitably strong signal. Typically the number of "keys" or "events" according to the receiver control the lighting as follows: 3 events, 25% brightness; 5 events, 50% brightness; and 7 events, 100% brightness. The AR2's adjustable lighting timer sets turn-on duration to your needs.



And what happens in the event of a local power failure or interruption to the AR2? Absolutely nothing! All receiver settings and all lighting control settings are saved in the internal memory. The rear panel lighting control output of the AR2 connects to our AR2L to interface with individual runway lighting control circuits.

As we do with all of our kits, a detailed instruction manual not only leads you through the step-by-step construction and assembly procedures, it teaches you the circuit theory as well. Learn all about RF receivers and how a dual conversion PLL radio works! You'll be proud to tell your friends that you built this outstanding aircraft receiver!

Includes the matching case and knob set, plus power supply. For the aviation professional that is not interested in building the receiver, the AR2 and the lighting controller are also available factory assembled and tested, ready to go. Just plug it in and you're all set. (I can't get this thing off my desk, now I'm addicted to listening to Rochester approach!)

AR2	Synthesized Aircraft Receiver Kit With Case and AC Power Supply	\$199.95
AR2WT	Factory Assembled AR2C With Case and AC Power Supply	\$269.95
AR2L	Plug-In Runway Lighting Controller Interface Kit With Case & Power Supply	\$59.95
AR2LWT	Factory Assembled AR2LC With Case and AC Power Supply	\$99.95

Ramsey AR2 In Action!

Dan Lipko of Barber Aviation in Pennsylvania has put the AR2 and AR2L to good use – landing his helicopters! Here you can see where Dan has mounted his AR2 and AR2L units in a weatherproof housing panel box "to keep the snow and the PA Whitetail's out"!

The AR2L activates the landing lights through the 110VAC/40A light relay on the right. A mobile antenna on the top of the box enhances the reception. Says Dan: "The timing function is really nice, as I've set mine to 6 minutes (save those \$11.00 bulbs!). Also, the pulsing at the end is nice and gives you the time to ask for six more minutes... squelch is set to quieting and a nudge... my range is 3 miles out they light up." (for more information visit www.barberaviation.com)



Runway and landing area, marker lights controlled remotely from the air!



Landing a Robinson R44 Raven II



AR2 & AR2L Mounted in an outdoor enclosure with 110V lighting relay controls



KIT

*Kit Planes Magazine...
"Puts You In The Pilot's Seat!"*

**TOP
SELLER!**

Aircraft Band Receiver

- ✓ Picks up aircraft, control towers, and more!
- ✓ Tunes entire 118 MHz to 136 MHz Aircraft band
- ✓ Automatic gain and squelch controls

Tune into the exciting world of aviation and learn the circuits at the same time with the AR1C Aircraft Receiver! As the feature article in Kit Planes Magazine said "It Puts You In The Pilot's Seat"! Listen to the airlines, big business corporate jets, hotshot military pilots, local private pilots, control towers, and other interesting and fascinating air-band communications. You'll hear planes miles away as well as all local traffic and control towers.

The AR1C features smooth varactor tuning of the entire air band from 118 to 136 MHz. An extremely effective AGC and superheterodyne circuitry make it a super performing unit. Variable squelch mutes the receiver between conversations. Audio output jack drives any standard speaker or headphone. Includes our custom case & knob set as shown for a great looking finished receiver! Operates on 9 VDC battery (not included). Case measures 5"W x 1 1/2"H x 5 1/4"D.

AR1C Aircraft Receiver Kit With Case \$44.95

Shortwave SWL Converter

KIT

- ✓ Receives and converts two (1 MHz wide) shortwave bands to standard AM band for listening on your existing AM radio
- ✓ Pushbutton switches provide easy selection of SW1, SW2 or AM Broadcast
- ✓ Tuning performed on AM radio
- ✓ Built-in antenna switching

Inexpensive Start To SWL!



The SC1 converter brings the sounds of the world right into your car radio or home stereo (set to receive AM broadcast band). Front panel push switches let you choose easily between regular AM radio and the shortwave bands. An additional switch allows the selection of any two bands of interest, each 1 MHz wide.

Set one range for daytime frequencies and one for nighttime when propagation is different; choose any two frequencies between 3 and 22 MHz. Frequencies are tuned on your AM radio, making it easy to log stations or set presets. A built-in antenna switch automatically switches the existing AM antenna to either the radio or converter, making hook-up/operation easy and fast. External power jack for 9 to 12VDC is a standard 2.1mm female. Included case measures 5"W x 1 1/2"H x 5 1/4"D.

SC1C Shortwave Converter Kit With Case \$39.95
AC125 110VAC Power Adapter \$9.95



KIT

*The Perfect...
"Beginner's Receiver"*

**TOP
SELLER!**

SWL Shortwave Receiver

- ✓ Tunable over 2 MHz bandwidth anywhere in the 4 to 20 MHz Shortwave Band
- ✓ Clean superheterodyne design with automatic gain control
- ✓ Extremely sensitive front end!

Here's a complete shortwave radio guaranteed to inspire awe in any listener. Imagine tuning in the BBC, Radio Moscow, Radio Baghdad and other services with just a few feet of antenna. This very sensitive (about a microvolt!) receiver is a true superhet design with AGC and plenty of speaker volume.

Smooth varactor diode tuning allows you to tune any 2 MHz portion of the 4 to 20 MHz frequency range and the kit conveniently runs on a 9 volt battery (not included). Our matching custom case and knob set gives your radio a finished, polished look. Amaze yourself and others - see how you can listen to the world on a receiver you built in an evening. Drives any speaker or earphone. Included case measures 5"W x 1 1/2"H x 5 1/4"D.

SR2C Shortwave Receiver Kit With Case \$44.95

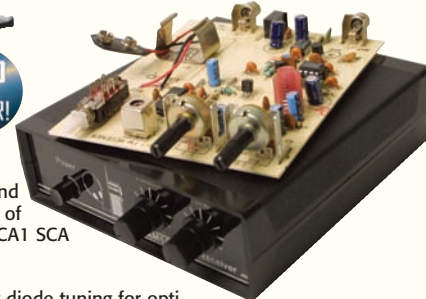
FM Broadcast Band Receiver

KIT

- ✓ Standard FM receiver with larger tuning range of 70 to 110 MHz!
- ✓ Ideal for FM wireless mics, SCA programming, or standard FM broadcasts
- ✓ Demodulated audio output for driving our SCA1 decoder

Perfect For "Out Of Band" Listening!

**TOP
SELLER!**



With a frequency range of 70 MHz to 110 MHz, the FR1C has become extremely popular for receiving the standard FM broadcast band (88-108 MHz) as well as large portions on each side. It's great for bug monitoring or detection and receiving SCA broadcast outside of the band. Unlike most FM receivers, the FR1C includes a separate demod output (unfiltered) to drive SCA decoders including our SCA1 SCA Decoder below.

The sensitive front-end features one microvolt sensitivity with a standard 10.7 MHz IF. An FM detector IC is used along with varactor diode tuning for optimum performance. Audio output is rated at 250mW and will drive any 4-45 ohm speaker or headphone (not included). Runs on a standard 9VDC battery (not included). Includes our matching custom case set, measuring 5"W x 1 1/2"H x 5 1/4"D.

FR1C FM Broadcast Band Receiver Kit With Case \$34.95



KIT

*How Do They Get That
Commercial Free Music?*

SCA Subcarrier Decoder

- ✓ Tunes entire SCA subcarrier band, 50 to 100 KHz
- ✓ Features both speaker and line level audio outputs
- ✓ Simply plugs into our FR1 FM broadcast receiver or tap into the detector in any FM receiver

Believe it or not, they get it off the local FM radio station with a special decoder! Now you can build your own decoder and tap into the wealth of programming available to those "in-the-know" !

Programming available runs the gamut from stock quotes to rock music, from easy listening to all news. These services are "hidden" in subcarriers riding along with the standard FM radio station's usual programming. The decoder connects to the detector output (unfiltered audio) on an FM receiver. If your receiver does not have such an output, consider our FR1C FM Receiver above! Tune into what you've been missing, try the SCA1.

Includes a custom case set to match the FR1C receiver above. Runs on a standard 9VDC battery. Case measures 5"W x 1 1/2"H x 5 1/4"D.

SCA1C SCA Decoder Kit With Case \$39.95



KIT

**Get On The Air...
For Under \$40!**

These little rigs are burning up the airwaves as young and old alike are rediscovering the fun in building their own equipment! Our detailed, step-by-step instruction manuals make building an enjoyable and rewarding experience. You're guided carefully to the completion of a unit that not only works but will provide hours of operating pleasure. These trusted and proven Ramsey all-mode mini rigs are routinely used worldwide by Hams of all ages.

You'll find you don't need high power - K71RK worked and QSL'd all states, plus global DX QSOs from Argentina to the former USSR—with only 2 mW! You don't need hundreds of watts, thousands of dollars or massive equipment; you'll find it's more fun with less!

These little receivers are based upon the SA-602 that we read about in Ham magazines and handbooks. Available in 20 meter, 30 meter, and 40 meter versions, the receivers are true superheterodyne direct conversion - a simple design that does not require the use of fancy IFs, RF filters, or exotic mixers. In short, the ideal design for easy hobby building. Only recently have high performance ICs become available that enable such circuitry to be constructed. Beginners can easily build these receivers, and experienced amateurs and QRP enthusiasts can use them as a reliable, economical, basic foundation for modifications.

Our single PC board has plenty of room for lots of modifications and hook-ups - tinker to your heart's content! Suggestions and technical info are included in every receiver manual. Isn't this what Ham radio is all about? Operates on 9 V battery (not included). Included case measures 5"W x 1 1/2"H x 5 1/4"D".

HR20C	20 Meter Receiver Kit With Case	\$39.95
HR30C	30 Meter Receiver Kit With Case	\$39.95
HR40C	40 Meter Receiver Kit With Case	\$39.95

QRP Amateur Radio Mini-Transmitters

- ✓ Four transistor circuit, oscillator, RF amplifier chain, and clean keying stage
- ✓ RF output of approximately one watt (3/4 W for QRP20)
- ✓ Pi-network output for good matching and harmonic suppression
- ✓ Provision for two internal crystals (one crystal provided), front panel switching
- ✓ VCXO tuning, frequency can be tuned approximately 7 KHz around XTAL frequency
- ✓ Available in 20 meter, 30 meter, or 40 meter versions

These nifty little CW transmitters are practical and economical take-along rigs for trips, camping, teaching or just amazing yourself with what a watt will do! With an exceptional manual of over 20 pages, the detailed step-by-step instructions guide you to a perfectly operating finished transmitter. They are available in 20 meter, 30 meter, and 40 meter models.

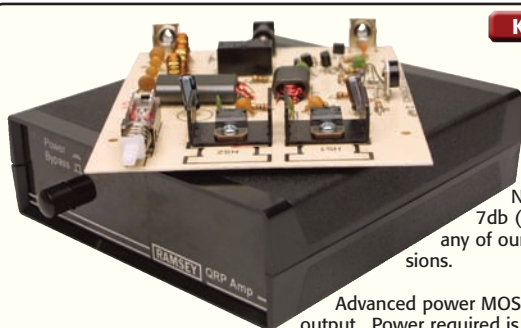
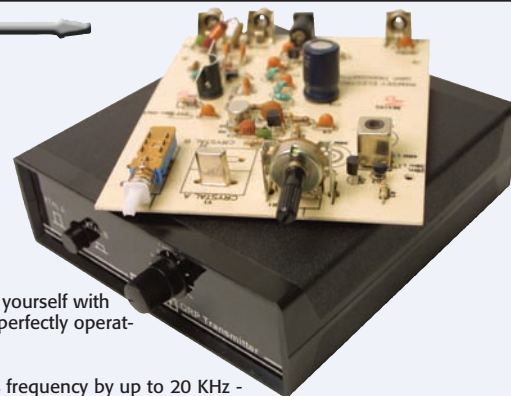
The rigs use a standard crystal that is connected into a VCXO circuit - which means that you can tune around the crystal's frequency by up to 20 KHz - thus giving you stable crystal control while still being able to tune around! A front panel switch lets you choose between two crystals; we include one, you can add another of your choice. A built-in T-R switch allows break-in operation.

Of course, these transmitters interface perfectly with our QRP Mini-rig receivers and our CMOS CW keyer! And for the real Ham, there's plenty of room inside the included case for your own circuit modifications and experiments. These little rigs are often the heart of many QRP operator's stations. Modify "til the cows come home" or just use them as they are - these little rigs pack a lot of performance into an economical package. Runs on 12 VDC at 200 mA. Included case measures 5"W x 1 1/2"H x 5 1/4"D".

QRP20C	20 Meter Transmitter Kit, Includes 14.060 MHz Xtal And Case	\$39.95
QRP30C	30 Meter Transmitter Kit, Includes 10.108 MHz Xtal And Case	\$39.95
QRP40C	40 Meter Transmitter Kit, Includes 7.040 MHz Xtal And Case	\$39.95
AC125	110VAC Power Adapter	\$9.95

KIT

**Work The
World On A
Watt!**



KIT

**Cut Through The QRM
With 20 Watts!**

Need a little extra boost for your QRP rig? This nifty little amplifier may be all you need. Believe it or not 20 watts is only 7db (about one S unit!) less power than a full sized commercial transceiver. These compact amplifiers are easily driven by any of our QRP transmitters or any other unit in the 1/2 - 2 watt range and are available in 20 meter, 30 meter, and 40 meter versions.

Advanced power MOSFETs are used for the utmost in efficiency and purity while a multistage low pass filter is used to assure a clean signal output. Power required is only 12 VDC at 2 to 4 amps, depending upon power output. Complete step-by-step instructions are provided which make building the kit a breeze. The amplifier works well for all modes: CW, SSB and AM. Included case measures 5"W x 1 1/2"H x 5 1/4"D".

QAMP20C	20 Meter QRP Amplifier Kit With Case	\$49.95
QAMP30C	30 Meter QRP Amplifier Kit With Case	\$49.95
QAMP40C	40 Meter QRP Amplifier Kit With Case	\$49.95

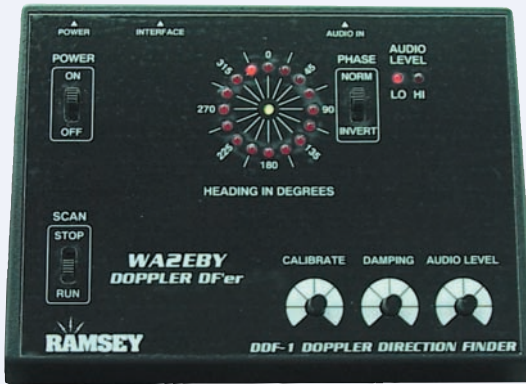
QRP Amateur Radio Linear Amplifiers

- ✓ Works great with Ramsey QRP rigs or any other 1-2 watt transmitter
- ✓ Built-in T/R relay automatically switches between receive and transmit
- ✓ Operates all modes; CW, SSB, or AM

What is QRP all about?

"People like to overcome challenges; it's part of our nature. I lack the physical skills to be a mountain climber, so I have instead chosen to challenge the fickle layers of the ionosphere with a transmitter that runs milliwatts. It's my way of riding the knife-edge of what can be done."

Ed Hare, W1RFI



KIT

Wired & Tested



Track Them Down...
Quick!

Get in on the fun of radio direction finding (RDF) with this super kit! The latest in affordable Doppler direction finding equipment available in a complete kit form...this one even includes the receiving antenna assembly!

A must for the "fox hunter" at an unheard of price! Radio direction finding is a fascinating hobby and is becoming more and more popular in today's portable world.

Doppler Direction Finder

- ✓ Track down jammers and hidden transmitters with ease!
- ✓ Elegant and cost effective design thanks to WA2EBY!
- ✓ Featured in QST Magazine
- ✓ Convenient LED 22.5 degree bearing indicator
- ✓ Adjustable damping rate, phase inversion, scan enable/disable
- ✓ Utilizes high speed CMOS technology for signal conditioning and audio processing!



With the increasing number of intentional jammers and other unknown transmitters around, Doppler DF locators have become the rage with a display that gives you a direct bearing on the location of the transmitter. Pretty neat trick considering you don't need multiple separate receivers at different locations to triangulate on the mystery transmitter!

The kit includes the Doppler Direction Finder display unit and all the parts necessary to build your own four point, 5 piece magnetic antenna assembly for easy setup and use. Operates on 12VDC and includes a matching 12VDC power plug for custom integration and connection into your vehicle or portable power supply. Easy to hook up to any FM receiver. Transmitter (the object of your DF'ing) need not be FM, it can be AM/FM or CW.

Requires only a connection to your receiver's speaker jack and radio's antenna. The whips can be cut and optimized for any frequency from 130-1000 MHz. An easy to build, reliable kit that compares most favorably to commercial units costing upwards of \$1000.00! Comes complete with matching case, 12VDC plug, magnetic antenna kit with cables, and a comprehensive instruction manual. (Sorry, the Dodge Stratus above isn't included, my daughter totaled it! She looks happy about it!)



DDF1 Doppler Direction Finder Kit, With Case, Power Cable, And Magnetic Antenna Kit
DDF1WT Factory Assembled & Tested DDF1 With Case, Power Cable, And Magnetic Antenna Kit

\$169.95
\$269.95

Foxhound Radio Direction Finder

- ✓ Pin diode switching of antennas, coupled with filters, determine direction of source signal as indicated by a pair of LEDs
- ✓ Sensitive metering allows easy "zeroing-in" on transmitter!
- ✓ Includes two telescoping whip antennas
- ✓ Features a built-in T/R switch!

Join The Wild
And Wacky Fox
Hunt Craze!

KIT



The Foxhound connects to any radio through the speaker jack and antenna connector and will allow you to easily zero in on the exact direction of an unknown transmitter, be it aircraft, two-way radio, Ham or even TV. The Foxhound uses a pair of telescoping whip antennas which are manually turned (by you!) until the sensitive meter indicates the lowest reading.

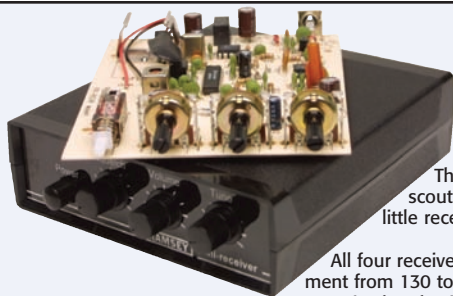
This direction finder uses the latest technology for trouble-free, solid operation. The antennas are alternately switched on and off using PIN diodes. The outputs are then passed thru a high-Q audio filter and synchronously detected for phase shift. A pair of LEDs tell you in which direction you should rotate the antennas- to the right or left.

We provide the telescoping whip antennas and ask you to provide a two foot long "boom" on which to mount them. And, as an added feature, we've included an automatic T-R switch! The T-R switch is ideal for handie-talkie usage; if you wish to transmit with your radio - go ahead, the Foxhound will sense your transmitter power and automatically switch itself out of the circuit while you talk.

Be the one with the answers, win those transmitter hunts, track down the jammers... you'll do it all with your Foxhound! Operates on internal 9 Volt battery or 12VDC, via a 2.1mm female power jack. Includes a custom case set for super-nice looking finished kit! (No foxes were injured or harmed during DF1 development!)

DF1C Foxhound Direction Finder Kit With Case
AC125 110VAC Power Adapter

\$74.95
\$9.95



KIT

Low Cost...
Easy To Build!

Mini VHF Series Receivers

- ✓ Tunes any 5MHz portion of selected receiver band
- ✓ Excellent performance, less than 1µV sensitivity
- ✓ True Superhet Receiver with sharp ceramic IF filters
- ✓ Front panel volume, squelch, and tuning controls

There are no short cuts taken in the design of these units-sensitivity is equal to full size monitor receivers or scanners. Schools, scout troops, clubs and hobbyists use these receivers for teaching, monitoring, and just plain building enjoyment. Any one of these little receivers is ideal for easy chair listening and with no big clunky box and wiring to aggravate the XYL!

All four receivers can be tuned outside of the intended amateur bands. For example, the FR146 two meter receiver will tune any 5 MHz segment from 130 to 180 MHz. Choose your band and enjoy FM repeater and simplex monitoring on a budget! Help a newcomer discover the 220 MHz novice band. Listen in on exciting 10 Meter international FM action.

Rediscover the fascination of 6 Meter sporadic E band openings and uncrowded new FM repeaters. For a professional finished look, our matching case and knob set is included. Kit includes detailed step-by-step manual that carefully guides you to a finished working radio. Runs on a standard 9VDC Battery. Case measures 5"W x 1 1/2"H x 5 1/4"D.

FR146C 2 Meter Receiver Kit With Case
FR6C 6 Meter Receiver Kit With Case
FR10C 10 Meter Receiver Kit With Case
FR220C 220 MHz Receiver Kit With Case

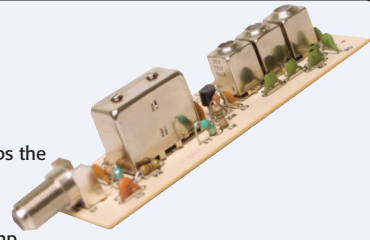
\$44.95
\$44.95
\$44.95
\$44.95



2-Meter Receiver Preamplifier

- ✓ 2 Meter Preamp with the sharpest filtering available!
- ✓ Can be powered up the signal coax (9 to 15 VDC)
- ✓ Helical filter for fantastic intermod rejection

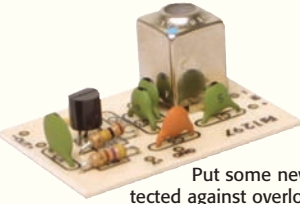
KIT →
Great Gain And Super Selectivity!



Here's the ideal preamp for repeaters, base stations, mobiles - anywhere a selective, low noise signal boost is needed. Unlike other preamps the PR100 features extensive RF filtering to crush intermod before it reaches your radio.

Two poles of sharp Helical filtering combined with a 3 pole L-C tank allow only signals of interest to reach your receiver. A low noise microwave bipolar transistor provides an excellent 1 dB noise figure while remaining ruggedly insensitive to static and strong signals. Preamp is easily configured to be powered via the coax (for mast mount applications) or powered through a separate power cable. Kit is designed to fit snugly into a 3" long piece of 1 1/2" PVC pipe with end caps, making an ideal outdoor enclosure. Runs on 9 to 15 VDC. Size: 4"W x 7/8"H x 1 3/8"D.

PR100 **2 Meter Receiver Preamp Kit** **\$34.95**



KIT →

The Quick And Easy Preamplifier!



Low Cost Receiver Preamps

- ✓ Low noise (typically < 1 to 1.5 dB)
- ✓ High Q tuned circuits (very narrow band) prevent out-of-band signals from overloading front-end
- ✓ Available in 2 meter, 220 Mhz, 440 MHz

Put some new "ears" on your rig with one of these hot little preamp kits. Their high gain combined with low noise will improve most any receiver. Fully protected against overload and designed for low current and stable operation, these preamps employ high Q tuned circuits which restrict out-of-band signals which can cause intermod blanking and overload of your radio's front-end.

Don't be misled by GaAs FET claims! The cheap dual-gate FETs (manufactured for TV tuner usage!) used by others just don't come close to the performance of these preamps designed with NEC microwave transistor devices. Gain is typically 16 to 20 dB and noise figure is 1 dB @ 2 Meters, 1.2 dB @ 220 MHz, and 1.4 dB @ 440 MHz. Compact design for easy installation into most any rig. Operates on 12 to 15 VDC. Size: 1" x 3/8" x 1 1/2".

PR10 **2 Meter Receiver Preamp Kit** **\$14.95**
PR20 **220 MHz Preamp Kit** **\$14.95**
PR40 **440 MHz Preamp Kit** **\$14.95**

Speech Scrambler & Descrambler

KIT → **Wired & Tested**

- ✓ Full duplex operation allows scrambling and descrambling at the same time
- ✓ Bypass mode provides quick change from direct audio to descramble

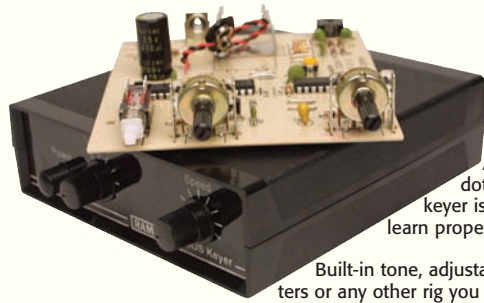
Decode That Garbled Gibberish!



Communicate in total privacy over your radio! This is the popular SS70A descrambler/scrambler that you've read about in all the Scanner and Electronic magazines. The technology used within the unit is known as speech inversion which is compatible with many police department systems; hook it up to your scanner speaker terminals and you're in business. (However, always be sure to check with your local authorities to ensure that you're not straying into any unlawful communications reception.)

The SS70A is full duplex in operation - you can scramble and unscramble at the same time. Easily configured for any use! Easy to build since all complex circuitry is contained in a custom ASIC chip which provides clear, clean audio. Powered by 9 to 15VDC, with 3.5mm mini phone type input/output jacks. The included case measures 5"W x 1 1/2"H x 5 1/4"D.

SS70C **Speech Scrambler/Descrambler Kit With Case** **\$39.95**
SS70WT **Factory Assembled & Tested SS70C With Case And Power Supply** **\$69.95**
AC125 **110VAC Power Adapter** **\$9.95**



KIT →

EZ Key CW Keyer

Works With Any Rig!

- ✓ Perfect CW in one night!
- ✓ Ideal for code practice
- ✓ Great features-budget price

Add to your CW fun with our low cost CMOS Keyer Kit. You'll send clean code that's a pleasure to copy; self completing dots and dashes with properly weighted spacing and timing are all programmed into the CW7C's design. Assembly of the keyer is fast, easy, and fun. Our step-by-step instructions lead you to a finished unit in only one evening. Great for beginners to learn proper and perfectly formed CW right from the start!

Built-in tone, adjustable pitch, and front panel speed and volume controls are featured. The CW7 is the ideal companion to our QRP transmitters or any other rig you may own. You need to supply an external set of paddles (Manual includes details on constructing economical paddles).

The included custom case and knob set matches our QRP receivers and transmitters and gives your keyer a nice attractive finished look. Runs on a standard 9VDC battery. Case measures 5"W x 1 1/2"H x 5 1/4"D.

CW7C **CW Keyer Kit With Case** **\$34.95**

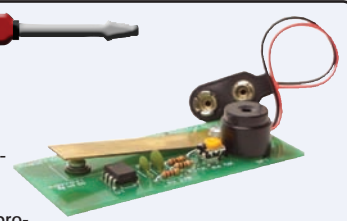
Code Practice Oscillator



- ✓ Great starter kit for young or old!
- ✓ Ideal scouting project
- ✓ Practice your code anywhere!

Learn Code The Simple Way!

KIT →



Looking for a great starter kit to spark the interest of a future engineer? Looking for an easy way to either learn or practice your code? This little code practice oscillator is inexpensive, easy to build, easy to use, and features an audio tone adjustment for your listening pleasure.

The unique "key" built on the board simulates a standard CW key making it unnecessary to connect an external key. A small built-in speaker provides you a clear audible tone complete with adjustable pitch. Uses the ever popular 555 timer IC with full theory of operation to guide you through the construction. Handy 9 VDC battery operation insures hours of enjoyment and the chance to practice your CW code anywhere you go. Size: 3 1/2" X 1 1/2" X 3/4".

CP03 **Code Practice Oscillator Kit** **\$14.95**



KIT 

It's The Real... Time!

I know, you saw the header line "Cola Clock" and wondered to yourself... exactly what are they up to now? What could they possibly mean by a "Cola Clock"??

Well, that pretty much says it! We have always been into really neat things and this one is no exception! First off, you have a neat digital clock and a very unique stand that resembles a cola can. And why would that be? This educational kit actually uses your favorite Cola soda drink as the power source! The bottom compartment is the "Cola battery section"; all you need to do is pour a small amount of soda into the compartment and it creates a chemical reaction just like a battery does! Voila! The digital clock comes on and runs!

The full color manual shows you how batteries work with a chemical reaction similar to your Cola Clock. All parts are easily identified and the clock is easy to assemble. Learn about batteries and have a lot of fun doing it. Your family, friends, and teachers won't believe their eyes, plus you have a real working clock to see when it's time to go to the dentist! (Now we can add this application to the old one about cleaning rust from chrome bumpers!)

Cola Powered Digital Clock

- ✓ Uses Cola soda drink as the power source!
- ✓ Powers a real digital clock!
- ✓ Doesn't rot your teeth!

FUN285 Cola Clock Kit

\$19.95

Electric Circuits Lab

- ✓ Beginner's learning kit!
- ✓ 80 experiments
- ✓ From electricity to magnetism



Learn Electric Circuits

The perfect beginner's course to learn basic electricity and electronics.

Includes 80 electric experiments such as electromagnetics, electrostatics, electric motors, electric meters, electrodes, series and parallel circuits, electromagnetic compass, magnetism, making batteries, and static electricity.

No soldering required. Requires 4 standard AA batteries, not included. From Power Tech.

EDU8100 Electric Circuits Kit

\$26.95

Radio & Electronics Lab

- ✓ Advanced electronics circuits!
- ✓ Over 200 different circuits included
- ✓ Includes transistors and ICs!



Work With Over 200 Circuits!

Go beyond the basics and explore a multitude of circuits and applications with this advanced Radio Electronics learning kit.

More than 200 different circuits are included with a variety of components including transistors, integrated circuits, photo cells, speakers, resistors, and capacitors. The comprehensive manual includes circuits and theory for circuits like a radio, music, logic alarm, games, industrial controls, and more. No soldering necessary. From Power Tech.

EDU8705 Radio & Electronics Kit

\$34.95

CD Electrolab

- ✓ Computer graphics lessons!
- ✓ "CAD" circuit design!
- ✓ Includes console & parts



Design With Your PC!

Wow, who would have thought that a basic learning lab kit would include "CAD" circuit design? This not only provides the convenience of computer aided design but makes it easy to understand circuit theory.

The unique interactive CD program lets you create an endless number of functional electric circuits right on your computer. Once the design is complete, you build them on the console with the supplied parts! Includes a voltmeter, ammeter, lamps, buzzers, diodes, resistors, and fuses. Comprehensive learning manual covers the design and construction of all circuits. Requires Windows XP or newer. No soldering required. From Power Tech.

EDU8150 CD ElectroLab Kit

\$29.95

Energy Lab

- ✓ Learn all about energy sources!
- ✓ Build your own power plants!
- ✓ Over 200 activities



Learn The Creation Of Energy!

With this learning kit you will learn and experiment with the common modes of energy creation! Over 200 energy related activities are included with this lab such as making a windmill, the steam wheel, the electric motor, the on/off switch, how to light a light bulb, making your own battery, solar powered motors, lightning, the propeller, and more.

You will even illuminate an LED with electricity you produce! The detailed learning and assembly manual guides you through each energy experiment and its related test procedures. Experiments are safe and no soldering is required. From Power Tech.

EDU8950 Energy Learning Lab Kit

\$29.95

Solar Lab

- ✓ Learn & harness solar power!
- ✓ Watch it work in front of your eyes
- ✓ Over 150 activities included



Harness The Power Of The Sun!

This kit continues the educational and learning aspects of technology with the introduction of Solar Power!

Learn how to harness and conserve energy from the sun and auxiliary light sources. Activities include a solar furnace, stroboscope, moire patterns, electronic thermometer, photosynthesis, solar energy mobiles, producing electricity components, DC electric motor, solar cells, galvanometer, solar water heater and more! From Power Tech.

EDU8405 Solar Learning Lab Kit

\$26.95

Physics Lab

- ✓ Have fun with physics!
- ✓ Understand nature's basic laws!
- ✓ Includes over 250 activities



Yes, Physics Can Be Fun!

This Physics learning lab takes you into nature's basic laws in a fun and exciting way certain to spark curiosity!

Like all Power Tech labs, the comprehensive guide takes you through more than 250 physics activities. These include air and gasses, pumps, siphons, Bernoulli's principle, specific gravity, water pressure, forces and motion, simple machines, sound waves, light and shadows, heat transfer magnetism, electric motors, and a lot more. From Power Tech.

EDU8200 Physics Learning Lab Kit

\$26.95

ELECTRONICS LABS...Where You Learn The Big Picture!

- 130-In-One
- 200-In-One
- 300-In-One
- 500-In-One

Get hundreds and hundreds of projects, and learn how and why each one works!

from **\$42.95**
Starting On Page 47





Chemistry Lab



- ✓ Makes it easy to understand!
- ✓ Safe for kids and adults!
- ✓ Over 120 experiments included



Learn Chemistry The Easy Way!

In my school days I found myself stumped with the periodic chart on the blackboard and couldn't get beyond that! This lab makes it interesting and fun to explore chemistry!

Contains over 120 unique experiments involving chemistry. Learn about chromatography, acids, bases, salts, indicators, reversible reactions, atoms, molecules, ions, and more. This chemistry is safe and complies with EN71 part 74. (*Guess I needed this in school!*) From Power Tech.

EDU8300 Chemistry Lab Kit \$24.95

Super Chemistry Lab



- ✓ Kitchen chemistry fun!
- ✓ 100 fun activities!
- ✓ From electricity to magnetics



Your Kitchen Is Your Lab!

What a great place for youngsters to learn the basics of chemistry... their kitchen! And mom and dad will enjoy the fun too!

Over 100 kitchen activities relating to chemistry to keep your imagination wandering with excitement! Includes such fun activities as balloon tricks, gas canoe, making a geyser, cleaning old coins, cola volcano, removing an egg's shell without touching it, making invisible ink, cheese, finding iron in cereal and many more! From Power Tech.

EDU8350 Super Chemistry Lab Kit \$24.95

Volcano Lab

- ✓ Make your own Volcano!
- ✓ Includes light and sound effects!
- ✓ Many activities



Get In Touch With Nature!

Definitely smaller in magnitude than Pompeii but this fun lab will allow you to create your own volcano complete with light and sound effects!

Understand nature's most powerful and awesome display of force. Make an erupting volcano with impressive effects. Trace the development of volcanoes and produce different types of eruptions. Other activities include making a fire extinguisher, making a lava light, chocolate lava, and much more! (*Now I want some chocolate lava cake!*) From Power Tech.

EDUCM011 Volcano Lab Kit \$22.95

Ecology Lab

- ✓ Explore today's concerns!
- ✓ Understand the how's and why's!
- ✓ Over 150 ecology experiments



Understand Our World!

From the greenhouse effect to holes in our ozone layer, this lab will guide you through the issues facing our world and what we can do to help.

With over 150 experiments, you learn about how a thermometer is built, the greenhouse effect, ice crystals, calorie calculations, how plants make oxygen, Co2 is heavier than air, barometers, the weather in a casserole, spore prints from fungi, testing acid rain, bacteria in the air, biodegradability issues, smoke, and a lot more. From Power Tech.

EDU8650 Ecology Lab Kit \$24.95

Talking Alarm Clock Kit



- ✓ Easy assembly without soldering!
- ✓ Creates three alarm sounds!
- ✓ Kids love them



Wake Up!

The Talking Clock Kit teaches you how electronic voices are made and is a real hit with the kids!

With the detailed full color assembly and theory manual, building the clock is a breeze and there is no soldering required. When you're done you'll have a running alarm clock that features hourly reports as well as a "rooster crow" for an alarm! Runs on 2 standard AA batteries, not included. From AmeriKit.

AK220 Talking Clock Kit \$17.95

Telephone Kit

- ✓ See-through case!
- ✓ Detailed training course included!
- ✓ Full featured tone/pulse phone



Learn How You Make That Call!

A very popular learning kit for young and old...or for anyone in between that uses a telephone and wants to know how they work!

The full-featured push button electronic telephone is housed in a transparent case to see the inner workings. Features pulse/tone dialing, automatic redial, ringer on/off, and neon bulbs that light up when it rings! A complete training course is included with detailed theory, assembly and testing sections. Can be desk or wall mounted. Soldering is required. From AmeriKit.

AK700 Telephone Kit \$19.95

Deluxe Solar Kit

- ✓ Includes 8 solar panels
- ✓ Comprehensive training manual included
- ✓ Starts at the beginning of solar power technology



Put The Sun To Work!

A great hands-on educational kit to learn exactly how Solar Energy works. Provides a neat bank of solar cells and all the related experiment materials to put the energy to work.

A unique solar cell "unit" provides a bank of solar cells that provide three independent 1.5VDC sources of power. Jumper connections with EZ connections are provided to wire up any of your experiments. Includes a motor, lamp, buzzer, tools, optical disks, and other accessories. You can easily learn how to make a solar circuit and how to increase/decrease voltage or current using series and parallel circuits.

You will be amazed when you produce power to run your small radio, calculator, cassette player and more!

SK40 Solar Deluxe Educational Kit \$17.95

Radio Controlled Car Kit

- ✓ 7 remote control functions!
- ✓ Includes remote control!
- ✓ Full color assembly manual



Build It From The Ground Up!

One of the neatest and most exciting learning kits for the kids! You will be building the Turbo King R/C speedster from the ground up, ending up with a super fast car!

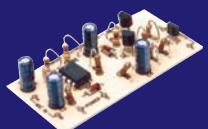
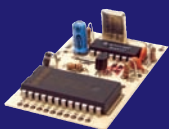
The detailed theory, assembly, and testing manual guides you through basic transmitters, receivers, and electronic switching theories. You'll also learn about gears, motors, integrated circuits, and printed circuit boards! You will construct each segment, explore the circuitry used, and test and troubleshoot it.

The end result? Turbo King with 7 remote functions, flashing top light and a full feature remote control! Electronics runs on a standard 9VDC battery and mechanics run on 4 standard AA batteries, not included. From AmeriKit. (*What a fun way to learn electronics and R/C cars at the same time!*)

AK870 R/C Car Kit \$29.95

Mini-Kits... The Building Blocks Where It All Begins!

Mini-Kits are easy-to-build fully functional kits that are often a great "First Kit" for the student, young or old! Check them out on page 33!





Easy To Learn 130 In 1 Electronics Lab

- ✓ No prior knowledge of electronics needed!
- ✓ Solderless connections for safe assembly
- ✓ Build 130 different circuits and see them work!
- ✓ Includes a comprehensive instruction & theory manual written for the youngest novice to understand!

**A Great Start To Electronics...
With 130 Separate Projects!**

KIT 

**TOP
SELLER!**



For over three decades, Ramsey has provided educational hobby kits that give thousands and thousands of kids their start in electronics. We've searched and searched for an Electronics Lab specifically designed to teach the youngest experimenter the fun and excitement of electronics.

The PL130 does just that! Learn the basics and theory of electronics the fun way while building 130+ projects that you actually see working when you're done! The detailed 162 page instruction manual covers the hows and whys of every circuit, theory, parts identification, and description. We've looked at a lot of these kits and have turned them down because of the documentation. This one is a winner!

LOTS OF PROJECTS? YOU BET! Check them out!

<i>Electronic Woodpecker</i>	<i>Toggle Flip-Flop Circuit Made from NAND Gate</i>	<i>Musical Tempo Generator</i>
<i>The Chirping Bird</i>	<i>TTL Line Selector</i>	<i>Operational Amplifier Winking LED</i>
<i>Electronic Cat</i>	<i>TTL Data Selector</i>	<i>LED Flashing Light</i>
<i>Sonic Fish Caller</i>	<i>TTL Astable Multivibrator</i>	<i>Two-LED Winker</i>
<i>Machine Gun Pulse Oscillator</i>	<i>TTL Tone Generator</i>	<i>One Shot Light</i>
<i>Electronic Motorcycle</i>	<i>Winking LEDs</i>	<i>LED Initials</i>
<i>Two-Tone Patrol Car Siren</i>	<i>A One-Shot TTL</i>	<i>Wake Up Siren</i>
<i>Electronic Siren</i>	<i>Transistor Timer with TTL</i>	<i>Voice-Activated LED</i>
<i>Electronic Metronome</i>	<i>Buzzin' LED</i>	<i>Logic Tester</i>
<i>Electronic Grandfather Clock</i>	<i>Son of Buzzin' LED</i>	<i>Alternating Current Sound</i>
<i>Light-Controlled Electronic Harp</i>	<i>Set/Reset Buzzer 1</i>	<i>Light Control Sound Circuit</i>
<i>Horror Movie Sound Effects</i>	<i>Set/Reset Buzzer 2</i>	<i>Sound Alarm Circuit</i>
<i>Strobe Light</i>	<i>Sound Machine</i>	<i>Study Timer</i>
<i>Rapid LED Display Switching (Persistence Vision Test)</i>	<i>Big Mouth</i>	<i>Kitchen Timer</i>
<i>Capacitor Discharge/High Voltage Generator</i>	<i>Shot in the Dark</i>	<i>Three-Input AND Gate Using Operational Amplifier</i>
<i>Capacitors in Series and Parallel</i>	<i>Variable R-C Oscillator</i>	<i>Voice Level Meter</i>
<i>Resistors in Series and Parallel</i>	<i>Oscillator with Turn-Off Delay</i>	<i>Power-On Reset Circuit</i>
<i>Light Dimmer</i>	<i>Temperature-Sensitive Audio Oscillator</i>	<i>Delayed Timer</i>
<i>Transistor Switcher</i>	<i>Two-Transistor, Directly Connected Oscillator</i>	<i>Pulse Frequency Doubler</i>
<i>Transistor Circuit Action</i>	<i>Push/Pull Square Wave Oscillator</i>	<i>White Noise Generator</i>
<i>Sound Amplifier</i>	<i>Pencil Lead Organ</i>	<i>DC-DC Converter with Operational Amplifier</i>
<i>Flip-Flop Multivibrator with LED Display</i>	<i>LED Strobe Light</i>	<i>LED Practice Oscillator with Tone Control</i>
<i>Seven-Segment LED Digital Display Circuit</i>	<i>Electronic Organ</i>	<i>Crystal Set Radio (Simple-Diode Radio)</i>
<i>Basic LED Display</i>	<i>Daylight Early Bird</i>	<i>Two-Transistor Radio</i>
<i>Transistor Control Switching of the LED Display</i>	<i>Intermittent Alarm Generator</i>	<i>Wireless Code Transmitter</i>
<i>Transistor, CDS Cell and LED Display Circuit</i>	<i>Comparator</i>	<i>AM Radio Station</i>
<i>Diode-Transistor Logic AND with LED Display</i>	<i>Basic Increase in DC Voltage</i>	<i>Operational Amplifier Radio</i>
<i>DTL OR Circuit with LED Display</i>	<i>Constant-Current Source</i>	<i>Aural Continuity Tester</i>
<i>DTL NAND Circuit with LED Display</i>	<i>Integrating Circuit</i>	<i>Conductivity Tester</i>
<i>DTL Exclusive OR Circuit</i>	<i>Schmitt Trigger Circuit</i>	<i>Transistor Checker</i>
<i>Transistor NOR Circuit with LED Display</i>	<i>Noninverting Two-Power Supply Amplifier</i>	<i>Sinewave Audio Oscillator</i>
<i>Transistor Flip-Flop Circuit</i>	<i>Inverting Two-Power Supply Amplifier</i>	<i>Low Distortion Sinewave Oscillator</i>
<i>Transistor Toggle Flip-Flop</i>	<i>Noninverting Single-Power Supply Amplifier</i>	<i>Twin-T Audio Oscillator</i>
<i>Transistor-Transistor Logic Buffer Gate</i>	<i>Two-Power Supply Differential Amplifier</i>	<i>Pulse Oscillator Tone Generator</i>
<i>TTL Inverter Gate</i>	<i>Tone Mixing Amplifier</i>	<i>Audio Signal Tracer</i>
<i>TTL AND Gate</i>	<i>Power Amplifier Using Operational Amplifier</i>	<i>Radio Frequency Signal Tracer</i>
<i>TTL OR Gate</i>	<i>Voltage Controlled Oscillator Circuit</i>	<i>Square Wave Audio Oscillator</i>
<i>TTL Exclusive OR Gate</i>	<i>Operational Amplifier Buzzer</i>	<i>Sawtooth Wave Oscillator</i>
<i>TTL NOR Gate</i>	<i>Burglar Alarm</i>	<i>Rain Detector</i>
<i>TTL Three-Input AND Gate</i>	<i>Hand-Operated Sweep Oscillator</i>	<i>Water Level Buzzer with Operational Amplifier</i>
<i>TTL AND Enable Circuit</i>	<i>Falling Bomb Sound</i>	<i>Metal Detector</i>
<i>TTL OR Enable Circuit</i>	<i>Emergency Siren</i>	<i>Water Level Alarm</i>
<i>TTL NAND Enable Circuit</i>	<i>First Aid Siren</i>	<i>Three-Step Water Level Indicator</i>
<i>TTL R-S Flip-Flop</i>		

Start today and learn the exciting world of electronics with this excellent starter learning lab. Just imagine, build an electronic metronome, a light dimmer, a voice actuated LED light! Or go back in time and learn all about how radio started by building yourself a Crystal Set radio... or take it one step forward and build an actual radio station!

For more advanced Electronics Labs, check out the following:

- PL200 200 In One Electronics Lab
- PL300 300 In One Electronics Lab
- PL500 500 In One Electronics Lab

This 200 In One Lab is a perfect start to a great new hobby in electronics, whether it's for you, your kids, or your friends. The 130 electronics projects are sure to excite the "student" young or old. And if it is even your first experience with electronics, the comprehensive training manual will guide you through each project, and explain exactly how and why it works! If you have a budding electronics hobbyist in your family, the 130-In-One lab is the perfect starter!



KIT

**200 New Projects In
A New Super Fun-To-
Use Package!**

It's back and even better! The new 200 in 1 learning lab contains 200 fun and exciting projects to spark the interest of anyone wanting to explore electronics... young or old!

The exclusive front panel contains a built-in speaker, earphone, meter, 7-segment LED digital display, two controls and more to make the finished projects fun to use. Now you can build your own AM broadcast station, burglar alarm, telegraph, sound effects, radios, and other interesting circuits that give you hands-on fun when done!

The unique front operating panel and special projects make this the popular choice for entry level learning labs. Requires 6 standard AA batteries, not included.

Super-Fun 200 In 1 Electronics Lab

- ✓ Build 200 very special and super-fun projects!
- ✓ Front panel speaker, meter, controls, and more!
- ✓ No tools required!
- ✓ Comprehensive instruction & theory manual!

Includes the following super-fun learning projects:

Surprise and Game Projects

Wheel of Fortune
The Noisy Light
Electronic Candle
Rain Detector
Ear splitter
Pencil Lead Organ
The Electric Human
The Electrosonic Human
Electric Birthday Cake
Quick Draw
Quick Draw II
Electronic Safecracking
UFO Invasion
Tug of War
Shot in the Dark
Burglar Alarm
SOS Alert
Target Range
"Catch" the Eight
Marching LEDs
Turn Signal Flasher
Leapin' LEDs!
Lights Out

Back to the Basics

Light Telegraph
Frontier Telegraph
Introducing the Resistor
Parallel Resistors
Secret Resistance
A Variable Resistor
Capacitors in Series and Parallel
The Electronic Gas Tank
Discharge Timer
Light Dimmer
The Quick Capacitor
Electronic Timer
Capacitors and Oscillators
A Variable Capacitor
Resistors and Capacitors Together
Resistors and Capacitors Together II
Meet the Diode
Voltage Drop
Voltage Regulator
LED - A Special Diode
How a Transformer Works
A Chopper Circuit
An AC Simulator
Electronic Buzzer
Photometer
Electronic Jigsaw Puzzle
Night Light
The Light Switch
Electronic Elephant
Capital Letter Displays

Small Letter Displays
Numeric Displays
Meet the Transistor
Transistors as Switches
Electricity from Sound
Electric Money

Electronic "Building Blocks"

A Push-Pull Amplifier
Understanding Oscillators
A Push-Pull Oscillator
An Inverter Circuit
Meet the OR Circuit
Introducing the AND Gate
Using the NOR Gate
Meet the NAND Gate
How a Multivibrator Works
A "One-Shot" Multivibrator
An R-S Flip-Flop

Putting Electronics to Work

Sound Scooper
Liquid Conductivity Tester
Super-Sensitive Photometer
Motion Detector
Two-Tone Buzzer
Variable Capacitor Oscillator
Variable RC Oscillator
Electronic Metronome
Door Alarm
Frequency Shift Oscillator
Code Practice Unit
Light/Sound Code Practice Unit
Strobe Light
Noisy Strobe Light
CdS-Controlled Oscillator
Shot in the Dark II
Does Money Talk?

Radio Circuits

"Crystal Set" Radio
"Funny" Transistor Radio
One Transistor Radio
Spark Gap Transmitter
Morse Code Transmitter
Remote Water Level Detector
AM Broadcaster

Sonic Zoo and Sound Factory

Basic Audio Oscillator
Light-Controlled Bird
Electronic Motorcycle
Chirping Bird
Electronic Siren
Fish Caller
Plant Growth Stimulator

Electronic Organ
Electronic Raindrops
Electronic Cat
Electronic Bird
Digital Rhythm
Sound Machine I
Sound Machine II
Sound Machine III

Electronic Decision-Makers

Electronic Coin Toss
Electronic Coin Toss II
Even or Odd
Electronic Roulette
Electronic Dice
Roulette with Sound
The Light Fantastic
ESP Tester
Close-In

A Trip to Digital Land

Three-Input OR Circuit
Three-Input AND Circuit
RTL Inverter
RTL Buffer
RTL OR Gate
RTL AND Gate
DTL OR Gate
DTL AND Gate
DTL NOR Gate
DTL NAND Gate
DTL Exclusive OR Gate
TTL Inverter
TTL Buffer
TTL OR Gate
TTL AND Gate
TTL 3-Input AND Gate
TTL NOR Gate

More Adventures in Digital Land

TTL XOR Gate
TTL NAND Enable Circuit
TTL AND Enable Circuit
TTL OR Enable Circuit
TTL Line Selector
TTL Data Selector
TTL R-S Flip-Flop
TTL R-S Flip-Flop II
Transistorized Toggle Flip-Flop
NAND Toggle Flip-Flop
J-K Toggle Flip-Flop
TTL Astable Multivibrator
TTL J-K Flip-Flop
TTL D Flip-Flop
TTL Latch Circuit
Shift Register

Circuits That Count

Basic Counter Circuit
Synchronous Counter
Asynchronous Counter
Counter with Line Decoder
Divide by 4 Counter
Divide by 4 Counter with Line Decoder
How a Line Decoder Works
Multiple Counter
Binary Counter with Display
Divide by 3 Counter with Display
Divide by 4 Counter with Display

Some Silly Circuits

Light or Sound
Be Your Own Multivibrator
Anticipation
Big Mouth!
Sound Stop
Multivibrator Switching
Winking LEDs
A Phony Counter?
Alphabet Flasher
A One-Shot TTL
Winking LEDs II
Transistor Timer
TTL Tone Generator
Meet the VCO
Sound Out Timer
Buzzin' LED
Son of Buzzin' LED
Octave Generator
Crossing Signal
Digital Timer
Set / Reset Buzzer I
Set / Reset Buzzer II
Set / Reset Buzzer III
Optical Counter
LED Sound Meter
Shot in the Dark III
Set / Reset Match
Number Displays

Testing and Measuring Circuits

Circuit Continuity Checker
Acoustic Ohmmeter
DC Voltmeter
Voltage Level Detector
AC Voltmeter
Audio Signal Generator
Volume Level Meter
Capacitance Checker
Diode Tester
Transistor Checker

For more advanced Electronics Labs, check out the following:

- PL300 300 In One Electronics Lab
- PL500 500 In One Electronics Lab



300 Projects
Plus Theory!

Complete 300 In 1 Electronics Lab

- ✓ Build 300 exciting electronic projects
- ✓ Solderless connections for safe assembly
- ✓ No tools required!
- ✓ 165 page comprehensive instruction & theory manual!

After we introduced our PL130 lab kit we were amazed at the customer response. Hundreds and hundreds were ordered, and re-ordered by everyone you could imagine! From parents for their kids, to grandparents for THEIR kids and grandkids, the response has been the same... "THEY LOVE IT!"

We've expanded our line to include this 300-in-one lab kit! Just like the PL130, this lab includes an incredible 165 page comprehensive manual covering the construction of EACH project and the theory behind it.

Includes ALL of the projects in the PL130 PLUS THE FOLLOWING PROJECTS:

Surprise and Fun

Light-Controlled Bird
A Transistor Radio
Sound Scooper
American Patrol Car Siren
Digital Roulette
IC Organ

Back to the Basics

Light Telegraph
Introducing the Resistor
Parallel Resistor
Meet the Diode
The LED-a Special Diode
The Electronic Gas Tank
Meet the Transistor
Transistor as switches
PNP Transistor Switch
NPN Transistor Switch
Delay Light
Night Light
Electronic Timer
Capital Letter Display
Small Letter Display
Number Display

Electronic "Building Blocks"

An Inverter Circuit
Meet the OR Gate
Introducing the AND Gate
Using the NOR Gate
Meet the NAND Gate
How a Multivibrator Works
A "One-Shot" Multivibrator
An R-S Flip Flop
Meet the Oscillator
Changing Oscillation with Capacitor
Changing Oscillation with Foreign Substance
More about Oscillator
A Push-Pull Oscillator

Putting Electronics to Work

CdS Controlled Oscillator
Frequency Shift Oscillator
Motion Detector
Door Alarm
Rapid LED Display Switching
Code Practice Unit
Current Switch
Two-Tone Buzzer
Astable Multivibrator
Monostable Multivibrator
Code Practice Unit
The Noisy Light
Hearing Aid Amplifier
Light/Sound Code Practice Unit
Light Controlled Burglar Alarm
DC-DC Converter
Count Down Timer
Transistor Frequency Doubler
One Transistor Full-Wave Rectifier

Radio Circuits

"Crystal Set" Radio

"Funny Transistor" Radio
Remote Water Level Detector
IC Radio
Morse Code Transmitter
AM Transmitter
Broadcasting Organ

Sonic Zoo and Sound Factory

Plant Growth Stimulator
Electronic Woodpecker
Fish Caller
Electronic Raindrops
Machine Gun Pulse Detector
Chirping Bird
Electronic Bird
"Horror Movie" Sound Effect
Sound Machine I
Sound Machine II
Multi-Tone Siren
Digital Rhythm
Two-IC Electronic Organ

Electronic Decision-Makers

Majority Logic Gate
Electronic Coin Toss
Electronic Coin Toss II
Electronic Coin Toss III
Even or Odd
Quick Draw Game
Close-In
ESP Tester
The Light Fantastic
Shooting Game
Marching LEDs
Electronic Dice
Electronic Roulette

Operational Amplifier IC Can Do Many Things

Meet the VCO
Silicon Diode Solar Cell
Astable Multivibrator Using OP Amplifier
Pulse Generator
Experiment of Comparator
Comparator with Hysteresis
Constant Current Sources by OP Amplifier
Non-Inverting Adder
Touch Switch Using OP Amplifier
Early Bird
DC-DC Converter by OP Amplifier
Inverting Amplifier
Non-Inverting Amplifier
Differential Amplifier
Differential Output Amplifier
Power Amplifier Using OP Amplifier
Balanced Transformerless Amplifier
Three-Stage Differential Amplifier
VCO Using OP Amplifier
Voltage Controlled Amplifier
V-F Converter
F-V Converter
Sweep Generator

Multiple-Function IC Project
Sound Alarm
Photo Organ
Vibrato Organ

Introducing the Power Amplifier IC

IC Power Amplifier
IC Power Amplifier II
Oscillator Using Power Amplifier IC
CdS Controlled IC Oscillator
Phase Shift Oscillator
Intercom
A Water Service Pipe Sound
Electronic Klaxon
Wide Range Audio Frequency Oscillator

A Trip to Digital Land

Switching Circuit
RTL Inverter
RTL Buffer
RTL OR Gate
RTL AND Gate
Transistor OR Gate
Transistor AND Gate
Transistor XOR Gate
Special NAND Gate
DTL OR Gate
DTL AND Gate
DTL NOR Gate
DTL NAND Gate
DTL Exclusive OR Gate
C-MOS Inverter
C-MOS Buffer
C-MOS OR Gate
C-MOS AND Gate
C-MOS 3-Input And Gate
C-MOS NOR Gate
C-MOS 4-Input NOR Gate
C-MOS 4-Input NOR Gate II
DeMorgan's Theorem
Experiment of Threshold Voltage
NAND/NOR and Transistor Switch

More Adventures in Digital Land

C-MOS XOR Gate
C-MOS NAND Enable Circuit
C-MOS AND Enable Circuit
C-MOS OR Enable Circuit
A One-Shot NAND Gate
C-MOS Line Selector
C-MOS Data Selector
C-MOS R-S Flip Flop
C-MOS Flip Flop II
Set/Reset Buzzer
Set/Reset Buzzer II
Set/Reset Buzzer III
Transistorized Toggle Flip Flop
NAND Toggle Flip Flop
J-K Toggle Flip Flop
C-MOS Astable Multivibrator
C-MOS J-K Flip Flop
C-MOS D Flip Flop

C-MOS D Flip Flop II
R-S-T Flip Flop
T Type Flip Flop
C-MOS Latch
Shift Register
Touch Switch Using NAND Gate
Half Adder
D-Latch
2-Line to 4-Line Decoder
Multiplier
Dual 2-Input Multiplexer
Two-Stage Frequency Divider

Circuits That Count

Basic Counter
Synchronous Counter
Asynchronous Counter
Counter with Line Decoder
Divide by 4 Counter
Divide by 4 Counter with Line Decoder
How a Line Decoder Works
Multiple Counter
Binary Counter with Display
Divide by 3 Counter Display
Divide by 4 Counter Display
Up/Down Counter
Down Counter
Decade Down Counter
Decade Down Counter with Display
Presettable Counter
Hexadecimal Counter
Octal Counter
Random Access Display
Decade Counter
BCD Counter with Display
Octal Counter with Line Decoder
Octal Counter with Display
Decade Counter with Display
Decade Counter with Display II

Getting Closer to Computers

BCD to 7-Segment Decoder
Full Adder
Decimal to Binary Encoder
Binary to BCD
Octal to BCD
Hexadecimal to BCD
3-Bit Shift Register

Amusement in Digital Land

VCO by NOR Gate
Pulse-Delayed Circuit
NAND Gate Tone Generator
Transistor Timer
Noise-Signal Discriminator
Pulse Stretcher
Bidirectional Buffer
Various Inverters
Electronic Switch
Tone Burst Generator
Digital Timer
Digital Timer II
Ten Count Buzzer
Press First

Target Range
Catch the Eight
SOS Alert
Wheel of Fortune
Leapin' LEDs

Shakehands of Analog and Digital

Pulse Number Modulation Light Dimmer
Pulse Width Modulation Light Dimmer
DC-DC Converter Using the C-MOS Oscillator
Absolute Value Amplifier
Window Comparator
Digital Light Dimmer
A-D Converter
D-A Converter
Photometer with Digital Display
Surprise and Fun Revisited
Experiment of Electromagnetic Induction
Electronic Candle
Constant Current Circuit
A Phony Counter
Alphabet Flasher
Winking LEDs II
Delayed Timer II
Crossing Signal
Octave Generator
Sound Out Timer
Sound Stop
Big Mouth!
Light or Sound
Be Your Own Multivibrator
Anticipation
Set/Reset Match

Testing and Measuring Circuits

Circuit Continuity Checker
Acoustic Ohmmeter
Audio Signal Generator
Temperature-Sensitive Audio Amplifier
Water Level Detector
Battery Checker
IC Oscillator/Component Tester
Voltage Drop Alarm
Current Shut-Down Circuit
Logic Checker
Logic Checker II
Temperature Alarm
Function Generator

For more advanced Electronics Labs, check out the following:

- PL300 300 In One Electronics Lab
- PL500 500 In One Electronics Lab



Advanced 500 In 1 Electronics Lab

KIT 

**TOP
SELLER!**

- ✓ 152 page starter course manual!
- ✓ 78 page advanced course manual!
- ✓ 140 page programming course manual!
- ✓ Quality hinged case construction

**Advanced Learning Courses Plus 500
Separate Projects!**



We went one step beyond our 300-in-one lab kit! Yes, 500-in-one, PLUS comprehensive learning course manuals! Build 500 exciting projects, learn schematics, build and learn both analog and digital circuits, and even get into digital programming. 500 projects, 370 pages of comprehensive course manuals, and LOTS OF FUN! (*I'd say a lot more... but I don't have the room!* WOW, 500 projects!)

If you're looking for smaller Electronics Labs, check out the following

- PL130 130 In One Electronics Lab
- PL200 200 In One Electronics Lab
- PL300 300 In One Electronics Lab

**Includes ALL of the projects in the PL130... AND
ALL the projects in the PL300... PLUS
THE FOLLOWING PROJECTS:**

Back to the Basics

Capacitors in Series and Parallel

Electronic "Building Blocks"

Low Distortion Sinewave Oscillator

Putting Electronics to Work

Strobe Light

Electronic Grandfather Clock

Electronic Metronome

Twin-T Audio Oscillator

Current Switch

Shot in the Dark

Variable R-C Oscillator

Two-Tone Buzzer

Sawtooth Wave Oscillator

Radio Circuits

Wireless Code Transmitter

Sonic Zoo and Sound Factory

Sound Patrol Car Siren

Pencil Lead Organ

Electronic Motorcycle

Machine Gun Pulse Detector

Electronic Siren

Electronic Cat

Electronic Organ

Electronic Decision-Makers

Majority Logic Gate

Electronic Coin Toss

Electronic Coin Toss II

Electronic Coin Toss III

Even or Odd

Quick Draw Game

Close-In

ESP Tester

The Light Fantastic

Shooting Game

Marching LEDs

Electronic Dice

Electronic Roulette

Operational Amplifier IC Can Do Many Things

Integrating Circuit

Pitch Doubling Circuit

Pitch Doubling Circuit II

Comparator

Schmitt Trigger Circuit

Delayed Timer

Pulse Frequency Doubler

Touch Switch Using OP Amplifier

Surprise and Fun Revisited

Experiment of Electromagnetic Induction

Winking LEDs

Voice Level Meter

Buzzin' LED

Son of Buzzin' LED

Testing and Measuring Circuits

Audio Signal Tracer

Metal Detector

Rain Detector

Burglar Alarm

Temperature-Sensitive Audio Amplifier

Learn Basics More

A Basic of Control Volume

Emitter Follower

Basic Operation of Zener Diode

Zener Voltage Checker

Zener Voltage Checker II

Basic Photo-Transistor Operation

Voltage Drop Circuit by Means of Diodes

Experimentation of Capacitor

Temperature Characteristic

Darlington Circuit (Touch Sensor)

Edge-Trigger Circuit

RC Type Differentiating Circuit

Switch Matrix Circuit

Memory Backup Circuit

Power on Reset Circuit

Constant-Voltage Circuit (Fixed Output)

Constant-Voltage Circuit (Variable Output)

A Rectifier Circuit by Diode Bridge

AGC Circuit Using a Single Transistor

Upper/Lower Limiter Circuit Using OP

Amplifier

Window Comparator II

Amusement on Sound

Multi-Tone Siren

Digital Rhythm

Two-IC Electronic Organ

A Water Service Pipe Sound

Electronic Klaxon

Sound Machine III

Sound Wave Varying with Light Intensity

Player Organ

Sound of Passing Siren

Light Source Sensing Circuit by Sound

Electronic Piano Circuit

Whistle Generating Circuit

Space Gun

Car Horn

More Radio Circuits

Morse Code Transmitter

Broadcasting Organ

FM Transmitter (FM Wireless Microphone)

To The Game World

Quiz Winner Detector

Reflex Nerve Test Game

Shooting Game II

Shot In The Dark II

Sound Quiz

Stop the Seven

High-Power Switch

"Lockout, Mr. Blackbeard!" Game

Russian Roulette

Mole Hitting Game

"Janken" Game

Ping-Pong Game

More Adventures in OP Amplifier Circuits

Voltage Controlled Amplifier

V-F Converter

F-V Converter

F-V Converter II

White Noise Generator

Sweep Generator

Multiple-Function IC Project

Sound Alarm

A Sound of Ripples

Photo Organ

Vibrato Organ

More About Oscillation

Phase Shift Oscillator

Wide Range Audio Frequency Oscillator

Sawtooth Wave Oscillator II

Three Phase Oscillator

Wien-Bridge Oscillator

Ramp Wave Generator

Digital Sine Wave Generator

Frequency-Variable Sine Wave Generator

Sine Wave Oscillator Using D-A Converter

RC Phase-Shift Oscillator

Two Sine Waves with Different Phases

One-Shot Multivibrator Using IC 555

One-Shot Multivibrator Using J-K Flip-Flop

One-Shot Multivibrator Using OP

Amplifier

Shakehands of Analog and Digital

Pulse Number Modulation Light Dimmer

Pulse Width Modulation Light Dimmer

DC-DC Converter Using the C-MOS

Oscillator

Photometer with Digital Display

Pulse Width Modulation Light Dimmer II

Voltmeter

Getting Closer to Computer

Full Adder

Decimal to Binary Encoder

Binary to BCD

Octal to BCD

Hexadecimal to BCD

3-Bit Shift Register

BCD-To-Decimal Decoder

More Digital Circuits

4-Input Data Selector

AND/OR Circuit Using OP Amplifier

XOR Using OP Amplifier

Time Sharing Display of LEDs

LED Lighting-Duty Varying Circuit Using

One-Shot Multivibrator

LED Blinking-Cycle Varying Circuit Using

Asstable Multivibrator

LCD Static Drive Circuit

LCD Dynamic Drive Circuit

Testing LCD Display Response

LED Drive by 4 Switches

Flashing LED by Preset Number

Digital Timer (1 to 7 Minutes)

Sound Timer

Programmable Timer with Down Counter

Amusement in Electronic Circuits

Revolving Light

Photo Switch

Door Chime

Visitor Sensing Chime Using Photo-

Transistor

Touch VCO

Sound Tuning Circuit

Crossing-Bell Sound Generator

Turn Indicator

Staircase Light Switching Control Circuit

Pseudo Candle Circuit

Lie Detector

Light Sensing Circuit

Automatic Lighting LED

Sound Sensing LED

Illumination Lamp

Intercom

PIP Sound Interphone

Electronic Volume

Pedestrian Signal

Time Counter

LED Display Counting Up/Down Circuit

An Electronic Pendulum

Staircase Light Switching Control Circuit II

Lamp Brightness Control Circuit

Illumination Circuit with 4-LEDs

A Simulated Car Winkers

Testing and Measuring Circuits

Battery Checker

Conductivity Tester

Resistor Checker

Three-Step Water Level Indicator

Tachometer

Battery Checker II

Digital Illuminometer

Software Projects

Light LEDs

Light On/Off LEDs

A Binary Counter-Increment Value by ADD

Instruction

A Binary Counter-Decrement Value by

SUB Instruction

Light LEDs Sequentially with AND

Instruction

Light LEDs Sequentially with OR

Instruction

Turn On and Off LEDs Sequentially with

XOR Instruction

Moving LEDs Light with ROL Instruction

Moving LEDs Light with ROR Instruction

Night Rider's LEDs with ROL/ROR

Instructions (1)

Night Rider's LEDs with ROL/ROR

Instructions (2)

Binary Counter with INC Instruction

Binary Counter with DEC Instruction

Sound Do as Do, Re, Mi

Sound a Series of Musical Scale

Let's Input Data to Program

Hidden Key Triggers Sound and Turns All

LEDs On

Stacked MOV Instructions

Changing Order of LEDs by Switch

A Musical Scale Sound by S1 Key

Arithmetic Addition of Two Binary

Values

Arithmetic Subtraction of Two Binary

Values

Arithmetic Multiplication of Two Binary

Values

Arithmetic Division of Two Binary Values

Displays Number 0 to 9 on 7-Segment

LED (2)

Change Order of Numbers Display on 7-

Segment LED (2)

Switches S1-S4 Light Hex Number On 7-

Seg LED

8-Key Organ

Lighting Spade, Diamond, Heart, and

Club on the LCDs Display (Basic)

Lighting Spade/Heart and Diamond/Club

on the LCDs Display

Lighting Spade, Diamond, Heart, and

Club by Static Drive Circuit

Lighting Spade, Diamond, Heart, and

Club by 1/2 Duty-1/2 Bias Circuit

Lighting Spade/Diamond and Heart/Club

by 1/2 Duty-1/2 Bias Circuit

Lighting Spade/Diamond and Heart/Club

Alternately by 1/2 Duty-1/2 Bias Circuit

Lighting Spade, Diamond, Heart, and

Club by 1/2 Duty-1/2 Bias Circuit

Results of Logical Operations AND, NAND,

OR, and NOR

Results of Logical Operations XOR and

XNOR

Results of Logical Operations AND/NAND



AM/FM/SW Radio Learning Kits

- ✓ Learn to build your own AM, AM/FM or SW radio!
- ✓ Discover how radios work!
- ✓ Listen to the results!
- ✓ Safe solderless assembly!



As the "Little Brothers" to our Lab Kits, our Radio Learning Kits teach you the fundamentals of modern radio theory and operation, and give you a working radio when you're finished! There's nothing like the feeling of accomplishment when you finish the kit, plug in the battery, and hear it work! Yes, you did it yourself! Our Radio Kits are available in AM Broadcast, AM/FM Broadcast, and AM Shortwave models. Take your pick! All operate on a standard 9V battery.

AM RADIO

Our AM2 AM Radio kit uses two transistors, 4 resistors and 5 capacitors including a variable capacitor to provide a highly sensitive AM Broadcast Radio. It covers 520 KHz to 1625 KHz and is easy to assemble with safe, solderless connections. The 18 page comprehensive learning and assembly manual covers everything from theory to parts identification and operation.

AM/FM RADIO

Our AMFM7 AM/FM Radio kit is the next step up from our AM2 kit above. It features the same quality AM radio and adds a factory assembled and aligned FM tuner to cover the 88 MHz to 108 MHz FM broadcast band. Utilizes 2 transistors, 5 resistors, 6 capacitors, 1 diode, and 1 coil to provide reception in either band. The AMFM7 is easy to assemble with safe, solderless connections. The 20 page comprehensive learning and assembly manual covers everything from theory to parts identification and operation.

AM SHORTWAVE

Our SR3 Dual Band AM Shortwave Radio Kit takes you away from the local AM/FM broadcasters and brings you into the exciting world of Shortwave Radio Listening (SWL)! The preassembled and aligned tuner section adds to the 2 antennas, 4 capacitors, 4 resistors, 1 transistor, and 1 variable capacitor to provide a sensitive Shortwave Radio covering 6 MHz to 8 MHz and 12 MHz to 18 MHz. The SR3 is easy to assemble with safe, solderless connections. The 20 page comprehensive learning and assembly manual covers everything from theory to parts identification and operation. Operates on a standard 9V battery (not included).

AM2	AM Radio Kit With Comprehensive Learning Manual	\$12.95
AM/FM7	AM/FM Radio Kit With Comprehensive Learning Manual	\$14.95
SR3	AM Dual Band Shortwave Radio Kit With Comprehensive Learning Manual	\$14.95



Start With The Basics!

Entry Level Learning Kits

- ✓ Learn the basics of electronics and electricity!
- ✓ Discover how to listen to AM radio without a battery!
- ✓ Understand and build a working motor!
- ✓ Learn how and why alarm bells work... and build one!

Go back in time and discover how radio was first received! Learn the basics of electric motors including forward and reverse action. Plus, while everyone has heard them, learn exactly how an alarm bell works and then build one yourself! These beginner kits are ideal for the inquisitive mind that wants to know "how and why it works". No previous experience in electricity or electronics is required and all kits use safe, solderless connections.

CRYSTAL RADIO SET

The crystal radio was invented in 1901. It is still the basis of modern-day radio and communications equipment and lives on in a wide variety of radio systems. Go back in time, and learn how radio detection was first done! Without a battery or power supply, you will hear AM broadcasts with your Crystal Radio Set! They contain few parts yet teach many concepts. The comprehensive 16 page manual covers everything from how it works to why it works, with illustrated assembly instructions. Assembly is easy with solderless connections, and no previous electronic experience is necessary. Relive history with a Crystal Set today!

MOTOR ACTION KIT

Learn the basics of an electric motor with our MA1 Motor Action Kit. Learn what makes motors spin, how to control forward and reverse in a motor, and then build one that works! Includes a fan blade and a color disk to learn how to mix color with a spinning disk! This is a great kit for the kids and for the beginner to learn just what makes the world go round! Easy assembly with solderless connections. Requires two AA batteries (not included).

BELL ACTION KIT

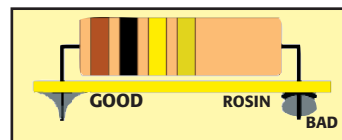
Ding-a-ling... is that a bell? Yep, we've all heard them but do you know exactly how they work? Our BA1 Bell Action Kit is a perfect learning kit for the beginner or the curious! Learn what makes an electronic alarm bell ring, explore how electromagnetism is used, and how you can change the ringing characteristics of a bell! This kit is fun and safe, using solderless connections. Requires two AA batteries (not included).

CS2	Crystal Radio Kit	\$9.95
MA1	Motor Action Kit	\$8.95
BA1	Bell Action Kit	\$8.95

RAMSEY'S TEN COMMANDMENTS OF GOOD PC-BOARD SOLDERING

1. If the soldering iron tip is covered with burned rosin, it can't heat your connection very well.
2. If you heat only the wire and not the wire and PC trace together, a cold, bad connection is likely.
3. If your soldering tip is big enough to bridge two adjoining connections, it probably will!
4. Dirty, grubby solder will contribute to dirty, grubby connections.
5. Any use of acid core (plumbers!) solder in electronics work will destroy everything... DON'T USE IT!
6. A connection in a large area of PC-board copper requires more heat than one pin of an IC.
7. If your connection looks dull or brittle, it's no good.
8. If your connection looks like a ball instead of a shiny cone, it's no good.
9. Thin fresh shiny rosin core solder is easier to use for PC-board work than thicker "hardware store" solder.
10. Pre-tin any stranded wires leading in and out of your PC-board kit project. It will prevent problems later!

Through Hole Soldering



Surface Mount Soldering





Practical Soldering Kit

- ✓ Learn soldering and PC boards!
- ✓ Includes practice exercises!
- ✓ Comprehensive training manual

Learn To Solder!

This is a beginner's project specifically designed to teach you the fundamentals of soldering and working with printed circuit boards.

Like any skill, good soldering requires practice as well as an understanding of the principles involved. You will become familiar with PC boards, the how's and why's of soldering, components, component installation, and troubleshooting soldering problems (including solder bridges!) Project runs on a standard 9VDC battery, not included.



SP1A Practical Soldering Kit **KIT** \$9.95

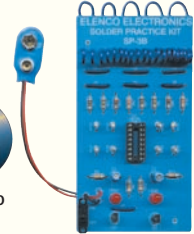
Practical Solder & Parts Kit

- ✓ Learn soldering, boards, and components!
- ✓ Learn color codes!
- ✓ Comprehensive course and exam included

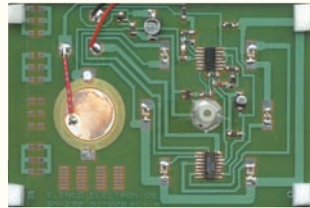
Learn Soldering & Components!

Not only will you learn soldering and desoldering but you will also learn component identification and color codes.

With 163 solder points, you will learn and practice standard soldering, close tolerance soldering, tack soldering and desoldering. Plus you will learn component identification and complete color codes. Even includes a color code calculator! Plus you'll learn voltage and resistance analysis in circuits. Comprehensive manual includes written and visual exams. Project runs on a standard 9VDC battery, not included.



SP3B Practical Soldering & Parts Kit **KIT** \$9.95



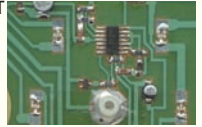
Learn & Practice SMT Component Soldering!



Practical SMT Soldering Course

- ✓ Learn all about those tiny little parts!
- ✓ Develop and practice your SMT soldering skills!
- ✓ Includes SMT training sessions
- ✓ End up with a neat "Decision Maker" project

Surface Mount Technology (SMT) has become a way of life for electronics. Virtually all new high tech products utilize SMT design and components. Even our latest Ramsey kits include various SMT components. There are two problems with SMT: First, the parts are extremely small, at times the size of a pin head! Therefore, you need to have the proper tools, not only to hold them and solder them, but to see them! (Check out the tools section for help!) Secondly, unlike "through hole" parts, SMT components are soldered directly on the surface of the PC board (hence the name SMT!) This is an entirely new method of soldering and it takes practice to get it right. Trust me, I've created a number of solder bridges myself when I first started soldering SMT components!



Taking this course and practicing on the neat little kit will prepare you for the future in electronics. Includes the PC board, all the SMT and other components required, and a comprehensive training course covering all aspects of SMT soldering, desoldering, removing, and component placement. The finished project is a neat little "Decision Maker" that includes 6 flashing SMT LEDs, complete with a professional overlay panel. The finished Decision Maker runs on a standard 9VDC battery, not included. (Hey, I mentioned that I created solder bridges when I first soldered SMT... now I can't even see them without my reading glasses!)

SM200K Practical SMT Soldering Course \$22.95

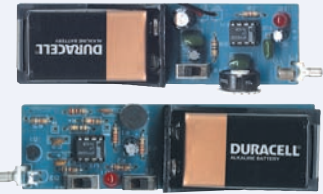
Practical Fiber Optics Voice & Data Kit

- ✓ Send voice over fiber optic cable!
- ✓ Includes transmitter, receiver, and fiber optic cable!
- ✓ Learn the theory and exactly how it works!
- ✓ Fiber length can be extended

Fiber Optics, Used For More Than Holiday Decorations!



Have an adventure with Fiber Optics and learn at the same time! At one time, fiber optics technology was just used for those cute little holiday trees you see at the stores. Then they realized that fiber can be used for communications and data transmission without the problems or line loss of conventional copper wires. Today fiber networks carry the bulk of the telephone, CATV and broadcast television programs. They are quickly replacing land lines, microwave, and satellite communications. Just like SMT, fiber optic technology is the wave of the future!



While this project and course will not build you a nationwide fiber communications network, you WILL learn the basics of fiber optics and its use in telecommunications. The learning kit includes a transmitter board, receiver board, fiber optic cable, and a comprehensive learning course. The transmitter converts an audio signal into a light signal. The receiver accepts the light and converts it back into an electrical signal. You will learn how the converted signal is then reshaped into the proper form to be heard.

Fiber optic cable, its protective covering, and connectors to attach the cable to the transmitter and receiver are also included. PC board soldering is required. The transmitter and receivers both utilize a standard 9VDC battery, not included. FO25 is a great project kit to learn about Fibre Optics (there, I spelled Fiber the way I like it!)

FO30K Fiber Optics Voice & Data Learning Kit \$20.95
FOC20 Fiber Optic Cable, 1,000µm (sold by the foot) \$.85/ft

WELCOME TO THE WORLD OF SURFACE MOUNT COMPONENTS

Welcome to the latest innovation in electronics: Surface Mount Technology, or SMT. Just as the transistor revolutionized the amount of space required to construct electronic circuits, the advent of surface mount components has further "shrunk" the dimensions of the space needed for modern day circuits. These "chip" components are commonly used in everything from camcorders to high speed computers. They are also used in a number of Ramsey Kits!

While the components may look strange at first (where are the leads?!) rest assured that they are not too difficult to install. You'll want to have some special equipment to solder these parts, nothing fancy or expensive, just things you'll want to have handy before beginning. A small pair of tweezers and good eye to hand coordination are necessary for proper SMT assembly. A magnifying lens is a MUST to check solder connections! And of course, a soldering iron.

A friendly warning for you: don't pull out your trusty soldering gun for surface mount projects as the gun generates too much heat for the tiny solder "tabs" on the component ends. A standard pencil type iron will work just fine. SMT parts are also identified differently than standard components so you'll want to familiarize yourself with what's what and who's who in the world of these tiny components. And while you may not be interested in working with them now... you will be forced to at some point since nowadays many manufacturers are making parts only in SMT packages! (Now I'm thinking back at the good old 5U4 vacuum tubes I used to use in kits... quickly replaced with a couple 1N2071 diodes! Wonder if anyone knows what the "getter" is? No it's not the guy you send to get your lunch!)

For the perfect surface mount installation helpers, check out the OptiVisor magnifiers and assorted tweezers in the Tools section!





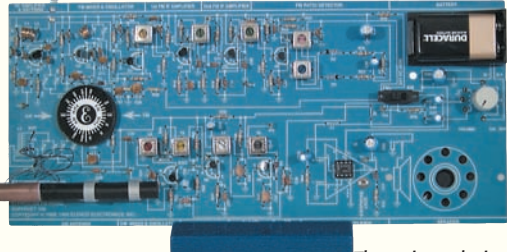
Learn AM and AM/FM Radios With Integrated Circuits!

Makes an excellent project for classroom studies, science fairs, home study!

The unique design of these kits allows you to place the part over its corresponding symbol in the schematic drawing on the surface of the PC board during assembly. This technique maximizes the learning process while keeping the chance of an assembly error at a minimum. They also feature the latest IC design technology to bring you up to speed with today's technology. These specific kits are available in both AM and AM/FM radios.

Both kits include an assembly, lesson, and theory of operation manual. The actual assembly is broken into simple sections. Each section is designed to be completely tested before moving on to the next; this reduces difficult troubleshooting associated with many similar kits. Both kits include hi-tech blue PC boards with the schematic printed on the top surface. The manuals are easy to understand without any previous electronics experience.

Each radio PC board has been designed so that no cabinet or enclosure is necessary. A special molded plastic base provides the necessary support to use the radio in any location, properly displaying the work achievement of the student or builder!



KIT

TOP SELLER!

Learn & Build A Superhet IC Based AM/FM Radio Receiver!

AM/FM Integrated Circuit Radio & Training Course

- ✓ Learn all about AM/FM radio design & theory!
- ✓ Build a high performance radio with an IC!
- ✓ Step-by-step assembly and test procedures
- ✓ Great for student projects

This Superhet 108 AM/FM Radio Kit is a "superheterodyne" receiver of the standard AM (amplitude modulation) and FM (frequency modulation) broadcast frequencies.

The unique design of the Superhet 108 includes an integrated circuit (IC), 9 transistors, 4 diodes, and other related resistors, capacitors, coils, and misc. parts. Because good soldering practices are important, a soldering guide is also provided as well as a component color code and pictorial identification chart.

The actual assembly is broken down into 9 sections. The theory of operation for each section, or stage, should be read before the assembly is started. This will provide the student with an understanding of what that stage has been designed to accomplish and how it actually works. After each assembly you will be instructed to make certain tests and measurements to prove that each section is functioning properly. If a test fails to produce the proper results, a troubleshooting guide is provided to help you correct the problem.

After all of the stages have been built and tested, a final alignment procedure is provided to peak the performance of the receiver and maximize the Superhet 108's reception capabilities. Runs on a standard 9VDC battery, not included. From Elenco.

AMFM108K

AM/FM Integrated Circuit Radio Kit And Training Course

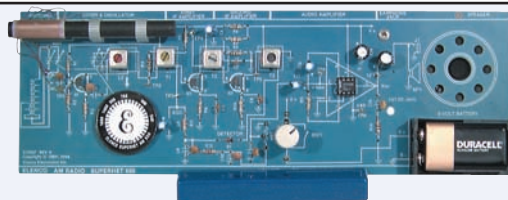
\$34.95

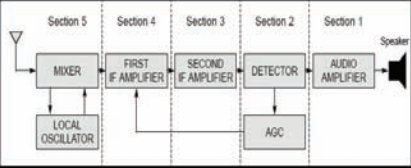
AM Integrated Circuit Radio & Training Course

- ✓ Learn all about AM radio theory and circuits!
- ✓ Build an IC based AM radio with great reception!
- ✓ Step-by-step assembly and test procedures
- ✓ Great IC starter kit for students young and old

KIT

AM Radio, Learn How It Works, And Build One Too!





This Superhet AM550 AM Radio Kit is a "superheterodyne" receiver of the standard AM (amplitude modulation) broadcast frequencies. Unlike the typical "cheap" AM radio kit, the AM550 features an integrated circuit design to bring you into today's technology of radio receivers.

The unique design of the Superhet 108 includes an integral integrated circuit (IC), 9 transistors, 4 diodes, and other related resistors, capacitors, coils, misc. parts and customer designed hardware. Before you even start building, construction techniques and soldering practices are illustrated and covered in detail. In addition, a comprehensive parts list complete with a color code card is provided for rapid identification of all discrete parts.

The training course and assembly are broken down into 5 distinctive sections, allowing you to learn, build, and troubleshoot each section before advancing to the next section. Like the AM/FM unit above, after each section you will be instructed to make certain tests and measurements to prove that each section is functioning properly. If a test fails to produce the proper results, a troubleshooting guide is provided to help you correct the problem.

After all of the stages have been built and tested, a final alignment procedure is provided to peak the performance of the receiver and maximize the AM550's superb reception. Runs on a standard 9VDC battery, not included. From Elenco. *(This is today's version of the "5 tube superhet radio I built in Mr. Baehre's 9th grade electronics shop class... Name those tubes!)*

AM550K

AM Integrated Circuit Radio Kit & Training Course

\$22.95

Integrated Circuit (IC)



Function: noun

A tiny complex of electronic components and their connections that is produced in or on a small slice of material such as silicon. (More from the "need to know" department here at Ramsey!)

Register with your E-Mail address to win MONTHLY drawings for equipment valued up to \$300 and more! Each month we award a value package to one lucky person!

WIN!
Monthly!

**Next month...
IT COULD BE YOU!**

OUR 5TH YEAR OF GIVEAWAYS!



www.ramseykits.com/win



High-Res Weatherproof "Lipstick" Cameras

Wired & Tested

- ✓ Three models: color Super EX-View, B&W hi-res, or B&W Super-HAD
- ✓ Small lipstick design
- ✓ Universal swivel mounting bracket
- ✓ Weatherproof, suitable for outdoor use!
- ✓ Simple plug-in connections

Welcome To The Super Resolution Department!

Looking for the highest quality "lipstick" or "bullet" cameras but don't want to pay a fortune? These are the cameras for you! All feature Sony manufactured CCD sensors for the highest quality and reliability.



	SPECIFICATIONS		
	CCD340	CCD341	CCD342
Format:	NTSC Color	EIA B&W	EIA B&W
Pick-up element:	Sony 1/3" EX-View	Sony 1/3"	Sony 1/3" HAD
Number of pixels:	768x494	512x492	768-494
Resolution:	480 TV lines	420 TV lines	600 TV lines
Min. Illumination:	0.05 Lux	0.1 Lux	0.2 Lux
S/N ratio:	>50dB (AGC off)	>46dB (AGC off)	>48dB (AGC off)
Electronic shutter:	1/60 - 1/100,000	1/60 - 1/100,000	1/60 - 1/100,000
Impedance: 75 ohm	75 ohm	75 ohm	75 ohm
Lens:		3.6mm	3.6mm
Connectors	BNC/Power	BNC/Power	BNC/Power
Power:	DC 12V/130mA	DC 12V/120mA	DC 12V/120mA
Dimensions:	3" L x 0.8 "H	3" L x 0.8 "H	3" L x 0.8 "H

A Sony EX-View color CCD sensor in the CCD340 provides the highest resolution and sensitivity available. Formerly only available in larger and much more expensive cameras, the EX-View is perfect when you want the finest picture quality possible. Great for medical coverage, precision inspection, or detailed surveillance use.

The standard B&W sensor in the CCD341 provides an above-average 420 lines of resolution. This is great for general purpose use and actually exceeds the resolution of the typical low cost black & white surveillance camera.

The CCD342 is a super-high resolution Black & White camera designed with a Sony CCD Super HAD sensor that provides 600 TV lines of resolution. This is perfect where exacting fine detail is required and color is not necessary. Yes, we said 600 lines!

All cameras feature a waterproof housing and a universal swivel mount. Video is brought out to a BNC female and power is brought out to a standard 2.1mm female connector. If you're looking for high quality and performance but don't want to pay a fortune, these are for you!

CCD340	Color Super Hi-Res Lipstick Camera, EX-View CCD Sensor	\$189.95
CCD341	B&W Hi-Res Lipstick Camera, Sony CCD Sensor	\$69.95
CCD342	B&W Super Hi-Res Lipstick Camera, Sony Super-HAD Sensor	\$99.95
AC125	110VAC Power Supply	\$9.95



Waterproof Color & B&W Bullet Cameras with Built-In IR Illumination!

Yes... We said COLOR Plus Automatic IR Illumination!

Wired & Tested

- ✓ Day & night monitoring! CCD color image automatically changed into B/W image in the dark!
- ✓ High output built-in IR illumination for B&W nighttime use
- ✓ Weatherproof black anodized aluminum housing for outdoor use
- ✓ Fool-proof interfaces...BNC video & power

Talk about the best of both worlds! High quality COLOR video camera, PLUS nighttime B&W video camera, PLUS built-in high output IR Illumination, PLUS auto mode switching... all in one unit!

You've seen bullet cameras before, but never like this! Yes, it's a high quality color CCD camera during the day, but once the light level falls below minimum requirements it automatically changes to an IR B&W camera, and turns on the built-in TEN IR illuminating LED's to see in the dark! Now you don't have to sacrifice color operation because you need total darkness coverage at night. You can have both in one camera!

That's not all! Just look at the case. Jet black solid aluminum case that's WATERPROOF to IP57 standards! Yes, that includes temporary complete immersion in water! That means you can mount it outdoors without one of those expensive environmental housings! And that saves a LOT of money.

	SPECIFICATIONS	
	CCD309	CCD308
Pick-up element:	1/4"	Sony 1/3"
Number of pixels:	512 x 492	542 x 492
Resolution:	350 TV lines	420 TV lines
Min. illumination:	0.0 Lux	0.0 Lux
S/N ratio:	46dB	46dB
Electronic shutter:	1/60 to 1/100,000	1/60 to 1/100,000
Load Impedance:	75 ohm	75 ohm
Standard board lens:	3.6mm, F2.0	6mm F1.8
Power:	DC 12V 150mA	DC 12V 180mA
Dimensions:	2.0" W x 3.2" L	2.0" W x 3.2" L

All angle, built-in swivel mount provides you with any mounting configuration you may need. Connections are simple. No solder connections needed; the waterproof cable terminates video with a professional BNC female connector and provides a standard 2.1mm DC power connector. Simply plug it in!



It only gets better... Take the same camera and with a mere switch closure get 2X digital zoom! That's right, our CCD321 also includes 2X digital zoom and we even provide a high quality push button switch for it! You'll be amazed; set up the camera for your wide angle view and with a flip of the switch you have 2X! The switch is operated at the cable end, not at the camera! Don't need color but want the same high-end housing and built-in IR Illumination in a Hi Resolution B&W unit? No problem! Use the CCD308 (I set one of these up for our webcam, pushed the button, and saw one of our people sleeping at the bench... and it wasn't even Friday... or Monday!)

CCD309	Waterproof Color Bullet Camera with Built-in Auto Switching IR Illumination	\$169.95
CCD308	Waterproof B&W Bullet Camera with Built-in Auto Switching IR Illumination	\$109.95
CCD321	Waterproof Color Bullet Camera with Built-in Auto Switching IR Illumination, 2X Remote Zoom	\$239.95
AC125	110VAC Power Supply	\$9.95

VHF TV Transmitter

TOP SELLER!

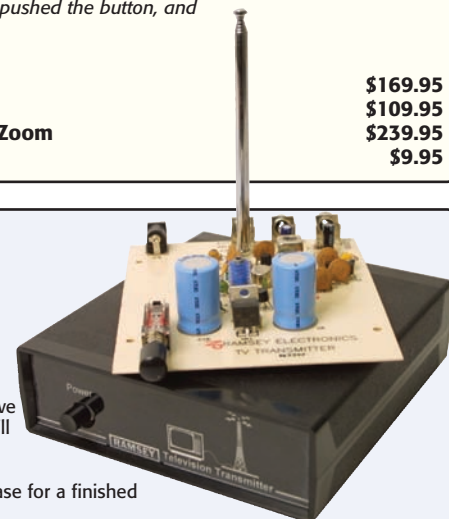
KIT

Learn How A TV Transmitter Works!

- ✓ Transmits on Channel 2-6
- ✓ Broadcast your VCR, DVD player, or CCTV camera throughout your house
- ✓ Learn TV theory while building!
- ✓ Extremely popular TV starter kit!

This great little kit allows you to send any audio and video source (like a VCR or TV camera) to any TV set for up to 300 feet. Have your own TV station with YOU playing producer and YOUR selection of programming! And, the nice feature of this kit is that you'll learn just how a TV transmitter works; we explain every part of the circuit from A to Z.

Tunable to any TV channel 2 - 6, runs on 12 VDC, and accepts standard audio and video signals. Includes an attractive custom case for a finished look! Case measures 5"W x 1 1/2"H x 5 1/4"D.



TV6C	VHF TV Transmitter Kit With Case	\$39.95
AC125	110VAC Power Supply	\$9.95



Wired & Tested

**The Size Of A Quarter?
You Bet!**

The Cubes! Mini Video Transmitters

- ✓ Crystal clear transmission
- ✓ Transmits on CATV channel 59
- ✓ Ultra small for ANY application!

Perfect video transmission from a transmitter you can hide under a quarter and only as thick as a stack of four pennies! Transmits color or B&W with fantastic quality - almost like a direct wire connection to any TV tuned to cable channel 59. Crystal controlled for no frequency drift with performance that equals law enforcement models that cost hundreds more!

Basic 20 mW model transmits up to 300' while the high power 100 mW unit goes up to 1/8 mile. Units run on 9 volts and hook up easily to most any CCD camera module. Any of our camera modules have been tested to mate perfectly with the Cubes and work great with solid, trouble-free operation! Fully assembled and tested - just hook-up power and you're on-the-air with a killer system! *(These new quarters are getting uglier each year & take bad pictures!)*

C2000 Cube Video Transmitter, Factory Assembled & Tested **\$49.95**
C2001 High Power Cube Video Transmitter, Factory Assembled & Tested **\$79.95**

Infrared (IR) Camera Illuminator

- ✓ Allows you to "See In The Dark"!
- ✓ Amazing illumination!
- ✓ Works with B&W CCD camera
- ✓ Operates on 12VDC

**Don't Let Darkness
Dim Your View!**



Imagine being able to see in total darkness! Well, while you can't, virtually any black & white CCD camera can... with a little help from some invisible infrared light! It's easy with our IR1 Infrared Illuminator! A huge array of 24 high intensity infrared LEDs illuminate a good size area so the camera "thinks" it's daylight!

There's nothing magical about it; CCD sensors are sensitive to IR light that you can't see so to the camera the area seems lit perfectly! The illumination provided is about the same as you would expect from a very bright wide beam flashlight. The illuminator runs on 12-15VDC and is built on a convenient PCB ready to install wherever you need it.

One of the neatest things about IR illumination is that it's invisible to the human eye, the illumination will not be detected and can be easily disguised! Order our AC125 power adapter for a simple plug-in connection. Board measures 3" x 2.25".

IR1 IR Illuminator Kit **\$29.95**
AC125 110VAC Power Supply **\$9.95**



**Don't Miss A Beat...
Watch 4 Cameras At Once!**

Automatic Sequential Video Switcher

- ✓ Automatic switching of 4 video sources
- ✓ Variable speed
- ✓ Manual camera selection

Now you can monitor up to four video cameras or other video sources on one video monitor. The AVS10 will automatically sequentially switch between inputs one through four and display the output on a video monitor. Perfect for multiple video camera installations, stores, household surveillance systems, and more.

It has (4) RCA inputs for video input and one RCA output connector, so you can use standard consumer video cables. Variable front panel timing control allows you to change the viewing time for each sequential view. Change it from fast to slow depending on your requirements! If you see a view you need to study you can manually select that input for constant monitoring. Case measures 5"W x 1 1/2"H x 5 1/4"D. *(If you don't want to build it or need full motion quad split monitoring, see the slick little switcher below!)*

AVS10C Automatic Video Sequencer Kit With Case **\$44.95**
AC125 110VAC Power Supply **\$9.95**

Color Quad Processor/Switcher

Wired & Tested

- ✓ Full motion quad display!
- ✓ Automatic sequential switching!
- ✓ Professional quality at a bargain price!
- ✓ PIP screen mode!
- ✓ Flicker-free freeze function!
- ✓ Selectable zoom function
- ✓ Title overlay generator
- ✓ Multiple alarms
- ✓ RS232 remote control

**Full Motion Color Quad
Display & Switching**



This color, professional quad processor/switcher really amazed us! It's simple to set up but has all the power and features you'd expect from units costing hundreds more. Plug in up to four color cameras or video sources and watch them displayed in FULL MOTION, in color, on one screen! Not sure which camera is which? No problem! Camera ID text generators name each camera view, plus give you the time and alarm or motion messages!

Want more? One touch freeze frame on any of the inputs, auto freeze and alarm at loss of signal, on-screen user menu provides all setup, ID generator, level and format functions. Plus independent title settings, 8 characters per channel with 3 character colors based on 16 million true colors, built-in bar generator for monitor setup, and VCR in to support 2x2 Zoom-In and freeze function for playback. It doesn't get much better than that! Sure it does!

How about RS232 remote control and alarm modes for video loss and motion detecting with a 60 event report and built-in buzzer alarm! Not enough you say? How about a miniature IR remote control... it's also included!

Manual pushbutton full screen selection of any input, quad display, or sequential display are all controlled from the front panel. All setup functions and status indicators are displayed on the on-screen graphical user interface! Each input has separate video adjustments to set levels for a perfect view. Motion detection includes adjustable sensitivity and area masking to create an absolute zone of protection.

All video connections feature professional BNC connections and include camera 1-4 input, VCR input, VCR output, and monitor output. The quad processor runs on 12-15VDC at 1A. (Works with our AC125 power supply.) All of this in a package that measures a mere 6.5"W x 5"D x 1.2"! If you're looking for a great full motion color quad switcher, go no further!

CCDS311 Professional Color Quad/Sequential Switcher **\$269.95**



Davis OBDII CarChip Pro

New For 2008

TOP SELLER!



The Ultimate Vehicle Monitoring Tool...
As Easy as 1-2-3

- ✓ Up to 300 hours of trip details (newest data records over oldest)
- ✓ Complete trip details including time/date, distance traveled, speed, etc.
- ✓ Log any 4 engine parameters simultaneously (23 parameters total)
- ✓ Individual graphs and summary reports
- ✓ Records/shows extreme acceleration/braking
- ✓ Allows user-set thresholds for audible alarms, speed, acceleration, and braking (post-drive reports/graphs show when, for how long, and number of times thresholds were exceeded)
- ✓ Automatic accident log with last 20 seconds of speed data before impact
- ✓ View/Reset engine diagnostic trouble codes (check-engine light)
- ✓ Test for preliminary emissions status
- ✓ Included software lets you review/clear diagnostic codes, view summaries/detail reports, and copy data to spreadsheets for further analysis

Record speed every second of every trip, keep your car in peak condition, and teach your kids safe driving habits!

With the CarChip Pro from Davis Instruments, you'll have complete access to all your vehicles diagnostic data at your fingertips! CarChip Pro records every second of every trip, up to 300 hours of driving data! Sort miles by type, business or personal miles, set thresholds for alarms, calculate gas mileage, and a whole lot more!

You get complete trip details of the following:

- Time and date for each trip
- Distance traveled
- Speed (logged every second!)
- Idle time
- Hard and extreme accelerations braking
- Engine diagnostic trouble codes, status, date, times
- Date and time each CarChip is connected
- Accident log

Plus choose 4 additional engine parameters to monitor:

- RPM
- Throttle position
- Engine load
- Fuel pressure
- Fuel system status
- Short term fuel trim (2 each)
- Long term fuel trim (2 each)
- Battery voltage
- Timing advance
- Coolant temperature
- Air flow rate
- Intake air temperature
- Intake manifold pressure
- Oxygen sensor output voltage (8 each)

With the included software, you can easily view all of this graphically on your computer screen, giving you a moment-by-moment picture of how you (or your employees or kids!) are driving! You can also set thresholds and alarms for speed, acceleration and braking, as well as view the number of times those thresholds were exceeded! Comprehensive reports are available to view, store, and even copy to spreadsheets and text documents for further analysis.

No more taking your car in to see why your Engine light came on - the car chip will give you the trouble code so you can check it yourself, and even reset the light! You can also find out if your car will pass the smog test before you take it in! If the vehicle's check engine light (also known as a malfunction indicator light or MIL) comes on, you'll be able to read the diagnostic trouble code (DTC), get the status/date/time of each trouble code, and reset the light. Just like the installation, it's as easy as 1-2-3!

CarChip Pro includes storage for up to 300 hours of driving data! (The actual number of hours will vary, depending on how frequently you log data). When full, the CarChip Pro "rolls over" and begins to overwrite the oldest data with the newest. If you're unfortunate enough to be involved in an accident, CarChip Pro will automatically generate an accident log showing the last critical 20 seconds of speed. (Just like the black box from an aircraft!)

The CarChip Pro is designed and tested to comply with the OBDII protocols used on most cars and light trucks sold in the USA since model year 1996. For excluded vehicles and possible conflicts and limitations, please visit www.carchip.com. The CarChip Pro includes the CarChip Pro data OBDII data logger, software on CD, and USB cable for downloading data to your PC. Requires Windows 98SE/2000/ME/XP/Vista and one USB port. (One of my kids asked to borrow the Magnum Hemi, he didn't know it had one of these in it, read the data when it was returned... no more borrowing that vehicle!)

8226

Davis OBDII CarChip Pro

\$99.95



Motor vehicle crashes are the number one killer of teenagers and young adults.

Don't wait for a speeding ticket—or worse—to find out how your teen is driving. You can't be with your teens on every trip they take. But CarChip Pro can.

Use CarChip Pro to set up your own graduated licensing program. Designate the number of driving hours and specific performance required for advancement to the next level. Review speed, accelerations, and decelerations for each trip, with quick starts and hard brakings highlighted in red. All the information you need is just a mouse-click away.

As your teens improve, lift restrictions as a reward, or reinstate them if they need more practice.

And just in case your teen is tempted to sneak in a few rides without CarChip Pro, the unit will log the time and date every time it is disconnected.

Bill originally installed CarChip Pro to troubleshoot the check engine light, only to find out that someone had been driving at high speeds through the local residential neighborhoods. One father-son talk later, and the kid was busted!

Old spark plugs can reduce fuel economy by 30%; a faulty oxygen sensor by 40%.

Save money and time by keeping your car in peak running condition. CarChip Pro can help by detecting malfunctions early and taking the guesswork out of diagnosing problems.

CarChip Pro records data from the car's computer control sensors every few seconds, on each and every trip. With CarChip Pro, you can log any 4 out of 23 possible engine parameters, all of which can affect operation, emissions, and fuel economy.

If your car's check engine light comes on, use the software to view the trouble code, its description, and the freeze-frame sensor readings. You'll have the information you need to diagnose and fix the problem. And, CarChip Pro will even let you turn the check engine light off when you're done!

Using CarChip Pro, Henry discovered that his coolant temperature was running low. After replacing the engine's thermostat, Henry found that his average fuel economy went up—saving hundreds of dollars a year!

50% of the emissions from late-model vehicles are due to malfunctions.

A smoothly running engine not only saves money, it also helps save the environment. Your car's check engine light comes on whenever emissions exceed 1½ times the federal standards for that model-year.

But don't wait for the check engine light to come on. When there's a malfunction in your car's sensors, the engine burns more gas and exhausts more pollutants. With CarChip Pro, you can keep an eye on selected engine parameters—so you'll always know whether or not your car is running cleanly.

For example, you can tell how efficient your catalytic converter is by keeping an eye on oxygen sensor voltage. Replacing a bad converter can reduce hydrocarbon emissions by 33% or more.

After repeated failed smog checks, David replaced his oxygen sensor—again! Too bad David didn't have CarChip Pro. He would have known about the faulty sensor sooner, saving hundreds of dollars in unnecessary repairs.

A single at-fault accident can raise insurance premiums dramatically.

Not at fault? CarChip Pro can give you the information you need to settle a contested insurance claim. Most cars sold today are equipped with "black boxes." But there's no simple way for you to access the information they record.

CarChip Pro puts this information into your hands, instead of the hands of the automaker or some big insurance company. Whenever there's an accident, CarChip Pro automatically logs the last critical 20 seconds of speed.

You can also see when the brakes were applied. And, if you're monitoring throttle position, you'll see that, too. But don't wait for an accident. By showing exactly how your car is being driven, CarChip Pro can help convince drivers to change their habits. Or it just might be an eye-opener for yourself!

After the radar gun tagged his car, Duncan went to traffic court to fight the ticket. Armed with CarChip Pro's printouts showing the exact speeds he was driving, he convinced an initially skeptical judge to dismiss the ticket.



Easy as 1-2-3!

No tools or automotive expertise required! Just plug CarChip into the OBDII port (easily found under the dashboard or steering wheel) and you're ready to roll.

Once installed, CarChip reads and stores the data from your car's on-board computers, continuously logging driving and engine performance.



CarChip records every second of every trip!

Summary reports show times, distances, driving extremes and more.

Teach your kids safe driving habits!

See maximum speed, jackrabbit starts, hard brakings and more.

Test for emissions status!

Find out if that used car will pass the smog test before you buy it.

Track critical engine parameters!

Keep your car in peak running condition—monitor any 4 out of 23 parameters at a time.

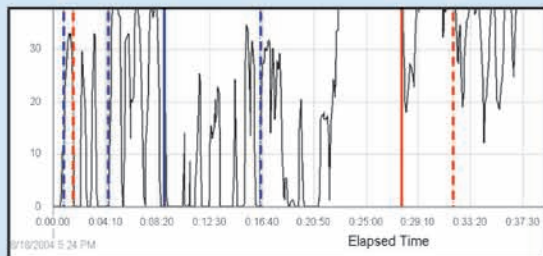
Sort business & personal miles!

Simplify record keeping for business and tax purposes.

Set thresholds for alarms & graphs!

Use the defaults or set your own alarms for speed, braking and acceleration.

Start Time	Duration	Distance Miles	Maximum Speed MPH	Time in To Speed Bar
6/28/2005 7:17 PM	0:27:19	21.8	76	0:00:54
6/28/2005 8:00 PM	0:08:53	4.0	66	0:00:00
6/28/2005 9:45 PM	0:01:39	0.3	25	0:00:00
6/28/2005 10:27 PM	0:07:54	4.6	71	0:00:00
6/29/2005 9:03 AM	0:29:18	18.0	80	0:02:58
6/29/2005 12:30 PM	0:07:44	3.6	58	0:00:00
6/29/2005 1:34 PM	0:10:22	3.4	65	0:00:00
6/29/2005 6:07 PM	0:32:28	18.0	75	0:00:04



Vehicle: **Ford Escape**

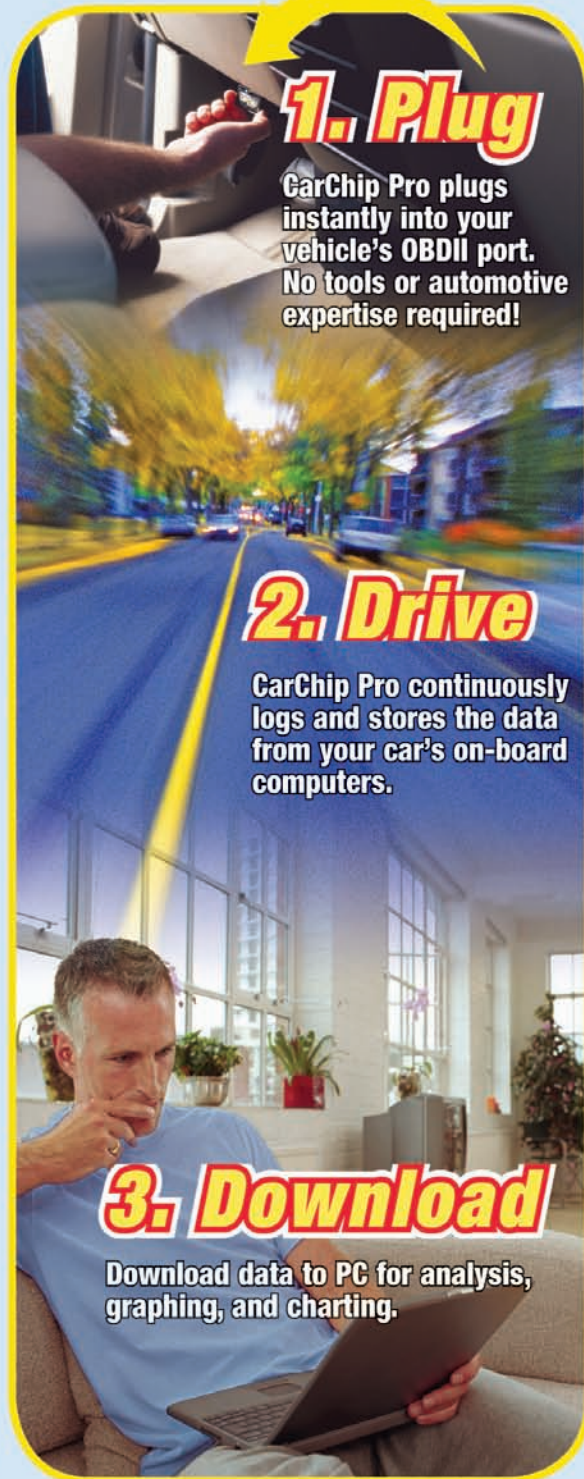
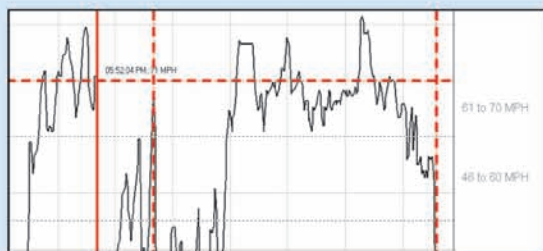
Status as of: 03/31/06 10:52 AM

Monitor	Supported	Status
Catalyst	Supported	Complete
Evaporative System	Supported	Complete
Secondary Air System	Supported	Complete
Oxygen Sensor	Supported	Complete
Oxygen Sensor Heater	Supported	Complete

This Month	Threshold	Time
Battery Voltage	11.00 V	0:00
Short Term Fuel Trim (B1)	0.00 %	0:00
Engine Load	80.00 %	0:00
Coolant Temperature	203.0 °F	0:00
Vehicle Speed	71 MPH	0:00

Date Range: _____ to _____ (mm/dd/yyyy) Search all dates

Trip	Start Date	Start Time	Day	Business	Personal	Commute	Other
1	04/08/05	04:57 PM	Friday				
2	04/08/05	06:11 PM	Friday				
3	04/08/05	06:40 PM	Friday				
4	04/08/05	07:26 PM	Friday				
5	04/08/05	08:11 PM	Friday				
6	04/08/05	08:33 PM	Friday				
7	04/08/05	03:19 PM	Saturday				
8	04/08/05	03:43 PM	Saturday				
9	04/08/05	03:57 PM	Saturday				
10	04/08/05	04:18 PM	Saturday				
11	04/08/05	05:00 PM	Saturday				



1. Plug

CarChip Pro plugs instantly into your vehicle's OBDII port. No tools or automotive expertise required!

2. Drive

CarChip Pro continuously logs and stores the data from your car's on-board computers.

3. Download

Download data to PC for analysis, graphing, and charting.



Wired & Tested

Ready, Aim... And Measure!

This beauty is one of the neatest thermometers we've ever seen! You can measure the temperature of anything merely by pointing an IR beam of light at it! That's right, no contact, no sensors, no wires, glass, nothing but a beam of IR light!

Is your motor running hot? Is your refrigerator cold enough? How cold IS that bottle of soda? If you want to know, just aim and push the button. The temperature is immediately displayed on the backlit LCD display! Check the temperature of your oven and stovetop for perfect cooking results!

The last measurement is automatically held and stored until power-off. Measurements can be momentary or continuous with minimum and maximum temps held during measurement! You can't ask for much more than that in a handheld thermometer that is contact-free besides!

How does it work, you ask? Well if you really want to know, here goes: When making a temperature measurement the surface radiation of the object to be measured is evaluated using the principle of radiation thermometry. This is a purely passive process, i.e. no radiation is transmitted. Only the natural electromagnetic radiation energy (heat radiation) of every body above a temperature of absolute zero (-273 °C) is used. The temperature can be determined very accurately from this radiation energy if the emission factor of the object being measured is known. We'll stop there because we only have so much space for all this copy!

Runs on 4 LR44 cells (included) for a long life. If you want to know what the temperature is, check it out with the IR101! *(The bartender didn't care when I told him my "ice cold beer" was 47.3° so I showed him... he still didn't care, he just wanted my money!)*

IR101 Infra-Red Thermometer

\$39.95

Infra-Red Thermometer

- ✓ Easy contact-free temperature measurement
- ✓ Momentary or continuous measurement
- ✓ Last measurement data hold/display
- ✓ Continuous capture of min/max values
- ✓ Large backlit LCD display

SPECIFICATIONS

Range:	-5°F to 575°F
Resolution:	0.1°F
Accuracy:	±4°F
Units:	°F or °C
Dist to measurement spot:	6:1
Ambient temp range:	32°F to 104°F
Emission factor:	0.95
Power supply:	4 x LR44 cells
Battery life:	2000 measurements approx.
Dimensions:	2.25" x 1" x 4"

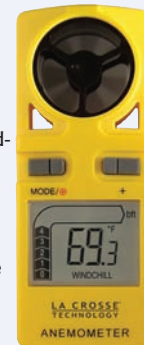
Handheld Wind Speed Anemometer



Wired & Tested

- ✓ Displays instantaneous wind speed!
- ✓ Stores and records max gusts and averages!
- ✓ Displays temperature and wind chill!

**No More Guessing...
KNOW The Wind Speed!**



SPECIFICATIONS

- ✓ Displays wind speed in mph, km/h, m/s, and knots
- ✓ Wind speed range: 0.44 to 67.0 mph
- ✓ Wind speed resolution: 0.1 for all units of measure
- ✓ Temperature range -21.8 to 138.2 °F (-29.9 to 59 °C)
- ✓ Temperature resolution: 0.2°F (0.1°C)
- ✓ Records and displays max and average wind speed since power up
- ✓ Beaufort scale bar graph, 0-12
- ✓ Wind chill display in °F or °C
- ✓ Backlight with auto off
- ✓ Battery saving auto off
- ✓ Neck band for easy carrying and security
- ✓ Weather resistant case
- ✓ Runs on one CR2032 lithium button cell for 12 months life
- ✓ Measures 7" x 4" x 1.63"

We have all seen them on TV... the professional weather talent (now known as meteorologists!) standing in the middle of the hurricane report holding up their wind meter clocking the fastest wind gusts. Usually that's just before they get blown to the ground along with their producer and camera crew! Well now you can have the same professional wind speed meter on a hobbyist budget!

This meter goes beyond just displaying the current wind speed! Besides displaying the realtime instantaneous wind speed in your choice of MPH, KM/H, M/S, or Knots, it also stores and records the maximum gust AND average since it was powered up! In addition, realtime wind speed is also displayed on a Beaufort wind scale ranging between 0 and 12.

Like the wind speed, realtime temperature is also displayed in your choice of °F or °C. Plus, as a derivative of wind speed and realtime temperature, wind chill is calculated and also displayed in your choice of °F or °C.

For your convenience the anemometer is housed in a rugged, weather resistant housing and includes a neck strap for easy carrying. The built-in battery saver circuit keeps the anemometer running for nearly a year with a single lithium button cell! Whether in the middle of a storm, on your boat, hiking, or just curious, if you're looking for the most convenient method of measuring the wind and temperature out in the field, the EA3010 is your answer.

EA3010 Handheld Wind Speed Anemometer

\$32.95

Wired & Tested

**Wireless Controls, Great For
Holiday Lighting Displays!**

RF Remote Control System

- ✓ Uses 433 MHz RF for wireless control!
- ✓ 4 channel remote controls multiple remotes!
- ✓ Master on/off controls all channels



Universal remote control doesn't get much easier than this! Plug the remote outlet in the wall. Plug the device into the remote outlet. Control the device with the RF remote control! Like I said, it simply doesn't get much easier than that!

The system operates with RF at 433 MHz so it doesn't have to have "line of sight" like IR controls. Plus the remote has 4 selectable channels to control 4 separate functions. Each function can be from one to an unlimited number of remote outlets! The functions are coded into the remote with a 4-digit security code! Separate on and off buttons are provided for each channel. Plus, there is a master on/off that turns off ALL channels!

SPECIFICATIONS

Operating voltage:	120V ~ (60Hz)
Maximum current:	30 amps
Maximum power:	3600 watts
Frequency:	433 MHz
Operational range:	80 feet approx.
Remote functions:	4 numbered keys, on/off
Security code:	4-digit
Remote power:	2 x AA batteries

The system comes with one 4-channel remote and two remote outlets. There are a variety of programming options. One remote can control a number of outlets, multiple remotes can control the same outlets, or you can have any combination using 4 channels! Outlets are rated for indoor use. *(I use these for my holiday lights; it was a lot easier than finding the plugs each night!)*

RS204 RF Remote Control Outlet System

\$34.95

"You'll always get top notch technical support from Ramsey!"

Here at Ramsey, we are very dedicated to customer service and response. In the interest of fast, comprehensive, and accurate service, feel free to contact the factory directly with your questions and requests. Please call our toll-free support number **866-446-0809** so you can speak in real-time, to service, and tech support personnel for a prompt and immediate answer to your questions!





Davis Vantage Pro2 Weather Stations

- ✓ Frequency hopping spread spectrum radio communications!
- ✓ Wireless range up to 1,000 feet!
- ✓ Also available cabled for a wireless-free installation
- ✓ Rain collector, Temperature and humidity sensors and anemometer in one package!
- ✓ Weatherlink and data logger for easy PC and web server interface!
- ✓ Displays UV index with optional sensor
- ✓ Displays solar radiation with optional sensor
- ✓ Displays leaf wetness with optional sensor
- ✓ Displays soil moisture with optional soil moisture sensor
- ✓ Add multiple temperature sensors for different locations
- ✓ Wireless repeaters available to extend communications beyond a mile!
- ✓ Compass shows wind speed and dominant wind direction
- ✓ Graph last 24 hours, days, or months of readings, highs and lows, with over 80 graphs to display!
- ✓ Forecast icons let you now whether to expect sun, partial sun, clouds, rain, or snow



**When Weather Is Important To You...
Rely On The Equipment The Professional's Use!**

THE LEADER IN WEATHER TECHNOLOGY!

Davis instruments, the leader in affordable high-quality weather technology, is proud to introduce the first weather station in its price range to use frequency hopping spread spectrum radio to transmit and receive data up to 1000' (300 m) line of sight. That's over three football fields in length and three times farther than competing wireless weather stations!

PACKED WITH FEATURES!

The Davis Vantage Pro2 offers a full range of features, including forecasting, on-screen graphing, and more! Quick view icons show the forecast at a glance: sunny, partly sunny, cloudy, rain or snow, and a moving ticker-tape display gives more details. The integrated sensor suite combines rain collector, temperature and humidity sensors, and anemometer into one package-making setup easier than ever while improving performance and reliability. For improved accuracy, temperature and humidity sensors are housed inside a radiation shield. The shield protects against solar radiation and other sources of radiated and reflected heat.

TONS OF OPTIONS!

Unlike the common consumer weather stations found at the discount stores, a wide variety of add-ons are available for expanded functionality, logging, and reporting! It's a simple concept... If you don't care if the weather information you see is accurate and dependable, those bargain-basement weather stations will do you just fine, if hit and miss forecasting is what you're looking for. But when accuracy and dependability counts, there is no better solution than the Vantage Pro2. Whether you're a farmer who'd entire livelihood depends on forecasting the weather, a meteorologist, science teacher, TV station, or just a serious weather enthusiast, the Vantage Pro2 has you covered...you can depend on it. See the following pages for sensors and accessories designed to tailor your station to your exact needs.

View current data or highs and lows for up to 24 different days, months, or years.

Wireless stations use frequency hopping spread spectrum radio. You'll get three times the transmission distance, improved reception through multiple walls, and greater immunity from rF interference.

Inside compass rose, view wind direction to 1° resolution. Or view wind speed.

View current data or highs and lows for up to 24 different days, months, or years.

Five-position trend arrow shows whether barometric pressure is rising, falling, or stable.

Compass rose with 16 points shows current and dominant wind direction.

Fixed display area shows the most important weather variables at all times.

Set over 70 alarms for multiple functions simultaneously.

Variable display area lets you pick between:

- Inside or additional temperatures or soil moisture
- Inside or additional humidity, UV index, or leaf wetness
- Wind chill, dew point, or two different heat indices

Graph last 24 hours, days, or months of readings or highs and lows. View over 80 graphs including additional analysis of temperature, rain, rain rate, wind, and barometric pressure. All without a computer!

Plus and minus keys simplify data entry.

Ticker-tape display shows expanded forecast details and additional information on current conditions. Over 100 different messages!

Use arrow keys to scroll through data on graph or view highs and lows over time.

View monthly or yearly rainfall, rain rate, evapo-transpiration, or intensity of solar radiation.

6152	Davis Vantage Pro2, Wireless Weather Station, Complete with Wireless Sensor Suite	\$534.95
6152C	Davis Vantage Pro2, Cabled Weather Station, Complete with Cabled Sensor Suite	\$444.95
6162	Davis Vantage Pro2, Wireless Weather Station With UV & Solar Radiation Sensors, Complete With All Sensors	\$894.95
6162C	Davis Vantage Pro2, Cabled Weather Station With UV & Solar Radiation Sensors, Complete With All Sensors	\$804.95

Note: See the amazing list of optional sensors and accessories on the next couple pages! Like I said...it's amazing!



Additional Receiver

An additional receiver/display unit allows you to view data from a Wireless Vantage Pro2 in additional locations throughout your home or office. It can also be used with Wireless Temperature, Temperature/Humidity, or Leaf Wetness & Soil Moisture/Temperature station.

Requires an existing Vantage Pro2 Weather Station (6152/6152C/6162) or a separate Integrated Sensor Suite (6322).



6312 Additional Receiver for Vantage Pro2

\$264.95

Integrated Sensor Suite

For use with Weather Envoy as a stand-alone computer interface or with a separate Receiver (6312). Includes the same sensors that come with the complete Vantage Pro2 system.

Includes a rain collector, temperature and humidity sensors, and anemometer in one package! For improved accuracy, temperature and humidity sensors are housed inside a radiation shield. The shield protects against solar radiation and other sources of radiated and reflected heat.

Requires Weather Envoy (6316/6316C) or Wireless Receiver (6312).



6322 Wireless Integrated Sensor Suite
6322C Cabled Integrated Sensor Suite

\$291.95
\$246.95

Leaf Wetness Sensor

Use this handy sensor to monitor the level of surface moisture on foliage, with range from 0 (completely dry) to 15 (saturated).

Add up to 2 sensors to a single Wireless Leaf & Soil Moisture/Temperature Station. Includes 40' (12m) cable.

Requires Vantage Pro2 Weather Station (6512/6512C) and Leaf & Soil Moisture/Temperature Station (6345).



6420 Leaf Wetness Sensor

\$84.95

Soil Moisture Sensor

The soil moisture sensor uses electrical resistance to measure the moisture level of the soil. Does not require periodic maintenance during the growing season.

Simply bury at the desired depth, then monitor moisture levels throughout the season. Add up to 4 sensors to a single Leaf & Soil Moisture/Temperature Station. Includes 15' (4.6m) cable.

Requires Vantage Pro2 Weather Station (6512/6512C) and Leaf & Soil Moisture/Temperature Station (6345).



6440 Soil Moisture Sensor

\$44.95

Weather Envoy

Receive data from a wireless Vantage Pro2 or Integrated Sensor Suite and post it to your computer without a console! When used along with a WeatherLink data logger and software package, Weather Envoy will collect and store data from the outdoor sensors. Both the wireless and cabled versions include an AC-power adapter. Requires: Vantage Pro2 Weather Station (6152/6152C) or Integrated Sensor Suite (6322/6322C) to receive data, and a Weatherlink data logger (6510USB/6510SER) to view data. (Visit our weather site at www.ramseykits.com/weather for live weather using the Envoy!)



6316 Wireless Weather Envoy
6316C Cabled Weather Envoy

\$174.95
\$147.95

Anemometer Transmitter Kit

This Anemometer Kit allows you to locate the anemometer independently from the rain collector, up to 300m away from the console/receiver! For even longer distances, you can add one or more wireless repeaters.

Great for tower and mountain sites! Kit includes transmitter inside weather-resistant shelter, solar panel, mounting hardware, and battery.

Requires Vantage Pro2 Weather Station (6512).



6332 Anemometer Transmitter Kit

\$152.95

Additional Wireless Temp Station

Battery powered station includes stainless steel temperature probe with 12' (3.6 m) cable, transmitter and battery inside weather-resistant shelter, and mounting hardware. Lithium battery lasts up to one year under normal conditions.

Data from up to eight stations may be viewed on a single Vantage Pro2 Console/Receiver (sold separately). Or, for a complete set of weather data, use with a Wireless Vantage Pro2 or Vantage Pro2 Plus. (You can add up to seven Wireless Temperature Stations to either of these.) Requires Vantage Pro2 (6512) Weather Station.



6372 Additional Wireless Temperature Station

\$165.95

Temperature Probe

Multi-purpose temperature probe with 2-1/2" (64 mm)-long stainless steel housing.

Use to measure temperature of air, soil, or water. Add up to four probes to a single Leaf & Soil Moisture/Temperature Station. Includes 15' (4.6 m) direct-burial cable.

Requires Vantage Pro2 Weather Station (6512/6512C).



6470 Temperature Probe

\$35.95

Weatherlink PC Data Logger

For the ultimate in weather monitoring, add WeatherLink to your Vantage Pro or Pro2. The data logger fits neatly into the weather station console or Weather Envoy, storing weather data even when it's not connected to your PC. Later, download the data and use the software to create graphs, generate summaries, HTML, web displays and a whole lot more! [Visit our live weather site at www.ramseykits.com/weather](http://www.ramseykits.com/weather) to see it in action!

When using the Weatherlink system in conjunction with a PC, you'll have access to:

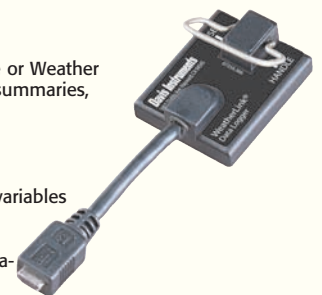
EXPANDED REPORTING

- ✓ See current conditions at a glance on the instant weather bulletin. Graph data on a daily, weekly, or yearly basis. Or view multiple weather variables at the same time to see their relationships.
- ✓ Create Weather Watcher Reports in NOAA National Climatic Data Center Format.
- ✓ View special reports on heating degree days, cooling degree days, and fuel-oil demand. With optional sensors, see reports on evapotranspiration, leaf wetness, soil moisture, soil temperature, sunburn risk for each skin type, and solar energy.

EASY SHARING OF YOUR WEATHER DATA

- ✓ Help the National Weather Service develop improved weather prediction models by submitting your data to the Citizen Weather Observer Program via APRS or the Internet.
- ✓ Create your own weather website or post weather conditions to a LAN using our included HTML templates. Upload other files (such as images from a webcam) along with your weather data.
- ✓ Participate in The GLOBE Program, an international weather-related science program for students from elementary through high school, supported by NASA and NSF.

Includes software on CD, data logger, and 8' (2.4 M) cable to connect the data logger to your computer. Choose a logging interval of 1, 5, 10, 15, 30, 60, or 120 minutes. Depending on the logging interval, store up to six months of data before downloading. Requires Vantage Pro2 Weather Station (6512/6512C) or Weather Envoy (6316/6316C).



6510USB Davis Weatherlink Data Logger and Software (USB Connection)
6510SER Davis Weatherlink Data Logger and Software (Serial Connection)

\$147.95
\$147.95



Weatherlink for APRS with Streaming Data Logger

For ham radio operators, including storm chasers and volunteer weather watchers! Connects a Vantage Pro2 or Weather Envoy to a ham radio or TNC modem for instant transmission of both your location and the local weather conditions via APRS (Automated Position Reporting System). Data submitted via APRS lets emergency personnel map changing weather conditions in real-time, and also helps the National Weather Service develop improved weather prediction models.

Datalogger also simultaneously logs and stores the data, which can later be downloaded to your PC for all the graphing, charting, and analysis included with our standard WeatherLink.

Includes streaming data logger, software on CD, and an 8' (2.4m) cable to connect the data logger to your computer or modem. For downloading to a PC, you need Windows 95/NT4.0/98/2000/ME/XP and one free serial port.

To track multiple stations on the same computer, add one WeatherLink for each station. To view the same weather station on multiple computers, add one Extra User License for each computer. Requires Vantage Pro2 Weather Station (6512/6512C) or Weather Envoy (6316/6316C).

6540 Davis Weatherlink for APRS with Streaming Data Logger

\$174.95



Weatherlink for Emergency Response Teams with Streaming Data Logger

For use with the free CAMEO® software developed by NOAA and the EPA. In conjunction with a Vantage Pro2, it provides the real-time weather data needed to map the "footprint" of a hazardous plume, predict its dispersion, and help make critical public safety decisions — all at just a fraction of the cost of other systems.

Datalogger also simultaneously logs and stores the data, which can later be downloaded to your PC for all the graphing, charting, and analysis included with the standard WeatherLink.

To track multiple stations on the same computer, add one WeatherLink for each station. To view the same weather station on multiple computers, add one Extra User License for each computer.

Includes streaming data logger, software on CD, and an 8' (2.4m) cable to connect the data logger to your computer or modem. For downloading to a PC, you need Windows 95/NT4.0/98/2000/ME/XP and one free serial port. Requires Vantage Pro2 Weather Station (6512/6512C) or Weather Envoy (6316/6316C).

6550 Davis Weatherlink for Emergency Response Team with Streaming Data Logger

\$264.95

Leaf & Soil Moisture/Temperature Station

Solar-powered station includes transmitter and battery inside weather-resistant shelter. Sensors are sold separately, letting you build the station that matches your needs. To view the data, add a wireless Vantage Pro2 console/receiver, or Weather Envoy or WeatherLink.

Each can receive data from either:

- ✓ A single fully-populated station with 2 leaf wetness sensors, 4 soil moisture sensors, and 4 temperature probes, or
- ✓ Two partially-populated stations, one with 2 leaf wetness sensors and 2 temperature probes, and the other with 4 soil moisture sensors and 4 temperatures probes.



Requires Vantage Pro2 Weather Station (6512) or Weather Envoy (6316).

6345 Wireless Leaf & Soil Moisture/Temp Station **\$174.95**

Additional Wireless Temp/Humidity Station

Includes temperature/humidity sensor, transmitter, and radiation shield. Shield protects against solar radiation and other sources of radiated and reflected heat.

Data from up to eight stations may be viewed on a single Vantage Pro2 Console/Receiver (sold separately) or Weather Envoy and WeatherLink. Or, for a complete set of weather data, use with a Wireless Vantage Pro2 or Vantage Pro2 Plus. (You can add up to seven Wireless Temperature/Humidity Stations to either of these.)

Station is battery powered. Lithium battery lasts up to one year under normal conditions. Requires Vantage Pro2 Weather Station (6512) or Weather Envoy (6316).



6382 Additional Wireless Temp/Humidity Station **\$210.95**

Complete Wireless Soil Moisture/Temperature Station

This solar-powered station package includes transmitter and battery inside weather-resistant shelter, 4 soil moisture sensors and 4 temperature probes.

To view the data, add a wireless Vantage Pro2 console/receiver, or Weather Envoy or WeatherLink. Add up to 2 leaf wetness sensors (sold separately), to create a custom station.

This station meets the GLOBE protocol requirements.

Requires Vantage Pro2 Weather Station (6512) or Weather Envoy (6316).

6345CS Davis Complete Wireless Soil Moisture/Temperature Station

\$489.95



Wireless Repeaters

For longer distances or to improve reception in troublesome areas, add one or more Wireless Repeaters. Transmitting and receiving range for each repeater is up to 1000' (300 m) outdoors, line of sight; typical range through walls under most conditions is 200' to 400' (60 to 120m). Includes AC power adapter. Use up to eight repeaters with a single wireless station, or form a network of weather stations by linking eight repeaters to eight different wireless stations.

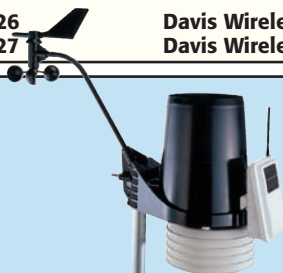
Requires Vantage Pro2 Weather Station (6512) or Weather Envoy (6316).

7626 Davis Wireless Repeater with AC Power
7627 Davis Wireless Repeater with Solar Power

\$152.95
\$197.95



Find out what the weather is right here at Ramsey!
Check our live remote weather display at
www.ramseykits.com/weather





Audio/RF DDS Signal Generator

- ✓ DDS and SMT technology!
- ✓ Frequency range 0 Hz to 5 MHz with 0.1Hz resolution!
- ✓ 0 to 10V peak to peak output level
- ✓ Sine, Square, or Triangle waveform output!
- ✓ Non-volatile memory
- ✓ Factory assembled and tested

Wired & Tested



**The Super Signal Generator...
DC To 5 MHz In 0.1 Hz Steps!**



SPECIFICATIONS

Frequency Range:	0.0 Hz to 5 MHz
Frequency Resolution:	0.1 Hz
Stability:	±15 ppm
Output Amplitude:	0 to 10 Vp-p
Amplitude Resolution:	10 mV
Amplitude Accuracy:	±0.1 dB from 0 to 3 MHz +0.1 to -1.5 dB from 3 to 5 MHz
Output Waveforms:	Sine, Square, Triangle
Output Impedance:	50 ohm, 25 ohm, 0 ohm (current limited) internally selectable
DC Offset:	0.0 V to 5.0 VDC
Offset Resolution:	10 mV
Display:	High contrast LCD
Entry Method:	Direct entry numeric keypad, incremental rotary encoder
Memory:	6 non-volatile memory locations
Power Requirements:	8 to 16 VDC @ 600mA max. 110VAC power adapter included
Dimensions:	9.625" W x 3.625" H x 5.875" D 244.4mm W x 92mm H x 149.2 mm D

THE ULTIMATE AUDIO SIG GEN...TO 5 MHz!

The SG560 is more than an audio generator. It is also a signal generator that produces AC signals with DC coupling at the output jacks like a digital signal generator. The versatility of the SG560 will allow you to recreate many basic signals used in testing situations.

The SG560 allows you to generate square waves, sine waves, and triangle waves of any frequency from 0 Hz to 5 MHz in 0.1 Hz steps. The frequency accuracy is tied to a crystal reference with an accuracy of ±15ppm over its full temperature range. You can also step the frequency at any arbitrary increment. For example a step of 37.5kHz can be entered and the dial or shift arrows can be used to step the frequency up and down by this amount.

The SG560 uses a robust output stage for the final driver. It is derived from DSL modems and is essentially a high power opamp. The opamp is capable of delivering 2.5W to a load before going into protective shut-down. It is being used in a differential fashion which means that any common mode noise is cancelled on the output. The output voltage can swing from 10V peak to peak with a 5V DC offset without clipping. For a negative DC voltage output, swap the polarity of the cables attached to the jacks.

The SG560 allows digital entry of the output level with a resolution of 10mV. For example, if you enter 5.55, the SG560 will generate a 5.55V peak to peak waveform at the jacks. The SG560 has an additional option which allows the user to set the output impedance. It can be 50 ohms, 25 ohms, or 0 ohms impedance at the output jacks. With a 50 ohm output impedance a 50 ohm load will drop the output signal level by 1/2 of the value entered. With 0 ohms a 50 ohm load will not drop the level at all. The 25 ohm output setting can help when driving a capacitive load; the 0 ohm setting should never be used with this type of load.

the value entered. With 0 ohms a 50 ohm load will not drop the level at all. The 25 ohm output setting can help when driving a capacitive load; the 0 ohm setting should never be used with this type of load.

ADVANCED FEATURES!

A DC offset may be entered; this is added (or subtracted if the jack connections are reversed) to the AC signal. Rather than the output AC waveform being centered on 0VDC, a set DC voltage can be added to your signal. This allows the performance of tests that are not possible with a basic audio signal generator. For example, a small circuit can be powered by the DC offset as long as it requires less than 2.5W of power and AC signals can be used to check for noise or EMI immunity. The DC offset can also be used to recreate digital signals in the square wave mode. For example, to create TTL square waves, enter 5V for the level and 2.5V for the offset. This will create the 5V (digital '1') and the 0V (digital '0') levels needed for testing and clocking digital circuits. With a signal range of up to 10V peak to peak and 5V of offset, even old 4000 series CMOS signal levels can be recreated!

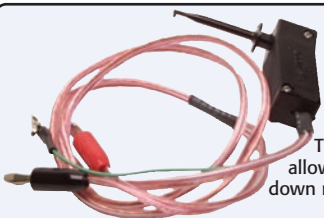
Additionally the SG560 contains 6 non-volatile memory units which save the full system settings: frequency, level, shape, and offset. This allows you to frequency hop or use the memories to "script" repair, testing, and alignment procedures.

EXTREMELY RELIABLE!

Surface mount technology is used throughout the SG560 making it extremely reliable and accurate. Frequency is entered directly on the sealed membrane keyboard and adjusted with a precision rotary encoder with an oversized knob. Both frequency and output level are displayed on a high contrast, two-line LCD display. The SG560 operates on 8 to 16VDC and includes a standard 110VAC power adapter. Because of the surface mount design the SG560 is only available factory wired and tested. If you are looking for a lab quality signal generator at a standard price, the SG560 fits the bill... and a whole lot more!

SG560WT Audio/RF Signal Generator, Factory Assembled & Tested

\$329.95



Wired & Tested

**Measure RF With A
Standard VOM!**

Sniff-It RF Detector Probe

- ✓ Use with any DMM or VOM to measure RF!
- ✓ Low cost RF measurement
- ✓ Can also be used as a field strength meter!

The RF1 is a very sensitive RF detector probe that connects to any digital multimeter and provides a DC voltage output from weak RF signals. This allows very easy tracing of low level RF signals that a counter can't pick up. Wide frequency coverage of 100 KHz to over 1000 MHz lets you track down most any problem in transmitter chains, receiver stages, or even complex PLLs.

Uses exotic, low barrier microwave detector diodes to give exceptional sensitivity which can see signals down to microwatt levels! A great low cost way of checking for RF. Fully assembled and tested, with standard banana plugs for use with any standard VOM, DMM or voltmeter. If you need to measure RF and don't want to spend big bucks, here you go!!

RF1 RF Sniff-It Probe, Assembled & Tested

\$22.95

Broadband RF Preamp

- ✓ Broadband...from 1 MHz to 1000 MHz, usable to 2000 MHz!
- ✓ Low noise figure, less than 2.5dB
- ✓ Improves AM, FM, VHF TV, UHF TV, and HF reception. 50 – 75 ohm imp.
- ✓ Over 25 dB Gain with up to 100 mW of power output!

Wired & Tested

**Broadband, Low Noise...
And 25dB Gain!**



Ever wish you could "perk-up" your counter or scanner to read weak signals? Or how about boosting that cable TV run to drive sets throughout the house or maybe preamping that TV antenna to bring in that blacked out football game from a distant city? The PR2 broadband preamp is the answer to all these needs as well as many others!

Since the PR2 has such a high compression point of almost 100 milliwatts, you can even use it to boost the power of small, micro transmitters! Microwave MMIC chips from NEC Japan enable the PR2 to have gain up to 2 GHz although we only spec the PR2 to 1 GHz. Runs on 12 VAC/DC or 120 VAC using the included wall adapter. Size: 4" x 2" x 1".

PR2 Broadband Preamp, Factory Assembled & Tested

\$69.95



Wired & Tested

Portable Digital Oscilloscope With DVM Readout

Your Own Personal Handheld Scope!



- ✓ Digital waveform & measurement display!
- ✓ 10 MHz & 40 MHz sample rates
- ✓ Backlit LCD display
- ✓ RS232 output (40 MHz model only)



THE AFFORDABLE PORTABLE STORAGE SCOPE!

We've all seen different models of portable scopes, meters, and scope/meters. We've also seen the price tag! Unless you were a field tech with a good sized test equipment budget they were out of the question. These Velleman "Personal Scopes" have changed all that and put a handheld digital scope within reach of the hobbyist, student, and technician! As I'm writing this catalog copy, I personally remember when I shelled out a couple thousand dollars for my first Scope Meter! And now you can buy one of these for several hundred dollars...with more features besides!

BUILT-IN DVM!

With today's technology, merely measuring voltage isn't enough. Whether you're an auto mechanic looking for electrical noise, working with audio equipment, or a student working on lab projects, a scope is a must! Instead of carrying around a digital multimeter you can actually have your own personal scope at about the same price! And besides a scope the display has DVM readout for dBm, dBV, DC, and True RMS!

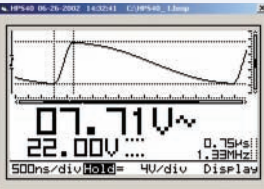


DUAL MEMORIES!

Frequency readout is also displayed on the screen through markers. Plus, the scopes have two memories for digital signal storage! That's right, we said it's a storage scope!

RS-232!

The scopes run on 5 standard AA Alkaline batteries (not included) which provide up to 20 hours of use. Rechargeable AA NiMH batteries can be used in place of standard Alkaline batteries and will be automatically charged with the included AC power supply adapter and charger.



The HPS40 also includes an RS232 interface cable for PC connectivity. A simple serial DB9 RS232 connection to your PC provides you with a high resolution bitmap display of your screen at the touch of a button! Perfect for recording measurement results. Windows based software is included.

SPECIFICATIONS

	HPS10SE	HPS40
Max Sample Rate:	10MHz (2MHz single shot)	40MHz (10MHz single shot)
Max Input Bandwidth:	2MHz (-3dB at 50mV, 1V & 20V/Div x 1 setting)	5MHz (-3dB at 5mV/div to 12MHz at 1V & 20V/div)
Input Impedance:	1M ohm, 20pf standard scope probes	1M ohm, 20pf standard scope probes
Input Coupling:	DC, AC, and ground (zero reference)	DC, AC, and ground (zero reference)
Vert Resolution:	8 bit, ±1 bit linearity	8 bit, ±1 bit linearity
Trigger Modes:	Run, normal, once, roll mode for 1s/div and slower timebase	Run, normal, once, roll mode for 1s/div and slower timebase
LCD Graphics:	64 x 128 pixel, white backlight	112 x 192 pixel, white backlight
Signal Storage:	256 samples with 2 memories, max 125 visible samples, 256 using X shift	256 samples with 2 memories, max 179 visible samples, 256 using X shift
dBm Measurement:	-73dB to +40dB, ±0.5dB accuracy (0dBm=0.775V at 600 ohm)	-73dB to +40dB, ±0.5dB accuracy (0dBm=0.775V at 600 ohm)
dBV Measurement:	-75dB to +38dB, ±0.5dB accuracy (0dBV=1V)	-75dB to +38dB, ±0.5dB accuracy (0dBV=1V)
True RMS Measurement:	.1mV to 80V, ±2.5% accuracy	.1mV to 80V, ±2.5% accuracy
P/P AC Range:	0.1mV to 160V, ±2.0% accuracy	0.1mV to 160V, ±2.0% accuracy
Timebase Ranges:	0.2us to 1hr/div, 32 steps	50ns to 1hr/div, 32 steps
Input Sensitivity Range:	5mV to 20V/div at time 1, 50mV to 200V/div at times 10, 12 steps	5mV to 20V/div at time 1, 50mV to 200V/div at times 10, 12 steps
Probe Calibration Output:	2KHz/5Vpp approx	2KHz/5Vpp approx
RS232 Output:	None	Plug-in to DB9 serial cable provided. Push button to PC computer bitmap display
Power Requirement:	9V, 500mA adapter provided	9V, 500mA adapter provided
Batteries (not included):	5 AA Alkaline batteries or 5 AA NiMH rechargeable batteries	5 AA Alkaline batteries or 5 AA NiMH rechargeable batteries
Battery Life:	Up to 20 hours with AA Alkaline	Up to 20 hours with AA Alkaline
Operating Temperature:	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)
Dimensions:	4.13" x 7.95" x 1.38" (105mm x 220mm x 35mm)	4.13" x 7.95" x 1.38" (105mm x 220mm x 35mm)
Weight:	14 oz (395g) less batteries	16 oz (450g) less batteries
Accessories Provided:	Foam lined carrying case, standard scope probes, users manual	Foam lined carrying case, standard scope probes, DB9 RS232 cable, user's manual

PERFECT FOR YOUR TOOL BOX!

We all carry a DMM in our tool boxes and would be lost without it. After all, how could you possibly measure voltage, current, continuity in every-day service calls. Well, take it one step further, and have your own personal storage scope in your tool box, ready to tackle those "difficult" problems. If you're working with electronic circuits, automotive applications, audio and stereo applications or any other type of electronic applications, the Personal Scope belongs in YOUR toolbox, at a price that can't be beat! (Editors note, I carry one of these in my tool box and it is the handiest thing in there! From audio hum to DC measurements, I'm always the guy that can find it... and then they assume the same guy can fix it... grrrrrrr!)

HPS10SE	Personal Scope, 10MHz, Case, Probes, Power Supply, Assembled & Tested	\$229.95
HPS40	Personal Scope, 40MHz, Case, Probes, Power Supply, RS232 Out, Assembled & Tested	\$299.95
PS28	9VDC Power Supply, 500mA	\$9.95

Professional RF Power Meter

KIT

Wired & Tested

- ✓ **Broadband:** PM50 10 kHz to 450 MHz ± 0.5dB, 10 kHz to 500 MHz ± 2dB;
- ✓ **High dynamic range:** better than 77dB!!
- ✓ **Power Handling:** up to 50 Watts continuous maximum
- ✓ **Readings auto-range and are displayed in Watts/dBm/etc.**
- ✓ **Easy to read LCD display with powerful microprocessor**

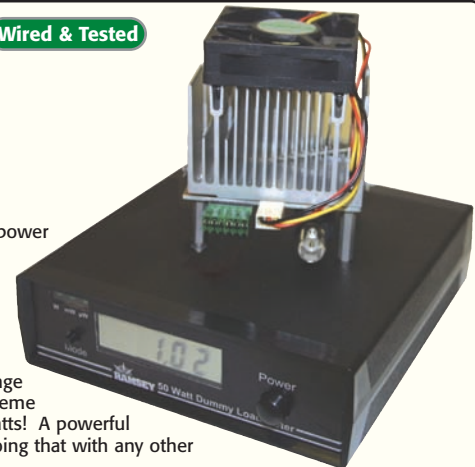
High Performance Power Meter... At A Low Cost!

The PM50 digital power meter is what every RF lab technician or micro-broadcaster needs on his/her workbench. Until now, power meters of this capability cost in the thousands! Imagine being able to accurately measure RF power from almost any signal source! Once you use one, you will wonder how you ever did without it!

The PM50 includes a 50 watt, 50 ohm dummy load allowing you to tune your transmitter off air without causing interference. An intelligent speed controlled fan adjusts cooling of the load according to power measured!

Extremely wide power range allows continuous measurement from an amazing 1µWatt to 50Watts, all without any manual range switching or setting - that's over 77dB! And accuracy is an astounding ± 0.5dB over the entire specified frequency range! Extreme dynamic range allows you to get meaningful measurements even with transmitters of less than 1mW of power or up to 50 watts! A powerful processor calculates and displays forward and reverse power, AM percent modulation, peak power, and average power. Try doing that with any other power meter for less than a thousand bucks!

Use the PM50 if you need to test transmitters off-air or into a good 50 ohm dummy load. The PM50 includes the matching case & knob set and power adapter so you have everything you need for a complete finished piece of RF test equipment. Case measures 5"W x 1 1/2"H x 5 1/4"D.



PM50	Power Meter/Dummy Load Kit, Includes Case And 110VAC Power Adapter	\$109.95
PM50WT	Factory Assembled & Tested PM50	\$154.95



**New For
2008**

Wired & Tested

**The Next Step In
Function Generators!**



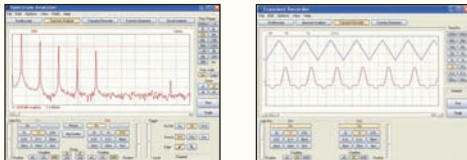
The PCGU1000 is the latest and greatest in function generators! Imagine a digital function generator that harnesses the power of your PC to bring you a great combination of affordability and versatility... well it's here! It's got everything you need in a function generator and more. Low sine wave distortion, TTL-level synchronization output, automated wave sequence generation via file or RS232 input, and lots more! All these great features are packed into a space-saving and stylish design that won't clutter up your desk and is a great companion to the PCSU1000 USB scope (see page 66).

Not only does the PCGU1000 include preset standard waveforms for sine, square and triangle waves, but it also comes with a powerful custom signal wave editor to create your own waveforms! The possibilities are endless! How does it work? The signal waves are created in your PC and then produced by the function generator via DDS (Direct Digital wave Synthesis)! Combine this with crystal-based stability and you get rock solid results every time! The included software gives you plenty of options, and lets you create extended bode plots with the use of one of Velleman's PC scope series (like the PCSU1000). For even greater control, the windows DLL is included to give you all the freedom you need to build your own custom software.

The PCGU1000 features 2 equal outputs and a TTL sync output, and will deliver output voltage of 1mVtt up to 10Vtt at 600 ohms. All the outputs are galvanically separated from the PC in order to avoid measuring problems. Power supply included. From Velleman Instruments.

System Requirements:

- ✓ IBM compatible PC
- ✓ Windows™ 98SE, ME, 2000, XP, Vista
- ✓ SVGA display card (min. 800x600)
- ✓ Mouse
- ✓ Free USB port
- ✓ CD Rom drive



2MHz USB PC Function Generator

- ✓ 0.1Hz to 2MHz frequency range
- ✓ Crystal-based for stability
- ✓ Low sine wave distortion
- ✓ 50MHz sample rate
- ✓ With internal 40 dB attenuator (output divided by 100)
- ✓ Direct digital wave synthesis (DDS) stores up to 8192 waveform points

	Specifications
Frequency Range:	from 0.01Hz to 2MHz
Standard Waveforms:	Sine, square, triangle
Predefined Library Waveforms Included:	Noise, sweep, and more
Sweep Frequency Range:	0.0001Hz to 25MHz
Sweep Time:	1ms to 10 hours
Noise Mode Bandwidth:	25MHz
Amplitude Range:	100mVpp to 10Vpp @ 1KHz// 600ohm load / 0V offset
Frequency Setting Resolution:	0.01%
Amplitude resolution:	0.4% of full scale
Offset:	from 0 to -5V or +5V max. (resolution 0.4% of full scale)
Vertical resolution:	8 bits (0.4% of full scale)
Sample rate:	50MHz
Typical sine wave distortion (THD):	< 0.08%
Output impedance:	2 x 50ohm
Power supply:	standard 9V DC adapter, 600mA (included)
Dimensions:	55 x 190 x 200mm

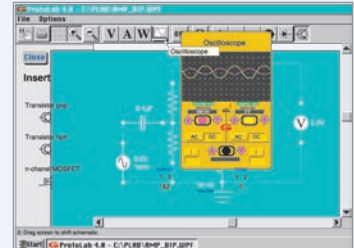
PCGU1000 2MHz USB Function Generator

\$219.95

ProteLab Circuit & Test PC Simulator

- ✓ Simulate a circuit **BEFORE** building it!
- ✓ Simple computer interface and operation!
- ✓ Loads of sample circuits to simulate!
- ✓ Great learning tool for engineers!
- ✓ Professional CAD features at a hobbyist price!

**Create And Test That Circuit...
WITHOUT Building It**



Easy to use PC interface. Easily create AC & DC circuits moments after installation with ProteLab's easy "click and drag" component placement and on-line help. You choose from a complete list of active and passive components, all of which are included. Once built, you can test and analyze your circuit with five virtual instruments (also included).

ProteLab 4.0 is designed to work as a simulated prototyping lab. Insert components on a grid (similar to a breadboard) then test the circuit using the appropriate test instrument from the tool bar. ProteLab's prototyping grid area is extensive and can handle a vast array of active and passive components.

ProteLab's pre-designed circuit library includes: MOSFET & transistor amplifiers, bridges, sinewave oscillators, squarewave oscillators, phase shift oscillators, current mirrors, integrators, differentiators, transistor & MOSFET monostables, LC oscillators, tuned collector amplifiers, LC tuned circuits, power supplies, and voltage stabilizers.

Components include wires, junctions, grounds, resistors, capacitors, inductors, DC voltage sources, AC voltage sources, DC current sources, AC current sources, diodes, zener diodes, transistors, and MOSFETs. Including: Voltmeter, ammeter, wattmeter, oscilloscope, and ohmmeter. Requires PC (Not Mac!).

PLAB4 ProteLab 4.0 Test Simulator Software

\$49.95

Wired & Tested

Multimeter With Temperature, Capacitance, Frequency, & Data Hold



The Latest and Greatest DMM!

New for 2008, Velleman has streamlined their DMM offerings with some great new models! The DVM8264 includes all the features you could ask for in a multimeter and more, at a rock bottom price!

Automatic low-battery indication, automatic deactivation, data hold, and them most robust overload protection of any DMM around! Audible continuity alarm lets you check circuits quickly and easily, and the large .7" LCD display is backlight for trouble-free operation under any lighting conditions!

The DVM8264 weighs in at only 12oz (and that's with the included 9V battery)!

- ✓ 30 ranges
- ✓ Low-battery indication, overload protection and automatic deactivation
- ✓ Diode, transistor, & continuity tests
- ✓ Overload protection
- ✓ Includes temperature probe, leads, battery and holster

Display:	.7" LCD
DC Volt:	200mV/2/20/200/1000V ±0.5%
DC Amp:	20m/200m/10A ±1.5%
AC Volt:	2/20/200/750V ±0.8%
AC Amp:	2m/200m/10A ±1%
Ohms:	200/2K/20K/200K/2M/20M/200M ohm, ±0.8%
	Continuity buzzer
Cap:	20n/200n/2µ/20µF ±4%
Freq:	200KHz ±1.5%
Temp:	-20°C to 1000°C ±5%
	Continuity buzzer, hFE & diode test
Size:	7.5" x 3.3" x 2.2"
Battery:	Standard 9V, included

DVM8264 Multimeter With Temp, Capacitance & Frequency

\$39.95



Wired & Tested

Measure Resistance, Capacitance, Inductance, & Temperature!

The DMM240 handheld LCR meter will measure resistance from 20 to 2000M ohms in nine ranges. It will also measure capacitance from 200pF to 200mF and inductance from 2µH to 20H and much more.

It has a 3½ digit, 2000 count display. Meter Capacitance in 8 Ranges, Max & Data Hold Feature, and Autoranging Frequency to 15MHz. Comes complete with temperature probe, standard probes, and holster style case.

DMM240 LCR & Temperature Meter

Professional LCR & Temperature Meter

✓ Temperature probe included

Display:	3½ Digit, 2000 Count
DC Volt:	0-20V ±2%
Ohm:	0-20/200 ohm/2/20/200/2000K ohm/20/200/2000M ohm ±0.3%
Cap:	0-200P/2/20/200nF/2/20µF ±2%/200µF to 200mF ±3%
Ind:	0-200µH/2m/20m/200mH/2H/20H±5%
Temp:	-20-500C ±2% 500C-750C ±3%
Freq:	Autoranging up to 15MHz ±0.1%
Cont:	Audible buzzer, diode test function
Over:	24VDC/24VAC Overload Protection
	10A Fused Protection
hFE:	Test Function

\$99.95

Compact Multimeter With Data Hold

- ✓ Backlit display
- ✓ Display Hold
- ✓ Auto polarity
- ✓ Diode, transistor, & continuity test

Perfect For Your Tool Box!

If you're looking for a nice little DMM to keep in your tool box, this one's for you! Small and inexpensive, yet packed with great functions and features. Has all the normal ranges of a pocket DMM plus a plug-in transistor tester socket for quick transistor testing. A built-in continuity test provides an audible buzzer for eyes-off testing.

The oversized 3½ digit display has a selectable backlight feature which illuminates the display in the dark. Besides all this, there is a professional "data hold" feature to hold and store a reading. Also features a high impact rubber holster just like the big boys! Includes a great set of test probes and even has the 9V battery installed. All this for under \$20! *(That's why there's one in my tool box!)*

DVM850BL Compact Multimeter With Data Hold

Wired & Tested



Display:	3½ Digit LCD, backlit, 45 x 18mm Data hold
DC Volt:	200mV/2/20/200/1000V ±2%
DC Amp:	200u/2m/20m/10A
AC Volt:	200/600V
Ohms:	200/2K/20K/200K/2M ohm, Continuity buzzer, hFE & diode test
Size:	68mm x 138mm x 30mm
Battery:	Standard 9V, included

\$12.95

Wired & Tested

Multimeter With Temperature, Capacitance, & Frequency

This is NOT Your Ordinary DMM!

Great for the technician, builder, hobbyist, or auto mechanic, this little DMM is not your typical digital multimeter! Measures DC Volts and AC Volts at 10M ohm impedance. Measures DC and AC current, resistance up to 200M ohm and it doesn't stop there! It also measures capacitance up to 20uF, frequency up to 20 KHz, and temperature all the way up to 1000°C with the included K-type thermocouple.

Of course, it also includes a dedicated transistor socket for NPN and PNP transistor testing, auto power off to save batteries, audible continuity and diode testing, and an oversized display. Sound too good to be true for 40 bucks?

We thought so too! That's why they're here! Comes complete with a professional rubber holster, standard & temperature test probes, user's manual, and a standard 9V battery.

- ✓ 30 ranges
- ✓ Temperature range: -50°C to 1000°C
- ✓ Capacitance range: 2000pf - 20uf
- ✓ Diode, transistor, & continuity test
- ✓ Overload protection
- ✓ Includes temperature probe

Display:	3½ Digit LCD, 31 x 61 mm
DC Volt:	200mV/2/20/200/1000V ±0.5%
DC Amp:	2m/20m/200m/20A ±0.8%
AC Volt:	2/20/200/700V ±0.8%
AC Amp:	20m/200m/20A ±0.8%
Ohms:	200/2K/20K/200K/2M/20M/200M ohm, ±0.8% Continuity buzzer
Cap:	2000pf/20nf/200nf/2uf/20uf ±2.5%
Freq:	20KHz ±1.0%
Temp:	-50°C to 1000°C ±0.75% Continuity buzzer, hFE & diode test
Size:	88mm x 170mm x 38mm
Battery:	Standard 9V, included

DVM890F Multimeter With Temp, Capacitance & Frequency

\$39.95

Dual Display DMM With RS232 Output

- ✓ RS232 output to your PC!
- ✓ Manual/auto range
- ✓ Temperature range
- ✓ Capacitance range
- ✓ Diode, transistor & continuity
- ✓ Analog bar graph
- ✓ Full 3¾ digit display

Digital Readout, Analog Bargraph, PLUS RS232 Output!



We gave you an inexpensive pocket DMM for under 20 bucks... Then we gave you a super multi-purpose professional multimeter that measured virtually everything for 40 bucks... What's next you ask? You won't believe it!

Everything PLUS RS232 serial data output for connection to your PC! That's right, now you can measure, control, and store your DMM and its readings on a graphical display on your PC!

Features both auto and manual ranging with a large 3¾ digit display with a 38 segment analog bargraph. RS232 connection requires a standard serial port on a PC. Includes all software, cable, probes, battery, and case.

DVM345DI Dual Display Multimeter With RS232 Output

Wired & Tested



Display:	3¾ Digit LCD, backlit, 38 segment analog bar graph, with data hold
DC Volt:	4/40/400/1000V ±0.5%
DC Amp:	4mA/400mA/10A ±1.2%
AC Volt:	4/40/400/750V ±1.2%
AC Amp:	4mA/400mA/10A ±1.5%
Ohms:	2400/4k/40k/400k/4m/40m ohm ±1.2% Continuity buzzer, diode test, hFE test
Cap:	4nf/400nf ±4.0%
Temp:	0-400°C, 401 to 750°C ±3.0%
RS232:	DB9 serial with Windows software
Size:	78mm x 186mm x 35mm
Battery:	Standard 9V, included

\$74.95



Wired & Tested

**The Next Generation
Of Scopes & Analyzers!**

This versatile and powerful "scope" harnesses the power of your pc or laptop to drive its software, eliminating the need for bulky stand-alone oscilloscopes, analyzers, and transient recorders! Just attach it to your laptop for easy troubleshooting readings in the field, or set it up on your workbench at home or the office.

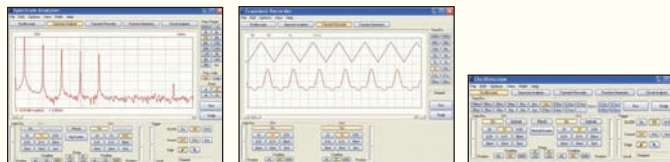
Powerful software is included along with a DLL giving you the ability to create customized applications to meet any additional needs! Its highly sensitive display resolution, down to 0.15mV, combined with a high bandwidth and a sampling frequency of up to 1GHz give this unit all the power you need. The USB connection makes this unit a snap to set-up, no external power required! In the field measurements using a lap-top computer have never been this easy. and the readings are automatically stored for your future analysis and comparison.

There are many advantages to using a PC based oscilloscope, including custom software, larger/high resolution/color display, lower cost, easy data export, and networking/storage functions. Take advantage of your PC and the convenience of this feature-packed multifunction scope. Includes two 60MHz professional scope probes, USB cable, software and comprehensive manual. Requires Windows 98SE or newer OS that supports USB. Compatible with USB1.1 or USB2.0. Looking for a PC based Function Generator? Check out the PCGU1000 on page 64! From Velleman Instruments.

USB 2 Channel PC Scope & Analyzer

- ✓ Scope, Spectrum analyzer, & transient recorder!
- ✓ 0.15mV resolution!
- ✓ 1GHz sampling frequency!
- ✓ Runs on USB power, no external power supply needed!

	GENERAL	OSCILLOSCOPE	SPECTRUM ANALYZER	TRANSIENT RECORDER
Inputs:	2 channels, 1 trigger input	Timebase: 20ns to 100ms per division	Frequency range: 1.2kHz to 25MHz	Time scale: 20ms/div to 2000s/div
Input impedance:	1Mohm, 30pF	Trigger source: CH1, CH2, EXT or free run		max. recording time: 9.4hours/screen
Bandwidth:	DC to 60MHz ±3dB	Trigger edge: rising or falling		Storage: automatic data storage
Max input:	30V AC or DC	Trigger level: full-screen adjustable	Operating principle: linear or logarithmic time scale	Storage time: automatic recording for more than 1 year
Input coupling:	DC, AC, and ground	Step interpolation: linear or smoothed	FFT resolution: FFT (Fast Fourier Transform)	max. number of samples: 100/s
Power supply:	USB power, 500mA	Markers for: voltage and frequency	Additional feature: zoom function	min. number of samples: 1 sample / 20s
PC compatibility:	Win98SE or newer	Input range: 5mV to 2V/division	Markers for: amplitude and frequency	Modes: recording and display of screens
USB port:	800x600 minimum resolution, 1024x768 recommended	Input sensitivity: 0.15mV display resolution		
Includes:	USB 1.1 or 2.0	Readouts: True RMS, dBV, dBm, p to duty cycle, Frequency		
Dimensions:	Scope, two 60MHz scope probes, USB cable, software CD, manual	Recording length: 4K samples / channel		
	8.2" x 2.2" x 7"	Real time sampling freq: 1.25kHz to 50MHz		
		Sampling freq for rep. sig: 1GHz		



PCSU1000 USB 2 Channel PC Scope & Analyzer, Factory Assembled & Tested \$369.95

Analog Sound Level Meter

- ✓ Measures 50 to 126 dB!
- ✓ 7 separate ranges!
- ✓ ±2dB accuracy!

So, How Loud Is It... Really!

Wired & Tested

	SPECIFICATIONS
Range:	up to 126dB
Positions:	60, 70, 80, 90, 100, 110, 120dB
Load impedance:	1kohm min.
Distortion:	Less than 2% at 1kHz, 0.5V
Microphone:	electret condenser microphone, omnidirectional
Precision:	± 2dB at 144dB
Weighting:	A or C
Response:	slow or fast
Output signal:	max. 1V deviation at 1kHz for the entire range
Power supply:	1 9V battery (included)
Battery test:	OK indication between 7 and 10.5V
Battery life:	110 operating hours (alkaline batteries)
Dimensions:	6.3" x 2.4" x 1.7"
Weight:	6.5oz

So you're at a concert and you want to know exactly how loud it is... You're at work and you're wondering if the ambient noise is below the safe level... You're really wacked out and you want to know if a jet engine at 10 feet really exceeds the threshold of pain... This little analog sound level meter is for you! It uses A and C weighting filters to accurately simulate the actual listening capability of the human ear! The easy-to-read analog display allows for accurate measurement of environmental noise across a wide range (50 to 126dB).

Useful to measure sound levels in industrial and office settings, traffic/noise reduction studies, or to ensure your noise generation is in compliance with local ordinances. This meter features an omnidirectional condenser microphone with +/- 2dB precision at 144dB. Over 100 hours of operation from one 9V battery (included). From Velleman. (Also helpful in proving to your landlord exactly how annoying the tenants upstairs are!)



AVM2050 Analog Sound Level Meter \$34.95

Wired & Tested

Digital Precision Accuracy... Yet Affordable!

Digital Sound Level Meter

- ✓ Measures 30 to 130 dB!
- ✓ ±1.5dB accuracy!
- ✓ Precise digital readout!



When you have to go the next step up from the inexpensive AVM2050 analog meter, here you go! Designed for industrial and professional use to meet or exceed IEC651 type 2 standards. Great for measuring sound levels when you need that extra digital precision, whether its industrial or office, an official survey, or you just want to make sure you are in compliance with local ordinances. This digital meter will give you high quality readings anywhere in the 30-130dB range.

The digital max hold and data hold display features will come in handy when logging your readings for compliance reports. Don't be fooled by its small ergonomic design, the DVM805 is a high quality meter designed for the most stringent applications. Includes A and C frequency weighting, fast and slow time response, and .1dB of resolution. Powered by one 9V battery (included), from Velleman. (Now you can even peak hold the noise from upstairs and show the landlord!)

	SPECIFICATIONS
Level range:	low: 30-100dB, high: 60-130dB
Accuracy:	±1.5dB 94dB @1kHz
Frequency range:	31.5Hz to 8kHz
Frequency weighting:	A, C
Time weighting:	fast, slow
Power supply:	1 x 9V battery (6LR61, included)
Operating temperature:	0°C ~ +40°C (Less than 80% RH)
Storage temperature:	-10°C ~ +60°C (Greater than 70% RH)
Dimensions:	8.27 x 2.17 x 1.26"
Weight:	8.11oz

DVM805 Precision Digital Sound Level Meter \$99.95

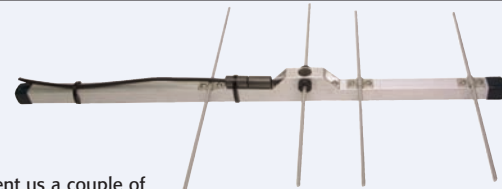


High Performance Yagi Antennas

- ✓ Construction that's rugged and simple
- ✓ Feed point fully watertight and sealed
- ✓ Cut elements during assembly to exact frequency desired
- ✓ Incredible performance!

KIT

**Commercial
Quality At A
Hobbyist's Price!**



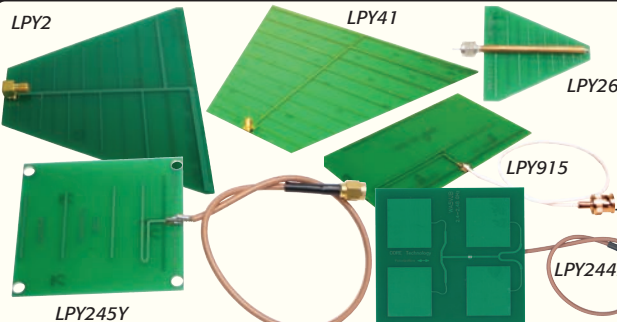
Joe Reisert, WIJR, probably the best known VHF'er, has entered into the antenna business with a killer line of Yagis. Joe sent us a couple of antennas to check out and were we impressed! We've got some pretty decent HP test gear here at the plant and measuring his antennas was a delight. Talk about a match at 50 ohms impedance; even our \$1800 EMI antenna couldn't come close to one of Joe's antennas.

Model	Elements	Gain	F/B Ratio	Length	Frequency
140-3	3	5 dB min	20 dB min	3 ft	140 - 300 MHz
400-4	4	7 dB min	15 dB min	2 ft	300 - 500 MHz
918-4	4	7 dB min	14 dB min	1.2 ft	902 - 928 MHz

Construction is rugged and simple. Joe wisely made the feed point fully watertight and sealed the coax right into it - no more antennas that go flaky when the weather's bad. Another nice feature is the ferrite sleeve balun, most often left out on other antennas. You'll find no coax radiation with this Yagi. In short, these are the finest 3 and 4 element Yagis on the market - we guarantee it!

1403	Yagi Antenna, 140-300 MHz	\$79.95
4004	Yagi Antenna, 300-500 MHz	\$79.95
9184	Yagi Antenna, 902-928 MHz	\$109.95

Precision PC Plane Antennas



Wired & Tested



**Broadband
Coverage And
NO TUNING!**

- ✓ Small thin size with excellent performance
- ✓ Very directional—ideal for transmission or reception use
- ✓ No tuning needed!
- ✓ Rugged FR-4 construction
- ✓ Available log periodic, yagi, or patch!

This series of Log Periodic and Yagi PCB Antennas allows you to cover the entire spectrum from 400 MHz to 11.0 GHz! If you want to get the maximum performance out of your UHF to low frequency microwave wireless system, one of these little babies is the answer! Their directional property "compresses" the signal into a strong beam that is 4 times more powerful in the desired direction.

They are the ideal antennas for scanners, wireless LAN's, and other wireless devices. When you need a dedicated point-to-point link, they have no equal! Maintenance free construction on rugged FR-4 material boasts the added advantages of no tuning and no fragile antenna elements to break or twist! The small size and wide bandwidth make them ideal for feeding reflector antennas such as easily constructed corner reflectors or parabolic grids. Pick the one that's right for you and start enjoying the fruits of a well designed system!

The Log Periodic models easily interface to your system via the provided connectors. The wide bandwidth characteristics of the Log Periodic design ensure total reliability within their respective ranges. The Yagi model is a patented design perfect for directionally extending the range of your cordless phone or other 915 MHz wireless device. Finally, the answer to those poor range blues!

- LPY41 (400-1,000 MHz, SMA-female)
- LPY2 (900-2,600 MHz, SMA female)
- LPY26 (2,100-11,000 MHz, SMA-male)
- LPY244P (2.4GHz WiFi Patch, SMA male)
- LPY245Y (2.4GHz WiFi yagi, SMA male)
- LPY915 Yagi (915 MHz, BNC-male)

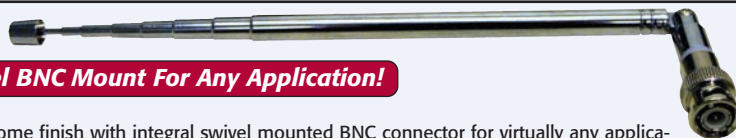
LPY41	Logi Log Periodic PCB Antenna, 400-1,000 MHz, Factory Assembled & Tested	\$39.95
LPY2	Logi Log Periodic PCB Antenna, 900-2,600 MHz, Factory Assembled & Tested	\$34.95
LPY26	Logi Log Periodic PCB Antenna, 2.1-11.0 GHz, Factory Assembled & Tested	\$34.95
LPY915	Directional Yagi PCB Antenna, 915 MHz, Factory Assembled & Tested	\$29.95
LPY245Y	Directional Yagi PCB Antenna, 2.4GHz WiFi, 8.5dBi Forward Gain, Assembled & Tested	\$29.95
LPY244P	PCB 4-Bay Patch Antenna, 2.4GHz Wireless LAN, 12dBi Gain, Assembled & Tested	\$34.95

Telescopic Whip Antenna

- ✓ High quality with BNC connection
- ✓ Covers VHF and UHF bands



Swivel BNC Mount For Any Application!



Ideal for handheld portables, receivers, and communications test equipment. Professional chrome finish with integral swivel mounted BNC connector for virtually any application! From the top of equipment to 90 degrees on the back of equipment, it will work like a champ! Whip extends 5.25" to 27.75" to cover a wide variety of ranges with ease!

WA10	Telescopic Whip Antenna	\$14.95
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KIT



**Rugged PVC Construction...
Keeps The Weather Out!**

Tru-Match FM Broadcast Antenna

- ✓ Fully weatherproof - rugged PVC construction
- ✓ Matches 50 or 75 ohm systems
- ✓ Broadband for perfect match over the entire 88 to 108 MHz FM band

Looking for a perfect low cost FM antenna? Our extremely popular TM100 Tru-Mach antenna will fit the bill! Matching your antenna to your transmitter is the single most important link in your transmitter setup. Without a proper match, power is reflected away from the antenna and back into the transmitter! This can cause the final amplifier stage to be damaged, not to mention spurious signals and (no better way to say it!) lousy range.

Its unique design made with PVC tubes and fittings makes it waterproof and impervious to rain and snow, making it the most reliable antenna available for the private broadcaster. Unlike other FM transmitter antennas that need to be tuned to a specific frequency, the TM100 is broadband over the entire 88-108MHz band yet still maintains a perfect match! The antenna terminates with a standard "F" connector for easy connection to standard coax and to your equipment. Maximum power rating of the TM100 is 25 watts. BTW, also makes a GREAT easy to connect omnidirectional receiver antenna!

TM100	FM Broadcast Low Power Antenna Kit (25 W Max)	\$69.95
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KIT

Wired & Tested

**Remove The Noise
Automatically!**

Signal Magnet Ferrite Rod Antenna

- ✓ Outstanding results from 500 KHz to 15 MHz
- ✓ High-Q Ferrite Rod antenna with Faraday shield eliminates noise from power lines, light dimmers, most static crashes, and more!

This antenna responds only to the magnetic field of the desired station and ignores the electrostatic field where most interference is found. It does a remarkable job pulling in stations lost down in the noise of powerline crud, fluorescent lamp buzz, and light dimmer hash. Plus, it's very directional, able to null strong stations on the same or nearby frequencies!

We developed this antenna to pull in WGR, an AM station more than 75 miles away, so we could listen to Buffalo Bills talk radio during the night. You can imagine all the powerline and equipment noise we have here at the factory. So, we came up with this ferrite rod, varactor tuned active antenna that's Faraday shielded - it only responds to the magnetic field - and boy does it do the job!

The SM100 is designed to cover the AM broadcast band but includes details on building for any frequency range up to 15 MHz (works gang-busters on Shortwave)! The antenna portion works indoors or out and is contained in rugged PVC pipe with a single F-type coax cable connector. Operates with up to 500 feet of coax cable (not provided!) between antenna assembly and control box. Includes all parts, matching case set and precut PVC materials. Operates on an external 120 VAC power adapter that is included. Antenna is 9 1/2" x 9" long, L-Shaped 1" pvc pipe with end caps. Control box case measures 5"W x 1 1/2"H x 5 1/4"D. (It worked just great to listen to the Bills players explain for 4 straight years why they lost the Super Bowl!)

SM100 Signal Magnet Noise Reduction Antenna Kit With Case
SM100WT Factory Assembled & Tested for AM Band

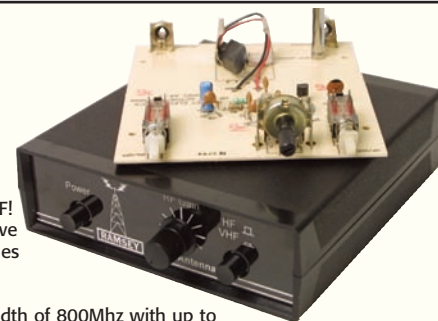
\$89.95
\$134.95

Active Receive Antenna

- ✓ Works with HF or VHF/UHF
- ✓ Performs like a 60' Long Wire!
- ✓ Operates as a stand-alone antenna or in conjunction with an existing antenna

KIT

**The Easy Antenna...
Regardless Of Frequency!**



Our AA7C has been a favorite for the serious DX'ers, and now it's even better! It works on all bands - shortwave, HF, VHF and UHF! Imagine a self-contained unit just 4 inches square that pulls in the signals like a 60 foot long wire; that's the advantage of an active antenna! For jazzing up VHF/UHF receivers and scanners the AA7B has you covered too. Over 15 dB of gain pulls in the weak ones whether you use the included telescopic whip or an outside antenna.

Unlike it's predecessor, the AA7C requires no band switching to cover the range of 1MHz to 800MHz. That's right, it has a bandwidth of 800MHz with up to 20 dB of gain at an input signal level up to -20dBm. A pair of N-Channel MOSFET tetrode transistors provide the gain. Because they are tetrode MOSFET devices, the gain adjustment is accomplished using a variable DC control voltage so the gain control potentiometer won't cause any noise if it gets "dirty." The transistors and solid state relays are surface mount devices, so the signal path (and therefore a lot of potential signal loss!) is minimized.

What if you don't need any gain? No problem! Just turn the AA7C off and the solid state relays automatically route the signal directly through with no amplification and a very minimum, 1dbm or less, of signal loss. There are no mechanical switches in the signal path to get dirty and degrade the signal levels. High quality BNC connectors provide input and output connections to your antenna and receiver.

You can power the AA7C from a standard 9 volt battery for portable operation or plug in an external power supply between 7 and 15 VDC. The battery will be automatically disconnected when you use an external power source. There's even an LED indicator to show you the AA7C is turned on and ready to go.

Features of the AA7C include: Front panel RF gain control, power switch with preamp bypass switching, rear panel input and output connectors, convenient 9 volt battery operation and telescopic whip antenna (or connect your own antenna with the BNC connector.) We think you'll agree that the AA7C is simply the most practical and best value of any active antenna on the market! Includes whip antenna and matching case set. Operates on a standard 9VDC battery (not included). Case size 5"W x 1 1/2"H x 5 1/4"D.

AA7C Active Antenna Kit With Case

\$39.95

TERMS AND CONDITIONS, AKA: THE FINE PRINT!

All of this is printed on saddlestitched envelope/order form, but just in case someone boosted it from this catalog, here it is...again!

Payment - Check, money order, and credit card (MC, VISA, American Express, Discover) are all accepted. If paying by credit card, please include the full card number, three digit security code (on the rear of the card) and the expiration date. If you are paying by credit card, you must provide the billing address exactly as it appears on your credit card statement.

Sales Tax - NY residents must add appropriate sales tax unless a signed resale certificate accompanies your order.

Prices - Prices shown are those in effect at the time of publication. We work to hold prices firm, however prices are subject to change without notice. Current prices will prevail at the time an order is placed. Visit www.ramseykits.com for any last minute updates!

Shipping -

Continental U.S. customers - We normally ship via Parcel post or UPS depending on the size and value of the order. If we are shipping via UPS you must provide a physical address, as UPS will not deliver to P.O. Boxes. Add \$7.95 for shipping, handling, and insurance on all orders. Express and air shipments are extra and priced at cost. COD is an additional \$10.00.

Alaska, Hawaii, and Puerto Rico - Specify USPS First class, UPS 2nd day, or UPS overnight only. The amount will be added to your order.

Canadian customers - Make checks payable in U.S. funds or use a credit card. Add 20% to the cost of your order for shipping to a maximum of \$50.00 for parcel post shipment. If you request UPS for delivery, we will confirm the amount to you prior to shipment. **These charges do NOT include any international duty charges.** Be aware, UPS shipments may be delayed in customs.

Overseas customers - We will determine the best method and cost for your location and will confirm to you before shipment.

Returns - Examine (do not build) any kit for up to 10 days. If not completely satisfied, return in the original packaging for a full refund. Kits that are partially built cannot be returned. Wired and tested items can also be returned if in their original packaging, suitable for resale, within 10 days. Returns received after 10 days will be subject to a restocking fee.

Design Changes - From time to time we make design changes. Some items may differ slightly from photographs and descriptions in the catalog. You can be sure that such changes are made in the interest of better performance or appearance. In addition, with the fluctuating pricing changes of some electronic components, pricing is subject to change.

Manual Preview - Looking at a kit and want to review it more closely? Our manual preview policy lets you purchase most of our manuals for \$5.00 (a few are more). Purchase price of the manual will be credited against your future associated kit purchase. You can also download most manuals (excluding the schematic!) at from our website at www.ramseykits.com.



Wired & Tested

**We Just Made
Space On Your Bench!**

3-In-1 Multifunction Lab Unit

- ✓ Digital multimeter!
- ✓ Regulated power supply!
- ✓ Temperature controlled soldering station!
- ✓ RoHS lead-free soldering compatible!
- ✓ Everything all in one unit!

Anyone who has worked with electronics knows the hassle of dealing with various bulky devices needed to get the job done. This brand new 3-in-1 lab kit gives you the most commonly required tools in one amazing compact package!

Great for your home bench where there's just so much space to go around! For the school or technical institute that needs to equip multiple benches with the basics, the 3-in-1 lab can't be beat! Not only for size and efficiency, but for cost as well!

Take a close look! On the left is a multi-function 3 1/2 digit digital multimeter. Its large backlit LCD display can be seen from anywhere on your bench while you're working. The DMM also features built-in transistor, diode, and continuity testing, data hold, and audible alarm. A great DMM that any bench could benefit from.

Next up, the regulated lab DC power supply. Switch selectable ranges of 3V, 4.5V, 6V, 7.5V, 9V, and 12V provide a continuous duty current of 1.5 amps with a 2 amp peak! Features both overload protection and overload indication. Full size color coded binding posts are provided front and center for connection to your project under test.

To the right we have a high quality temperature regulated soldering station. One would think there's not much to say about a soldering station, but that's not the case here. The 24V low voltage iron features an isolated ceramic 48 watt temperature controlled element. Front panel control gives you variable tip temperature control from 150°C to 450°C (300°F to 840°F) and LED indication of power-on and heating-on. A pull-out tip cleaning sponge is conveniently located right up front. Unlike stand alone soldering irons, a protected iron holder/stand is attached to give you a convenient place to store the iron without the possibility of burning yourself! It gets even better... this soldering station is RoHS or Lead-Free compatible! What does that mean? Lead-Free solder requires a higher melting and flow point and requires the soldering station to maintain that temperature throughout the soldering task. Just set it for the higher temperature (typically 350 to 400°C) and this station is designed to maintain that temperature. Replacement tips and irons are also available.

DIGITAL MULTIMETER	SPECIFICATIONS	SOLDERING STATION
<ul style="list-style-type: none"> • 3 1/2 digit backlit LCD • Automatic polarity indication • DC voltage: 200mV to 600V in 5 steps • AC voltage: 200V and 600V • DC current: 200µA to 10A in 5 steps • Resistance test: 200 ohm to 2Mohm • Diode, transistor and continuity test • Data-hold function and buzzer • Input power: 9V battery, included 	<p>REGULATED POWER SUPPLY</p> <ul style="list-style-type: none"> • Selectable output voltages: 3, 4.5, 6, 7.5, 9, 12 VDC • Output: 1.5A (2A peak) • LED overload indication • Output on/off switch • Very low ripple • LED power indication • Input power: 110VAC, isolated power supply 	<ul style="list-style-type: none"> • Low-voltage iron: 24V ceramic 48W heating element with temperature sensor • Temperature range: 150-450°C • Lead-free soldering possible • Sponge and spare bit included • Input power: 110VAC, isolated power supply

It gets even better! Although the 3-in-1 lab is a multi-function unit, each component is electrically isolated and utilizes a separate power supply, for the ultimate in safety, circuit protection, and reliability! The DMM features its own battery supply to keep it totally isolated from the AC supply!

What's included? The 3-in-1 lab, high quality test probes for the DMM, 9V battery for the DMM, solder sponge, spare solder tip, AC power cable, and a comprehensive user manual. It simply includes everything you need to get started! From Velleman Instruments.

LAB1U	3-in-1 Multifunction Lab, Factory Assembled & Tested	\$129.95
BITC10N1	Replacement Solder Tip, 1.6mm Round	\$2.95
BITC10N2	Replacement Solder Tip, .8mm Round	\$2.95
BITC10N3	Replacement Solder Tip, 3.0mm Slant Edge	\$2.95
BITC10N4	Replacement Solder Tip, 2.0mm Slant Edge Pointed	\$2.95
LAB1SCS	Replacement Plug-In Soldering Iron Unit	\$16.95

Complete Portable Gas-Powered Soldering Set

New For 2008

- ✓ Melts solder in under 40 seconds
- ✓ Perfect for quick jobs
- ✓ Cordless
- ✓ Great for soldering in hard-to-reach places
- ✓ Fast ignition with built-in lighter
- ✓ Built-in catalytic converter for powerful and safe flameless combustion
- ✓ Refills in under 10 seconds!
- ✓ 90 Minutes of soldering per refill

Solder Anytime, Anywhere!

Cordless soldering irons are the perfect tool for quick repairs, or in locations where there is no mains power supply to plug into. A cordless iron is also an invaluable tool when working in difficult to access areas where dangling cords can cause problems. When you need to solder in the field, or just want to make a quick repair without waiting around for your iron to heat up, there is no better solution than this awesome set! It includes everything you need:

- ✓ Portasol soldering tool with 0.1" tip
- ✓ Iron-plated soldering tip (0.09")
- ✓ Cleaning sponge
- ✓ Blowtorch accessory
- ✓ Safety stand
- ✓ Hot blower accessory
- ✓ Hot knife accessory
- ✓ Rugged plastic storage case



Amazingly, the lightning fast recharge time of under 10 seconds gives you 90 minutes of soldering! You won't have to sacrifice power for portability either, as the Portasol soldering tool will deliver adjustable temperatures of up to 842°F! Extra tips are included to extend the functionality, including a hot-air blower, a blowtorch, and a hot knife tip. You can refill your iron with affordable butane, the same kind used to refill any ordinary cigarette lighter.

GASSET	Portable Gas-Powered Soldering Set	\$89.95
BITSP1.0	Spare Bit: .04"	\$18.95
BITSP2SF	Spare Bit: .09"	\$14.95
BITSP3.2	Spare Bit: .13"	\$15.95
BITSP4.8	Spare Bit: .19"	\$12.95
BITPB	Spare Bit: Hot Blower	\$15.95
BITPK	Spare Bit: Hot Knife	\$12.95
BITPT	Spare Bit: Hot Air	\$12.95



Temperature Controlled Soldering Station & Fume Extractor

- ✓ Integral fume extractor quickly removes smoke and fumes.
- ✓ Built-in high efficiency, low noise brushless exhaust fan
- ✓ Easy to replace activated carbon filter absorbs noxious flux and lead fumes
- ✓ Variable electronic temperature controlled soldering station attached
- ✓ Ergonomic mini-handle soldering iron
- ✓ ESD safe, insulated ceramic heater, spike free zero voltage switching
- ✓ All-in-one extremely convenient package, ready to use on your bench

TOP
SELLER!

Automatic Fume
Extraction At
EVERY Work
Station!



We've all sat at the bench and soldered some quick circuits. We have also sat at the bench worked on a big project, soldering for hours at a time, not thinking twice about the fumes. The big culprit is the rosin core center in electronic solder. This flux is an integral part of the soldering process to prepare the work surface and the components being soldered.

Without getting overly technical, flux is composed of rosin-resin and mixed with an activator (halogen organic agent) that, as the temperature increases, generates noxious components such as salicylic acid and pinene commonly seen as smoke rising from the work area. High content ratios of resin generate phenol (C₆H₅OH) and the activators can emit hydrogen chloride (HCL) and other compounds.

This is stuff you really don't want to constantly breathe while you're soldering! Not only do you not want to but there are occupational hazard standards controlling the permissible amounts of such compounds in the work area. The 456DLX can not only save you and your health from the fumes, but help you meet these standards!

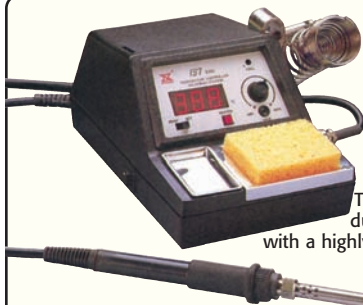
Designed for use on the factory floor, in R&D, and by hobbyists in their homes, the 456DLX provides an economical, space saving, and super efficient method to eliminate the hazard of solder fumes. It also improves the work place by eliminating headaches, nausea and eye irritations often associated with exposure to these fumes. A high performance fan together with an easy to replace activated carbon filter does a super job. The activated carbon has a surface area of 1250 m square/gram and the total weight of the filter is 500 grams/meter square. The dust collection efficiency of the filter is 30% while the carbon filter can absorb up to 30% of its carbon weight in noxious components. In other words, it works!

When we looked for an ideal solution we were extremely conscious of limited bench space. Therefore, the fume extractor couldn't take up much more space than the soldering station we were using. The answer was simple...have both units in one! The 456DLX features a variable electronic temperature controlled soldering station built right in!

Variable control gives you a wide temperature of 500-800° F. The iron has a new ergonomic mini-handle for comfort and ease. Comes complete with a precision 1/32" soldering tip. Additional interchangeable tips are available in a variety of sizes. That's right, put your old soldering station or soldering iron away and use just one product for both soldering and fume extraction.

A protected iron holder and sponge tip cleaner are also attached to the side of the station making it the perfect all-in-one soldering tool. If you're looking to control the hazardous fumes of soldering, looking for a super high quality temperature controlled soldering station, and staying on a budget, the 456DLX is for you! From Xytronic. *(You will be amazed when you see the fumes from each solder connection get sucked away from your face!)*

456DLX	Temperature Controlled Soldering Station/Fume Extractor Station	\$99.95
98804	Replacement Interchangeable Tip, 1/32" For 456DLX and 137ESD	\$9.95
98805	Replacement Interchangeable Tip, 1/64" For 456DLX and 137ESD	\$9.95
98806	Replacement Interchangeable Tip, 1/16" For 456DLX and 137ESD	\$9.95
98807	Replacement Interchangeable Tip, 5mm Right Angle Chisel For 456DLX and 137ESD	\$12.95



Lab Quality At A
Hobbyist Price!

The 137ESD represents the most versatile and advanced soldering station available today that meets all of the needs of the electronics production industry, service technicians, engineering departments, and the advanced hobbyist. The detachable soldering iron handle is designed with a highly insulated ceramic heating element which incorporates a state-of-the-art PTC sensor to insure accurate temperature performance.

Zero voltage switching and fully grounded design makes the 137ESD safe for Electro-Sensitive Devices, and the highly accurate temperature stability over the entire range makes it ideal for use on such circuits and components. The lightweight ergonomic handle and grip reduces operator fatigue while making soldering operations a breeze. Comes complete with one precision 1/32" soldering tip. Uses the same interchangeable tips as the 456DLX above. Check our website for additional options, tips, and configurations. From Xytronic.

137ESD Auto-Temp Precision ESD Safe Soldering Station

\$167.95

Auto-Temp Precision ESD Safe Soldering Station

- ✓ Digital tip temperature readout in ° F or ° C
- ✓ Temperature adjustable from 392 to 896° F (200 to 480° C)
- ✓ Rapid heat-up ceramic heating element
- ✓ Lightweight ergonomic soldering handle
- ✓ Front panel calibration port

Variable Temperature Soldering Station

- ✓ Variable temperature controlled!
- ✓ 5 to 40 Watt
- ✓ Built-in holder and tip cleaner
- ✓ Interchangeable tips

Don't Damage Your Board...
Control The Temperature!

Here's the ideal entry level soldering station for building your Ramsey kit - and for your bench! Made by Weller, the leader for decades in electronic soldering equipment. The WLC100 is the perfect soldering station for the professional or serious hobbyist who requires higher performance than a standard soldering iron but doesn't want to pay a fortune! The WLC100 soldering station provides variable power from 5 to 40 watts for precise tip temperature control.

Just like the expensive industrial soldering stations! A built-in holder and tip cleaning sponge are included. A pre-tinned 1/8" screwdriver tip comes with the station. If you're looking for quality on a shoestring budget, the WLC100 is for you! Operates on 120VAC, 60Hz. From Weller.

WLC100	Weller Soldering Station, 5-40 Watt Temperature Controlled	\$49.95
ST2	3/32" Screwdriver Tip	\$6.95
ST3	1/8" Screwdriver Tip	\$6.95
ST4	3/16" Screwdriver Tip	\$6.95
ST6	1/32" SMT Screwdriver Tip	\$6.95

TOP
SELLER!





Technician's Solder

- ✓ Standard Electronics 60/40 blend!
- ✓ Lead-Free RoHS 96.5/3.5 blend
- ✓ .032" diameter, 1 pound spool



Whether it's for building your new kit or just for your bench, this is the perfect solder. Don't destroy your kit investment by using the wrong solder or solder with low quality flux core. This solder is made exclusively for electronic applications by one of the leading manufacturers. The size is perfect for board soldering, thru-hole, SMT and more. Available standard or RoHS lead-free compliant. Lead-free is 96.5%TN, 3%AG, .5%CU (not just TN/CU!). One lb spools.

RTS12	60/40 Electronics Solder, 1 Pound	\$19.95
RTS16	96.5/3.5 RoHS Lead-Free Solder, 1 Pound	\$29.95

Helping Hands & Magnifier

- ✓ Built-in magnifier!!
- ✓ Alligator clip holders grip anything!



So you're trying to hold that small board, while holding the transistor you're trying to solder in, and holding the soldering iron, and holding the solder. Wait a minute, that's 4 hands! Not a problem! Just clip the board, junction or component you're working on onto the bench holder, swivel it wherever you want it, and go to work! What, you can't see? It even has a built-in magnifier!

HH3	Helping Hands & Magnifier	\$8.95
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Bench Gooseneck Magnifier

- ✓ 3 1/2" magnifier!
- ✓ 19" flexible gooseneck!



When you're working with small surface mount components (SMT) there's nothing like a stronger set of eyes! Well we found the perfect, and incredibly economical solution! This large 3 1/2" magnifier is attached to a 19" gooseneck that stays right where you put it. And that is usually between your eyes and the PC board you're soldering! Heavy duty cast bench clamp mounts to any bench, desk, or counter top.

VTMG5	Bench Gooseneck Magnifier	\$7.95
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Solder Sucker

- ✓ Eliminate PC board damage!
- ✓ Cleans out holes with ease!



For 5 bucks, this will probably be the most valuable tool you've ever bought! Even the most experienced solderer has problems removing components from PC boards without one! One hand loading and one hand operation. Just heat up the joint, place the special tip over the joint, and squeeze the trigger. Solder is sucked right from the board and even plated-through holes! It's that easy!

SS01	Solder Sucker	\$4.95
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Panavise Bench Vise

- ✓ Holds PC boards at any angle!
- ✓ Heavy duty weighted base!



Trying to solder and unsolder tiny components on small boards can be a challenge for even the most experienced. Here's a gem of a handy vise that is very sturdy and has the flexibility to hold boards at virtually any angle. The heavy base holds even the largest boards without being attached to a bench. Includes 2 7/8" jaws and a large base/parts tray with lockable flex joints.

RTS13	Panavise Bench Vise	\$39.95
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Magnifier Tweezers

- ✓ The perfect 2-in-1 tool for SMT!
- ✓ Great for your tool box!



Working with SMT components a good pair of tweezers is a must. And as you know, a good magnifier is also a must. So what do you keep in your tool box to solve THAT problem? Simple, this super handy combination tweezers and magnifier!

This 1" magnifier is mounted on a slick 2 1/2" chrome handle with a fold-out precision tweezers. Focal point for the magnifier is matched to the tweezers point for easy use.

VTMG7	Magnifier Tweezers	\$3.95
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**Working With SMT?
Protect Those Components!**

Non-Conductive Tweezers

- ✓ ESD safe!
- ✓ Great for SMT and other small parts!

We've discussed tweezers and magnifiers while working with SMT components. Working with some highly sensitive components, our engineers asked for some ESD safe tweezers. We looked, we found, and now that they're all set, here they are for you! This set of 4 non-conductive tweezers are perfect for any static sensitive devices you may be working on. And...they are priced right!

VTTWSET2	Non-Conductive Tweezers Set	\$3.95
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Two-In-One Ceramic Drivers

- ✓ Non-inductive, non-metallic, anti-static!
- ✓ Thermally/electrically insulated!

**The Ultimate Diddle Stick...
That Won't Wear Out!**

These double-sided ceramic drivers are ideal for working with sensitive electronics. Safe to use when tuning inductors, capacitors, or other sensitive variable components! Large surface area prevents fragile cores from stripping or breaking! Choose from five different dual-sided sizes below!



902191	0.4" x 0.035" and 0.4" x 0.07"	\$7.95
902192	0.4" x 0.047" and 0.4" x 0.078"	\$7.95
902194	0.4" x 0.047" and 0.4" x 0.094"	\$7.95
902195	0.4" x 0.047" and PH1.7	\$7.95
902196	0.4" x 0.35" and PHO	\$7.95



Optivisor Headband Magnifiers

- ✓ See those tiny parts with ease!
- ✓ Professional quality
- ✓ Add-on light and swivel eye loupe
- ✓ A must-have for SMT components!

Probably the handiest helper you can have for working with small electronic parts. When you need to see a closeup view, simply flip the visor down. When done, flip it back up! Fits over your standard glasses. Made in the USA by Donegan Optical and available in 2.5x or 3.5x diopter power.

Additional 2.5x flip up OptiLoupe attaches to one side to provide an additional 2.5x magnification for those really hard to see items! Left in the dark? No problem, the VisorLight clamps to the Optivisor to provide 6,000 candlepower of Xenon light (operates on 2 standard AA batteries (not included) in a battery pack that can either be headband or belt-clip mounted. (*I'm over 40, and therefore...these are the greatest things ever invented!*)

RTS26	Optivisor 2.5x Headband Magnifier	\$32.95
RTS25	Optivisor 3.5x Headband Magnifier	\$34.95
RTS24	OptiLoupe Additional 2.5x Flip Up Screw-On Eye Loupe For Optivisor	\$8.95
RTS23	VisorLight For Optivisor, 10" Cord For Headband Mounting	\$19.95
RTS22	VisorLight For Optivisor, 42" Cord For Belt-Clip Mounting	\$19.95



Magnetic "Pick-Up" Tool

- ✓ Screwdriver-style handle
- ✓ Extends to 16"
- ✓ Pick up those dropped parts!



We've all been there: you drop something through a grating, in a small crack, etc. You strain and stretch but your prize is just out of reach! Well strain no more true believer, here is your solution! This handy tool stretches out to approximately 16" and is tipped with powerful magnet, allowing you to retrieve your lost metal items! (Remember that MacGyver episode where he magnetized a metal pole to retrieve some lost keys when they fell through a sewer grate?!)

900017 Magnetic Pick-Up Tool \$3.95

5" Precision Flush Cutters

- ✓ Micro tips for precision cutting!
- ✓ Copper: 16 AWG
- ✓ Get those hard-to-reach leads!
- ✓ Ergonomic cushioned grips



When you need maximum precision cutting, check out these cutters! Extremely sharp tip reaches into highly restricted areas and cuts cleanly every time! Features ergonomic green cushioned grips for easy cutting. These are durable enough for a long life of cutting!

200071 5" Precision Flush Cutters \$4.95

5.5" Needle-Nosed Pliers

- ✓ Smooth jaw prevents damage
- ✓ Cushioned grip handles
- ✓ Spring return
- ✓ Precision tips



These pliers will get the job done! Cushioned black rubber grips mean easy handling and comfort, and the smooth jaw means no scraping up your components! (The perfect companion to a nice pair of dikes!)

100013 5.5" Needle-Nosed Pliers \$9.95

Student Tool Kit

- ✓ Great for Tech School!
- ✓ Easy-to-Carry Case!
- ✓ All the Basics!



This tool kit has all the basic tools for working with electronics. Great for students or beginning hobbyists! Includes Cutter, Pliers, Tweezers, IC Extractor, Utility Knife, Brush, Desoldering Pump, Hex Key Wrench Set, Soldering Iron, 3 Phillips Screwdrivers, and 3 Slotted Screwdrivers! All this in an attractive and handy zippered case!

500016 Student Tool Kit \$52.95

33 Piece Security Bit Set

- ✓ 33 pieces total!
- ✓ The most popular formats!
- ✓ 5 different types of security bits!
- ✓ Handy case included!

**The Handy Bit Set...
Perfect For Your Tool Box!**



We've all run into them. Those special little screw heads that you can't remove! They are frequently used in electronic equipment to keep you out of it!

Now with this 33 piece set of bits your headaches are gone! Includes standard 1/4" driver bits for secure torx/star, secure hex, secure tri-wing, secure fork and secure four wing, in all common sizes.

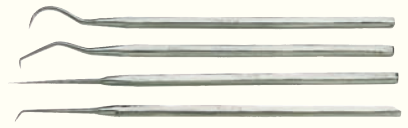
Includes a handy carrying case to keep your bits in order. (Now you can remove those "special" screws they don't want you to!)



VTBT5 33 Piece Security Bit Set \$7.95

4 Piece Pick Set

- ✓ Stainless steel
- ✓ Durable construction
- ✓ Easy-grip textured handles



Ideal for separating wires, removing small fuses, "O" rings, retrieving washers and loose parts too small to pick up with fingers. These little picks will definitely come in handy! Set includes one straight tip, one curved tip, and two different angles of hook tips. (These are for circuit boards, electronics, etc. and not for use on your teeth... unless you're a sadistic dentist!)

900205 4 Piece Pick Set \$4.95

4.5" Full-Flush Diagonal Cutters

- ✓ Hard Steel: 20AWG
- ✓ Soft Steel: 16 AWG
- ✓ Copper: 12 AWG
- ✓ Cushion grip handles



The most important tool while working on PC boards... a pair of dikes! These cutters are forged from high quality alloy steel for maximum strength and durability! Features black cushioned grips for easy cutting. These are durable enough for a long life of cutting hard or soft wires!

200057 4.5" Full-Flush Diagonal Cutters \$13.95

Needle-Nosed Pliers

- ✓ Extra-thin tapered nose
- ✓ Cushioned grip handles
- ✓ Great for SMT
- ✓ Extra fine tips



These pliers will get the job done, even if it's inside a very tight opening! Cushioned green grips mean easy handling and comfort, and a unique extra-long and extra-thin nose gets those hard to reach components with ease!

100042 Needle-Nosed Pliers \$4.95

Computer Service Tool Kit

- ✓ Includes Most Computer Service tools
- ✓ Zippered Carrying Case

Includes all these items and more!

- 5" diagonal cutter
- 5" long-nose pliers
- All-in-one crimp tool
- Tweezers
- IC extractor/insertor
- Desoldering braid & solder
- 8-bit pack
- Assorted screwdrivers
- Soldering iron



500003 Computer Service Tool Kit \$49.95

100 Piece Security Bit Set

- ✓ Expanded security bit selection!
- ✓ All common standard bits!
- ✓ 2 bit holders and 2 extensions!

With the extreme popularity of the VTBT5 33 piece kit, we went one step further! This set contains 100 pieces and includes all the security bits in the VTBT5 kit and a lot more! Includes the following:

- Philips bits
- Pozzi bits
- Square bits
- Flat bits
- Antenna remover bits
- Star bits
- Tri-wing bits
- Star with center bits
- Four-wing bits
- Metric hex bits
- Clutch bits
- Fractional hex bits
- Dodecagonal star bits
- Metric hex with center bits
- Fractional hex with center bits
- Wing nut driver
- Socket bit holder
- Magnetic bit holder
- 1" extension
- 2" extension



All bits are chrome vanadium construction for long life, and include a very handy custom case.

VTBT11 100 Piece Security Bit Set \$9.95



When you needed a special connector or adapter, is used to be easy to run to the corner parts store to find one. Well... those corner parts stores are few and far between now, and those national chains no longer seem to care too much about parts! Here at Ramsey we try to make it easy, at a great price!

CONNECTORS & BETWEEN SERIES ADAPTERS

BNC Male to Type-N Female

- ✓ Popular in-between series adapter!
- ✓ Used for RF connections!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7001 BNC Male/Type-N Female Adapter \$6.95

BNC Male to F-Type Female

- ✓ Popular in-between series adapter!
- ✓ Used for RF connections!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7002 BNC Male/F-Type Female Adapter \$3.95

BNC Female to RCA Male

- ✓ Popular in-between series adapter!
- ✓ Pro to consumer video adapter!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7003 BNC Female/RCA Male Adapter \$3.95

BNC Male to RCA Female

- ✓ Popular in-between series adapter!
- ✓ Consumer to pro video adapter!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7004 BNC Mal/RCA Female Adapter \$3.95

BNC Female to F-Type Male

- ✓ Popular in-between series adapter!
- ✓ Used with video and rf applications!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7005 BNC Female/F-Type Male Adapter \$3.95

BNC Female to UHF Male

- ✓ Popular in-between series adapter!
- ✓ Used with video and RF applications!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7006 BNC Female/UHF Male Adapter \$3.95

BNC Female to RCA Female

- ✓ Popular in-between series adapter!
- ✓ Used with pro & consumer video!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7007 BNC Female/RCA Female Adapter \$3.95

BNC Male Quick Connector

- ✓ Easy to connect twist on BNC!
- ✓ Suitable for RG58 Coax!
- ✓ No crimper required!
- ✓ Available in single quantities!



CON7008 BNC Male Quick Connect Connector \$3.95

UHF In-Line Grounding Connector

- ✓ Inline UHF PL-259 connector
- ✓ Heavy duty grounding lug!
- ✓ Easy to ground your connection!
- ✓ Available in single quantities!



CON7009 UHF In-Line Grounding Connector \$6.95

"The Right Connector At The Right Time Is Worth Its Weight In Gold"

But at Ramsey It's Priced RIGHT!

UHF Male to F-Type Female

- ✓ Popular in-between series adapter!
- ✓ Used for RF connections!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7010 UHF Male/F-Type Female Adapter \$4.95

RCA Male to F-Type Female

- ✓ Popular in-between series adapter!
- ✓ Used for RF, video, & audio!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7011 RCA Male/F-Type Female Adapter \$3.95

N-Type Male to UHF Female

- ✓ Popular in-between series adapter!
- ✓ Used for RF connections!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7012 N-Type Male/UHF Female Adapter \$9.95

N-Type Female to UHF Male

- ✓ Popular in-between series adapter!
- ✓ Used for RF connections!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7013 N-Type Female/UHF Male Adapter \$9.95

N-Type Female "Barrel"

- ✓ Splices together N-Type males!
- ✓ Used for RF connections!
- ✓ Easily extends premade cables!
- ✓ Available in single quantities!



CON7014 Double N-Type Female Adapter \$7.95

N-Type Male "Barrel"

- ✓ Great to match up/splice connectors!
- ✓ Used for RF connections!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7015 Double N-Type Male Adapter \$3.95

UHF Female "Barrel"

- ✓ Splices together UHF males!
- ✓ Used for RF connections!
- ✓ Easily extends premade cables!
- ✓ Available in single quantities!



CON7016 Double UHF Female Adapter \$3.95

UHF Male "Barrel"

- ✓ Great to match up/splice connectors!
- ✓ Used for RF connections!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7017 Double UHF Male Adapter \$3.95

BNC Female "Barrel"

- ✓ Splices together BNC cables!
- ✓ Used for RF & video connections!
- ✓ Easily extends premade cables!
- ✓ Available in single quantities!



CON7018 Double BNC Female Adapter \$3.95

BNC Male "Barrel"

- ✓ Great to match up/splice connectors!
- ✓ Used for RF & video connections!
- ✓ Professional quality!
- ✓ Available in single quantities!



CON7019 Double BNC Male Adapter \$4.95

Mini Stereo Male to 1/4" Female Jack

- ✓ Mini 3.5mm stereo male plug
- ✓ 1/4" stereo female jack
- ✓ Great for headphones!
- ✓ Professional quality!



CON8001 Mini Stereo/1/4" Stereo Adapter \$2.95

1/4" Stereo Male to Mini Female Jack

- ✓ 1/4" stereo male plug!
- ✓ Mini 3.5mm stereo female jack!
- ✓ Great for headphones!
- ✓ Professional quality!



CON8002 1/4" Stereo/Mini Stereo Adapter \$2.95

Mini Stereo Male to Dual RCA Jacks

- ✓ Mini 3.5mm stereo male plug!
- ✓ Dual left/right RCA female jacks!
- ✓ Great for line inputs!
- ✓ Professional quality!



CON8003 Mini Stereo/Dual RCA Jacks Adapter \$4.95

XLR Male to 1/4" Male TRS

- ✓ XLR balanced male to 1/4" male TRS!
- ✓ Not the easiest one to find!
- ✓ Great for pro to consumer audio!
- ✓ Professional quality!



CON8004 XLR Male/1/4" TRS Adapter \$9.95

XLR Female to 1/4" Male TRS

- ✓ XLR balanced female to 1/4" male TRS!
- ✓ Not the easiest one to find!!
- ✓ Great for pro to consumer audio!
- ✓ Professional quality!



CON8005 XLR Female/1/4" TRS Adapter \$6.95

XLR Male to 1/4" Female TRS

- ✓ XLR balanced male to 1/4" female TRS!
- ✓ Beyond not the easiest to find!
- ✓ Great for pro to consumer audio!
- ✓ Professional quality!



CON8006 XLR Male/3.5mm Mini Adapter \$9.95

XLR Female to 1/4" Female TRS

- ✓ XLR balanced female to 1/4" female TRS!
- ✓ Way beyond the impossible to find!
- ✓ Great for pro to consumer audio!
- ✓ Professional quality!



CON8007 XLR Female/3.5mm Mini Adapter \$9.95

3.5mm Male Mini Stereo Plug

- ✓ 3.5mm stereo mini plug!
- ✓ Solder connections
- ✓ Handy strain relief cover!
- ✓ Great for consumer audio!



CON8008 3.5mm Mini Stereo Male Plug \$3.95

1/4" Male Stereo TRS Plug

- ✓ 1/4" male TRS plug!
- ✓ Solder connections
- ✓ Handy strain relief cover!
- ✓ Great for pro audio equipment!



CON8009 1/4" Male TRS Plug \$3.95

Banana Male Plugs

- ✓ Great for audio & test equipment!
- ✓ Screw wire connection!
- ✓ Include one pair
- ✓ professional quality!



CON8010 Banana Male Plug Set \$6.95



POWER ADAPTERS AND POWER SUPPLIES

Power supplies, the one component often taken for granted! They usually come with the equipment, but what happens when they need to be replaced... or you need a second one? Trying to find the direct replacement from the manufacturer is often impossible. Check them out, the handiest selection around!

AC125 120VAC to 12VDC

- ✓ Input: 120VAC @ 60Hz, 15W
- ✓ Output: 12VDC, 500mA, unregulated
- ✓ Connector: 2.1mm power plug female (C+)
- ✓ For use with most Ramsey kits



AC125 12VDC 500mA Power Adapter

\$9.95

FMAC 120VAC to 12VDC

- ✓ Input: 120VAC @ 60Hz, 6W
- ✓ Output: 12VDC, 200mA, unregulated
- ✓ Connector: 2.5mm x 12.5mm phone (T+)
- ✓ For use with Ramsey PR2, FM10A



FMAC 12VDC 200mA Power Adapter

\$9.95

PS11 120/240VAC to 15VDC

- ✓ Input: 120-240VAC @ 50/60Hz, .7A
- ✓ Output: 15VDC, 1.6A, 25W, regulated
- ✓ Connector: 2.1mm pwr plug female (C+)
- ✓ Used with Ramsey SGMEVM, FMRMEVM



PS11 15VDC 1.6A Power Supply

\$29.95

PS21 120VAC to 16VAC

- ✓ Input: 120VAC @ 60Hz, 80W
- ✓ Output: 16VAC, 4A, 64VA, unregulated
- ✓ Connector: 2.1mm pwr plug female (C+)
- ✓ Used with Ramsey PG13



PS21 16VAC 4A Power Adapter

19.95

PS27 120/240VAC to 15VDC

- ✓ Input: 120-240VAC @ 50/60Hz, .5A
- ✓ Output: 15VDC, 1A, regulated
- ✓ Connector: 2.1mm pwr plug female (C+)
- ✓ Used with Ramsey AR2, FM30, FM35



PS27 15VDC 1A Power Supply

14.95

PS28 120VAC to 9VDC

- ✓ Input: 120VAC @ 60Hz, 8.5W
- ✓ Output: 9VDC, 500mA, unregulated
- ✓ Connector: 2.1mm pwr plug female (C+)
- ✓ Used with HPS10SE, HPS40 scopes



PS28 9VDC 500mA Power Adapter

\$9.95

PS4 120VAC to 15VDC

- ✓ Input: 120VAC @ 60Hz, 22.5W
- ✓ Output: 15VDC, 1A, unregulated
- ✓ Connector: 2.1mm pwr plug female (C+)
- ✓ Used with Ramsey AM25



PS4 15VDC 1A Power Supply

\$17.95

PWR25 120VAC to 12VAC

- ✓ Input: 120VAC @ 60Hz, 15W
- ✓ Output: 12VAC, 500mA, unregulated
- ✓ Connector: 2.5mm x 11.25mm phone (T+)
- ✓ Used with K2639



PWR25 12VAC 500mA Power Adapter

\$12.95

SPS18 100/240VAC to 18VDC

- ✓ Input: 100-240VAC @ 50-60Hz, 1A
- ✓ Output: 18VDC, 1.67A, regulated
- ✓ Connector: 2.1mm pwr plug female (C+)
- ✓ For use with the UAM2



SPS18 18VDC 1.67A Switching Power Supply

\$39.95

SPS183 100-240VAC to 18VDC

- ✓ Input: 100-240VAC @ 50-60Hz, 1A
- ✓ Output: 18VDC, 3.3A, regulated
- ✓ Connector: 2.1mm pwr plug female (C+)
- ✓ For use with the UAM4



SPS183 18VDC 3.3A Switching Power Supply

\$49.95

PSSMV4U 100/240VAC to 5, 6, 7.5, 9, 12, 15VDC

- ✓ Input: 100-240VAC @ 50/60Hz
- ✓ Output: 5, 6, 7.5, 9, 12, 15VDC, 3.6A max, reg
- ✓ Connector: 2.5mm, 3.5mm, 3 x 1, 3.5 x 1, 4 x 1.5, 5 x 2, 5.5 x 1, 5.5 x 2mm
- ✓ Switchable output voltages and universal assortment for general replacement



PSSMV4U 5-15VDC 28W Compact Switching Power Supply

\$14.95

PSSMV5U 100/240VAC to 12, 15, 18, 20, 22, 24VDC

- ✓ Input: 100-240VAC, @ 50/60Hz
- ✓ Output: 12, 15, 18, 20, 22, 24VDC, 2.3A max, regulated
- ✓ Connector: 2.5mm mono, 3.5mm mono, 1 x 3, 1.35 x 3.5, .7 x 4, 2.1 x 5, 2.5 x 5.5, 1.5 x 5.5mm
- ✓ For use with notebook computers and personal digital electronic devices, universal output connectors



PSSMV5U 12-24VDC 28W Compact Switching Power Supply

39.95

PSSMV6U 100/240VAC to 15, 16, 18, 19, 20, 22, 24VDC

- ✓ Input: 100-240VAC, @ 50/60Hz
- ✓ Output: 15, 16, 18, 19, 20, VDC, 3.5A, 22, 24VDC, 2.9A regulated
- ✓ Connector: 5 Standard DC Plugs
- ✓ For use with notebook computers and personal digital electronic devices, universal output connectors



PSSMV6U 15-24VDC 70W Regulated Switching Power Supply

62.95

PSS1255 90/264VAC to 12VDC

- ✓ Input: 90-264VAC @ 47/63Hz, 70W
- ✓ Output: 12VDC, 5.8A, regulated
- ✓ Connector: 2.1mm pwr plug female (C+)
- ✓ Great for general purpose 12V high current use



PSS1255 12VDC 70W Compact Switching Adapter

\$54.95

PSS1839 90/264VAC to 18VDC

- ✓ Input: 90-264VAC @ 47/63Hz, 70W
- ✓ Output: 18VDC, 3.9A, regulated
- ✓ Connector: 2.1mm pwr plug female (C+)
- ✓ For 18V laptops and other 18V high current use



PSS1839 18VDC 70W Compact Switching Power Supply

\$54.95

PSU03RUSA 110VAC to 3, 4.5, 6, 7.5, 9, 12VDC

- ✓ Input: 110VAC
- ✓ Output: 3, 4.5, 6, 7.5, 9, 12VDC, 300mA max, regulated
- ✓ Connector: 2.5 x 3.5, 2.35 x .75, 3.5 x 1.35, 4 x 1.7, 5 x 2.1, 5.5 x 2.5mm
- ✓ Switchable output voltages and universal assortment for general replacement



PSU03RUSA 300mA Multi-Voltage Power Adapter

\$12.95



POWER SUPPLIES, VEHICLE ADAPTERS, IPOD ADAPTERS

Looking for a World-Wide power supply you can plug in anywhere? How about that special 5VDC power supply for your MP3 player that uses a USB connector? Need to charge your iPod? And then there's the problem of overseas 230VAC power requirements for use over here or vice versa! We've got you covered!

PSSMV14U 110/240VAC to 5VDC USB

- ✓ Input: 110-240VAC
- ✓ Output: 5VDC, 750mA, regulated
- ✓ Connector: USB type A
- ✓ Charge your USB accessories without computer!



PSSMV14U 5VDC USB Power Supply \$16.95

PSSMV7U 100/240VAC to 5-24VDC

- ✓ Input: 100-240VAC @ 50/60Hz, 36 W
- ✓ Output: 20 Selectable outputs from 5-24VDC in steps 1V, 4.3-1.5A, regulated
- ✓ Connector: 2.5mm mono, 3.5mm mono, 1 x 3, 1.35 x 3.5, 1.7 x 4, 2.1 x 5, 2.5 x 5.5, 1.5 x 5.5mm
- ✓ Switchable output voltages and universal assortment for general replacement



PSSMV7U 5-24VDC 36W Compact Switching Power Supply \$39.95

PSSMV8U 100/240VAC to 15, 16, 18, 19, 20VDC

- ✓ Input: 100-240VAC, @ 50/60Hz, 120W
- ✓ Output: 15, 16, 18, 19, 20VDC, 6A regulated 22, 24 VDC, 5A, regulated
- ✓ Connector: 6.5 x 4.5, 6.3 x 3, 4.75 x 1.7 5.5 x 2.5, 5.5 x 2.1mm, plus special computer connector
- ✓ For use with heavy duty (120W!) notebook computers and electronic devices



PSSMV8U 15-24VDC 120W Regulated Switching Power Supply \$82.95

PSS1546 90/264VAC to 15VDC

- ✓ Input: 90-264VAC @ 47/63Hz, 70W
- ✓ Output: 15VDC, 4.6A, regulated
- ✓ Connector: 2.1 x 5.5mm
- ✓ Ideal 15VDC OEM replacement power supply



PSS1546 15VDC 70W Compact Switching Power Supply \$54.95

PSS2430 90/264VAC to 24VDC

- ✓ Input: 90-264VAC @ 47/63Hz, 70W
- ✓ Output: 24VDC, 3.0A, regulated
- ✓ Connector: 2.1 x 5.5mm
- ✓ Ideal 24VDC OEM replacement power supply



PSS2430 24VDC 70W Compact Switching Power Supply \$54.95

PSSMV11U 100/240 VAC, 12/24VDC to 5VDC USB

- ✓ Input: 100-240VAC @ 50Hz, car plug: 12 or 24VDC
- ✓ Output: 5VDC, 500mA, regulated
- ✓ Connector: USB, Mobile phone jacks for Nokia, Sony/Ericsson, Motorola, Siemens, and Samsung
- ✓ For mobile phones, PDAs, MP3 Players, GPS units and other 5VDC portable devices



PSSMV11U 5VDC 3.75W USB Switching Power Supply \$24.95

PSSMV10U 110/240VAC to 3, 4.5, 5, 6, 6.5, 7VDC

- ✓ Input: 110-240VAC @ 50/60Hz, 13W
- ✓ Output: 3, 4.5, 5, 6, 6.5, 7VDC, 1900mA, 2.5A max, regulated
- ✓ Connector: 5.5 x 2.5, 5.5 x 2.1, 5.0 x 1, 3.8 x 1.1, 3.5 x 1.4, 2.4 x .75mm
- ✓ Switchable output voltages and universal assortment for general replacement



PSSMV10U 3-7VDC 13W Compact Switching Power Supply \$24.95

SPS15U 100/240VAC World-Wide to 15VDC

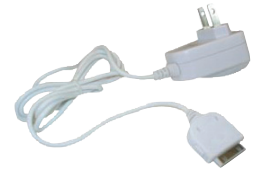
- ✓ Input: 100-240VAC @ 50/60Hz world-wide!
- ✓ Output: 15VDC, 1A, regulated
- ✓ Connector: 2.1mm pwr plug female (C+)
- ✓ Used with most Ramsey kits for overseas use, great world-wide power supply



SPS15U 15VDC 1A World-Wide Switching Power Supply \$24.95

PCMP11U iPod Charger

- ✓ Input: 90-240VAC @ 50-60Hz
- ✓ Output: 5VDC, 500mA
- ✓ Connector: iPod standard dock connector
- ✓ For use with all iPods utilizing the standard dock connector



PCMP11U 5VDC iPod Charger \$8.95

PCMP10 iPod & USB Vehicle Charger Adapter

- ✓ Input: 12-24VDC
- ✓ Output: 5VDC, 1A
- ✓ Connector: USB Type A
- ✓ Allows you to charge any personal USB device with direct USB plug-in or your iPod with PCMP13 cable below



PCMP10 5VDC iPod Vehicle Charger Adapter \$4.95

PCMP13 USB iPod Dock Cable

- ✓ Input: USB2 Type A
- ✓ Output: iPod standard doc connector
- ✓ Connector: iPod standard dock connector
- ✓ For use with all iPods utilizing the standard dock connector for both charging and data transfer



PCMP13 USB iPod Dock Cable \$5.95

PCMP12 USB/Firewire iPod Dock Cable

- ✓ Input: USB2 Type A, Firewire
- ✓ Output: iPod standard doc connector
- ✓ Connector: iPod standard doc connector
- ✓ For use with all iPods utilizing the standard dock connector for both charging and data transfer from both USB and Firewire sources



PCMP12 USB/Firewire iPod Dock Cable 8.95

PSUC45 110VAC to 230VAC Step-Up

- ✓ Input: 110VAC @ 60Hz
- ✓ Output: 230VAC @ 50Hz, 45W
- ✓ Connector: Euro VDE
- ✓ Makes it easy to run your 230VAC equipment with standard 110VAC sources. 45 watts maximum. Use the PSUC100 below for larger loads.



PSUC45 110VAC To 230VAC 45W Step-Up 14.95

PSUC100 110VAC to 230VAC Step-Up

- ✓ Input: 110VAC @ 60Hz
- ✓ Output: 230VAC @ 50Hz, 45W
- ✓ Connector: Euro VDE
- ✓ Makes it easy to run your 230VAC equipment with standard 110VAC sources. 100 watts maximum.



PSUC100 110VAC To 230VAC 100W Step-Up \$18.95

GSCRU SIM Card Reader Writer

- ✓ Input: SIM card
- ✓ Output: USB Type A
- ✓ Connector: USB Type A
- ✓ Explore the info on your SIM card, read & edit phone books and save on your PC, write SMS messages



GSCRU SIM Card Reader Writer \$24.95

GSCRU1 GSM 2G & 3G Card Reader Writer

- ✓ Input: GSM SIM Cards (2G and 3G)
- ✓ Output: USB Type A
- ✓ Connector: USB Type A
- ✓ Explore the info on your GSM 2G & 3G SIM cards, read, edit, backup phone books & messages, write SMS messages, and save data to your PC



GSCRU1 GSM 2G 3G SIM Card Reader Writer \$26.95



COM3010 Communications Service Monitor

**Full Duplex, Loaded
With Features...
At A Sensible Price!**

- ✓ 100 kHz to 1.0 GHz, full duplex
- ✓ Built-in power meter & dummy load
- ✓ Built-in frequency counter
- ✓ Built-in sweep generator
- ✓ Built-in SINAD meter
- ✓ Built-in calibrated RSSI meter
- ✓ Built-in RS232 control
- ✓ Built-in Li-Ion battery packs

THE RIGHT CHOICE!

The COM3010 is a full featured communications service monitor engineered and designed to provide highly accurate measurement and monitoring of communications equipment from 100kHz to 1.0GHz with 0.1ppm accuracy. Full duplex design enables independent and separate measurement and testing of transmitter and receiver circuits simultaneously making it the ideal service monitor for the radio technology of today...and tomorrow!

All functions are selected with simple commands and selections on the Elastomeric touch keypad and are displayed on high contrast dual vacuum fluorescent graphical displays. For those on-site measurements, all graphical displays can be "zoomed" to full size to see them across the room! Of course, battery operation is standard to make field use a breeze!

BUILT-IN POWER METER, FREQUENCY COUNTER, AND A LOT MORE!

Perfect for the two way radio user. Simply key the transmitter while the radio is connected to the generator output for an instantaneous reading of RF output power in either watts or dBm. Yes, we said key the radio into the generator output! The COM3010 incorporates automatic reverse power protection rated at 100 watts with a built-in dummy load. No more burned up pads, no separate wattmeter, and no more worries. Not sure of the radio frequency? Don't want to plug it into a programmer to interrogate the memory? Even worse, don't want to take it apart to look at the channel elements or crystals? No problem, just key the transmitter. The built-in frequency counter will display the frequency! Counter range is 100kHz to 1.0GHz!

AUTOMATIC SINAD AND RSSI MEASUREMENTS!

Working on a receiver? Check the true SINAD sensitivity of the receiver with the built-in SINAD meter. Also provides audio loop-back for the equipment being tested. A separate SINAD meter is no longer required! It gets even better! A calibrated Receive Signal Strength Indicator meter makes the COM3010 perfect for testing filter designs and performance as well as cable characteristics.

Such tests are made simple with the availability of user memories. 100 groups of 100 memories allow the storage of a large number of test setups for quick and easy retrieval. See detailed specifications below. *(In my previous life I was the first to buy a Cushman CE3 and CE5 for two-way use... if these were only available then I never would have had to change all those small light bulbs in the dials... all the time!)*

SPECIFICATIONS

FEATURES

Display: 2 vacuum fluorescent graphical displays, 16x140 pixels
 Memories: 100 sequences of 100 registers plus system memories
 Sweep Features: Linear, octave, and decade of up to 10,000 points
 Scanner Mode: Allows scanning through a sequence of 100 stores
 SINAD Meter: Displays reading from -30dB to 0dB of SINAD
 Freq. Counter: Measures frequency error to 1 Hz. Three counter modes
 Battery Meter: Displays charge left in batteries
 Reverse Protection: Generator output protected, switches into 100W internal load and automatically displays power in dBm or watts
 Power Meter: Displays power from +23dBm to +50dBm, $\pm .5$ dB (200mW-100W)
 Attenuator Output: -30dB sample port from load for external equipment
 RSSI Meter: 80dB of range on receiver side, -40dBm to -120dBm
 Warranty: One-year parts and labor with extended Ramsey Technical Support and dedicated COM3010 user forum access

GENERATE MODE

Frequency: 100kHz to 1.0GHz in 1Hz steps
 Freq. Accuracy: ± 0.1 ppm standard
 RF Output Level: -140dBm to 0dBm in 0.1dBm steps
 Level Accuracy: ± 1 dB, 500kHz to 1GHz, ± 2 dB 100kHz to 500kHz
 Units: dBm, uV, mV
 Leakage: Better than 1uV, 2 turn loop, 1" diameter at 1"
 Spurious Harmonics: -30dBc typical
 Non-harmonics: -50dBc typical
 FM Modulation: ± 75 kHz max in 0.1Hz steps
 FM Bandwidth: 0.1Hz - 75kHz
 Accuracy: ± 0.1 ppm (inherently tied to reference frequency)
 AM Modulation: 0 - 75% in 1% steps to -100dBm, 0-50% to -140dBm
 AM Bandwidth: 10Hz - 10kHz
 Accuracy: $\pm 5\%$
 Distortion: Less than 5%
 Modulation Internal: 0.1Hz - 3kHz
 Modulation External: 0.1Hz - 3kHz digital and analog selectable, auto leveling.
 CTS Encode: 0.1Hz to 999.9Hz at ± 75 kHz default deviation, variable from .1Hz to 2.5kHz deviation
 DPL Encode: ± 500 Hz, Variable from 0.1Hz to 2kHz
 Two Tone Paging: 0.1Hz - 3kHz, group, voice, tone, battery save modes

RECEIVE MODE

Frequency: 100kHz to 1.0GHz in 10Hz steps
 Sensitivity: Less than 2uV below 512MHz
 Less than 3uV above 512MHz
 FM Demod: 0 - 6kHz, 0 - 4kHz
 AM Demod: 0-100%
 CTS Decode: In AF frequency count
 Frequency Error: 0-1MHz, two methods of bargraph and count
 AF Demod output: 1Vp-p for 5kHz deviation
 Gates: 0.1 sec, 1 sec

FREQUENCY COUNTER

Frequency Range: 100kHz - 1GHz
 Low Band Sensitivity: Less than 10mV under 70MHz, 1Hz and 10Hz resolutions
 High Band Sensitivity: Less than 10mV, 70MHz - 1GHz, 10Hz and 100Hz resolutions with divide by ten prescaler
 IF Frequency: Receiver sensitivity, range limited to bandwidth of current set receiver frequency ± 10 kHz, 1Hz, and 10Hz resolutions

AUDIO COUNTER

Frequency Range: 60Hz - 3000Hz
 Gates: 10 Sec variable gate for 1 sec quick updates
 Sensitivity: 35mV at demod audio, (± 750 Hz deviation)

GENERAL

Receiver input: Has diode protection and fused components
 Controls: Elastomeric keypad
 Dummy Load: 100W 30dB feed-through attenuator with sample port on rear, 25% duty cycle full power
 RS232 Control: Serial interface provides external function control and automated calibration
 Primary power: 100-240VAC, .6A, 50/60Hz; built in Li-Ion battery
 Stand: Standard push to lock handle/stand
 Case Color: Mist gray epoxy powder coat
 Supplied Accessories: 110VAC EIA cord, BNC-BNC test cable, whip antenna, one BP3010 Li-Ion battery
 Dimensions: 6" H x 11.9375" W x 14.75" D (152.4mm H x 303.31mm W x 374.65mm D)
 Weight: 14 lbs (6.5kg)

COM3010
 BP3010
 CC3010

Communications Service Monitor, 100kHz-1GHz
 Additional Li-Ion Battery Pack, Extends Operation by 1 Hour Approx (Max 3 Packs Total)
 Matching Black Padded Cordura Carrying Case With Strap

\$3995.00
 \$59.95
 \$129.95

RSG1000B RF Signal Generator

- ✓ 100 kHz to 1 GHz!
- ✓ 10 Hz continuous tuning
- ✓ AM & FM internal and external modulation
- ✓ 90 user setup memories
- ✓ RS232 interface
- ✓ 0.1ppm stability

**A 1 GHz Professional RF
Signal Generator At A
Price That Can't Be Beat!**



EXCELLENT VALUE AND PERFORMANCE!

The RSG1000B RF Signal Generator was designed from the ground up to fill the need for a high performance lab quality signal generator at an economical price. How do you do that? It's simple... remove the "bells and whistles" that aren't needed and maintain the critical lab quality specifications. The result is a highly versatile RF signal generator that is not only perfect for any bench in your shop, classroom, or home, but also small enough for use on the road!

BROADBAND OPERATION!

If you're looking for an RF signal generator with the broadest range of frequencies, the RSG1000B has you covered! A continuous frequency range of 100 kHz to 1,000 MHz takes care of any application you may have. This is provided at a variable output level range from -130 dBm to +10 dBm at 50 ohms! Output can be CW, FM, or AM modulated. An internal 1 kHz modulation source is derived from the reference to provide AM modulation up to 75% in 0.1 kHz steps and FM deviation up to 99.9 kHz in 0.1 kHz steps. External 600 ohm modulation inputs are provided for both AM and FM modulation! A modulation output also provides a buffered 600 ohm output for monitoring the current modulation source (internal, external, or both).

HIGHLY ACCURATE & STABLE!

The precision frequency synthesizer is referenced to an internal 0.1ppm 50 MHz TCXO time base. No expensive high stability options are required here; this ultra precision time base comes standard with the RSG1000B! In addition, an external 10 MHz external time base input is provided to lock to an external reference. Automatic switching is provided when a proper 10 MHz reference is detected!

RF INPUT PROTECTED!

RF on/off (inhibit) is provided through an RF output relay. An RF-On LED is illuminated when RF output is present on the output connector. RF output is automatically inhibited upon power-up. When reverse RF power is detected at the RF Output connector at a level greater than +26 dBm, the protection circuit opens the RF output relay and displays a reverse RF power detected indicator. No more damage from inadvertent transmitter connections!

EASY TO USE!

We designed the operation of the RSG1000B to be simple and intuitive to the technician. The display is a bright, two line vacuum fluorescent display that can be seen across the room! All operating parameters are displayed. An easy to use numeric membrane keypad enables direct entry of all values. All functions are accessible without using a "shift" or second function key for real ease of use. In addition, we designed in a "smart knob" dial which has a true analog feel but is intelligently enabled when entering or changing parameters in any field.

NON VOLATILE EEPROM MEMORIES!

The RSG1000B features 90 user accessible memories! Each of these memories will store a complete front panel setup including the increment settings. To store a front panel setting to memory you simply press the Store key. Memories can be recalled via the up/down keypads or with the Smart Knob. Memories are stored in the non-volatile EEPROM with a data retention of 10 years!

RS232 REMOTE CONTROL!

The RSG1000B can be remotely controlled through a standard DB-9 RS232 serial connection on the rear panel. The signal generator is addressable and the address can be set to any number between 0 and 255. This means that up to 256 units can be connected to the same RS232 port. The interface supports polled readings plus download and upload of all setup memories. Commands can be uploaded individually or as an ASCII file from any terminal program or com port.

COMPACT SIZE, WORLDWIDE USE!

At 12" x 6" x 12," the RSG1000B is suitable not only for bench and lab use but for mobile applications. It makes a great field service tool and a very stable field local oscillator reference! It also weighs only 11 lbs so it's a breeze to carry with you. A universal switching power supply operates on 90 to 230VAC, 50/60 Hz for use anywhere! A convenient swivel tilt-bail stand is included on the bottom of the RSG1000B to give you tilt view when in use that can easily be folded up for travel and storage.

COST EFFECTIVE!

As many schools and technical institutes have told us, they get 90% of the performance of a \$20,000 RF signal generator for 10% of the price! Economically it simply makes sense! If you're looking for great features in an RF signal generator without breaking the bank... or your budget, the RSG1000B is for you! On the other hand, if you're looking for useless bells and whistles, extra buttons, interfaces you will never use, and love wasting your money... I guess we can't help you!

If you are looking for a cost effective way to test receivers AND transmitters, check out our COM3010 communications service monitor. It features the same broadband range of the RSG1000B with a complete receiver, power meter, frequency counter, sweep generator, SINAD meter, RSSI meter, and a whole lot more... for a whole lot less! (The very first RSG1000B that came off of production went to an antique radio museum that needed a long sought-after, cost effective way to test radios. How cool is that!)

DETAILED SPECIFICATIONS (at 0dBm output level)

RF SECTION

Frequency Range:	100kHz to 1,000 MHz
Resolution:	10Hz continuous tuning,
Oscillator Frequency:	50MHz TCXO
Oscillator Stability:	±0.1ppm from 15°C to 35°C
Harmonics:	-30dBc typical
Non-Harmonics:	-50dBc typical
Residual FM:	5 Hz typical, 0.3 to 3 KHz detection BW
Residual AM:	-60dBc (>10KHz from carrier)
	0.3 to 3 KHz detection BW
Output Level:	-130 to +10dBm (50 Ohms);
	Resolution: 0.1dB
Level Accuracy:	±1dB (>500 KHz)
Level Units:	dBm, dBmV, mV, dBµV, µV
Reverse Power Protect:	25 watts, 50 VDC
Leakage:	1µV (2 turn loop, 1 inch diameter,
	1 inch distance)

FREQUENCY MODULATION

Range:	0-99.9KHz in 0.1 KHz steps
Accuracy:	±5% of scale
Freq. Response:	50Hz to 25KHz
Max. Deviation:	99.9KHz; except 250 to 500MHz, 50KHz

AMPLITUDE MODULATION

Depth:	0-75% in 1% steps <0 dBm
Distortion:	Less than 5%
Accuracy:	±5%
Freq. Response:	50Hz to 15KHz
Modulation Sources:	Internal 1KHz derived from reference. External - 600 ohm impedance with level LEDs to indicate correct 1 Volt p-p input level

GENERAL

Front Panel:	Sealed membrane with audio acknowledgment
Display:	Two line, vacuum fluorescent display
RS-232:	RS-232 interface provides polled readout plus downloading and uploading of all front panel setups
Memory:	90 full front panel set-ups. 9 series of 10 memories each. 10 year retention
External Timebase Input:	10MHz, 1 Volt p-p
Power Requirements:	90 to 230 VAC ±10%, 50/60Hz
Dimensions:	12" w x 6" h x 12" d
Weight:	11 lbs.



STE RF Shielded Test Enclosures

- ✓ Wireless device testing!
- ✓ Forensics Isolation!
- ✓ Perfect for 802.11a, b, g, n, WiMAX
- ✓ Cellular, PCS, GSM, 3G testing
- ✓ 802.15, Bluetooth®, Wibree, RFID, ZigBee testing
- ✓ Wide variety of I/O options are "standard"!
- ✓ Super isolation up to 18 GHz!
- ✓ RF radiating test fixture models for absolute repeatability testing of wireless devices!
- ✓ Stock models to fit your custom applications!

THE RF SCREEN ROOM ON YOUR BENCH!


In 1997 Ramsey took the technician out of the large expensive shielded screen room and put his hands and eyes into a portable benchtop RF Shielded Test Enclosure. With thousands placed in service worldwide, the patented STE technology became the standard for efficient and cost effective RF isolation testing. That legacy has continued with a wide variety of STE's to suit every RF test application and the size requirements you have today. Our exclusive double lip gasket technology assures an RF tight seal each and every time. Steady-hold hinges maintain the opening at any location and prevent gasket compression due to prolonged closure pressure when not in use. Our STE2800 and STE3800 STE's feature our RTF Radiating Test Fixture with a built-in broadband antenna to properly test wireless communications devices with guaranteed repeatability.

Cellular phones and other wireless devices have quickly become one of the most important and valuable sources of investigative data. But that data has the high risk of being overwritten, deleted, locked-out, or corrupted unless the device is immediately RF shielded from the carrier's network, or even powered down. Our Forensics series of STE's is specifically designed for the safe collection of wireless devices on-site and the preservation and recovery of data at the lab.

All of the STE's feature a wide variety of available I/O connection and interface options and RF filtered feed-throughs. All available to fit your custom requirements with the pricing and delivery of a stock unit!

STE2200


The "Portable Test Box" or STE2200 evolved from its big brother the STE3000B. Designed specifically for TDMA, CDMA, AMPS, PCS, GSM and other small communication devices, it is constructed to the same precision-machined tolerances as our patented STE3000B to maintain an exceptionally well shielded environment. Heavy duty, rugged .090 and .125 aluminum is used throughout and our double lip, high performance gaskets are used at all joint locations assuring a reliable RF tight closure. Oversized hinges and latches are used to provide a physically tight seal every time. RF absorbent foam lines the interior to provide a typical RF attenuation of -90dB @ 3GHz! Perfect for 2.4GHz testing. Input/output connections and options can be configured to match your needs.

	MODEL STE2200	FEATURES <ul style="list-style-type: none"> • RF absorbent foam liner • Exclusive double lip RF tight gasket • Easy release handle • Steady-hold hinge • Designed for compact devices 	CONNECTORS None provided standard. Custom configured, see options below.	ISOLATION -100dB @ 1GHz -90dB @ 3GHz -80dB @ 6GHz	DIMENSIONS 4 1/2" H x 7 1/4" W x 9 3/4" D 3 1/4" H x 6" W x 8 1/2" D (Nom. Inside Dimensions)	COST \$475.00
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STE2200F (Forensics Edition)

The STE2200F is designed specifically for securing and isolating cell phones and other small communications devices on-site for transport to your lab for evaluation. The moment the device is secured into the STE2200F it is isolated from the carrier's network and other RF signals preventing any incoming or outgoing communications, including GPS tracking information. An optional 12VDC filtered power input allows you to keep the device powered up using a standard vehicle power outlet. Filtered AC power interfaces are also available.

It is constructed to the same precision-machined tolerances as our larger models in order to maintain an exceptionally well shielded environment. Heavy duty, rugged .090 and .125 aluminum is used throughout and our double lip, high performance gaskets are used at all joints assuring a reliable RF tight closure. Oversized hinges and latches provide a physical tight seal every time. RF absorbent foam lines the interior to provide a typical RF attenuation of -90dB @ 3GHz! Tamper-proof hardware and a padlockable latch is used to maintain security. Even with its small size, the STE2200F will hold approximately 21 average-sized cell phones for secure RF isolated transport and storage!


	MODEL STE2200F	FEATURES <ul style="list-style-type: none"> • RF absorbent foam liner • Exclusive double lip RF tight gasket • Easy release handle, steady-hold hinge • Tamper-proof hardware • Great for field collection of wireless devices 	CONNECTORS None provided standard. Custom configured, see options below.	ISOLATION -100dB @ 1GHz -90dB @ 3GHz -80dB @ 6GHz	DIMENSIONS 4 1/2" H x 7 1/4" W x 9 3/4" D 3 1/4" H x 6" W x 8 1/2" D (Nom. Inside Dimensions)	COST \$495.00
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STE2800

Designed around the STE2200, we took the task of repeatability testing of TDMA, CDMA, AMPS, PCS and GSM phones, and other wireless communications to a new level! For more than a decade, Ramsey's RTF Radiating Test Fixture was the standard in pager testing and alignment. Now, designed specifically for such communications devices, the RTF has a built-in embedded antenna to cover 800 MHz to 8 GHz.

A heavy duty universal clamp system allows any phone to be securely clamped into position for testing. Once clamped in, the flat coupling response, together with the high RF isolation factor, gives you guaranteed repeatability testing. Phone to phone, the measurements will be exact and will be taken under the identical conditions. An SMA connector is provided standard on the STE2800 for the RTF antenna connection. Other I/O connector options may be ordered separately. For a compact highly reliable enclosure with repeatable device coupling, the STE2800 is your answer!




	MODEL STE2800	FEATURES <ul style="list-style-type: none"> • Integral RF radiating test fixture (RTF) • Flat Coupling Factor 800MHz - 8 GHz • Provides absolute repeatability testing • Exclusive double lip RF tight gasket • RF absorbent foam liner • Easy release handle • Steady-hold hinge 	CONNECTORS SMA female capped to built-in RTF antenna. 2nd SMA female bulkhead capped. Additional connectors available, see options below.	ISOLATION -100dB @ 1GHz -90dB @ 3GHz -80dB @ 6GHz	DIMENSIONS 4 1/2" H x 7 1/4" W x 9 3/4" D 3" H x 6" W x 8 1/2" D (Nom. Inside Dimensions Above RTF)	COST \$995.00
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STE2900


Our broad line of STE series Shielded Test Enclosures were already being used for virtually all wireless LAN device tests. But the daunting task was how to streamline the testing while reducing the physical space required for simultaneous high volume testing. Our engineers started to work with a number of manufacturers to find out exactly what was needed.

Wow... multiple boards, blades, WAPS and other devices had to be physically mounted in close proximity. They couldn't "talk to each other", they couldn't "talk to the outside world", they had to run cool within their published specs in a small confined space over a long period of time. There needed to be suitable filtered I/O connections, RF feed throughs, RF isolation was critical, and there had to be a lot of them running simultaneously in a small lab. Pretty tall wish list, but once again, Ramsey came through... with flying colors! Also available in dual rack mount and shock mounted road case versions!

	MODEL STE2900	FEATURES <ul style="list-style-type: none"> • Designed for WLAN testing • Front loading swing away door • Dual ventilation or fan forced cooling • Exclusive double lip RF tight gasket • Universal I/O connector interface plate • RF absorbent foam liner • Optional security locking latch available 	CONNECTORS None provided standard. Custom configured, see options below.	ISOLATION -90dB @ 1GHz -90dB @ 3GHz -80dB @ 6GHz	DIMENSIONS 11"H x 8"W x 14"D 10"H x 7"W x 13"D (Nom. Inside Dimensions)	COST \$1,095.00
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STE2902

If you're looking for the ultimate test enclosure system for your dense pack test environment, the STE2902 is your answer! Designed for space saving 19" rack mounting, the STE2902 contains TWO STE2900 WLAN test enclosures in one single 7 rack unit (12 1/4" high) package! The integrated custom rack shelf provides mounting and support for use in your standard 19" racks. Front loading doors swing away to the left for easy installation and access to your DUT. Also available in a shock mounted road case for easy travel and setup.

	MODEL STE2902	FEATURES <ul style="list-style-type: none"> • Dual 19" rack mount configuration • Designed for WLAN testing • Front loading swing away doors • Dual ventilation or fan forced cooling • Exclusive double lip RF tight gaskets • Universal I/O connector interface plates • RF absorbent foam liner • Optional security locking latches available 	CONNECTORS None provided standard. Custom configured, see options below.	ISOLATION -90dB @ 1GHz -90dB @ 3GHz -80dB @ 6GHz	DIMENSIONS 12.2"H x 19"W x 17.4"D 10"H x 7"W x 13"D (Nom. Inside Dimensions per chamber)	COST \$2,195.00
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STE2902C

A large number of manufacturers requested a dual rack mount test system in a stand alone package. This was for benchtop and field use, where existing 19" rack cabinets were not available. We took our highly popular STE2902 dual WLAN test enclosure and installed it in a high impact shock road case! This provided not only a self contained test system, but a convenient method to ship the STE2900 system! Special rear mount supports are included to withstand shipping and road abuse. As a plus, the shock cases are "keyed" on the top and bottom to provide locked stacking of multiple units. All this in a case that measures 19.2" high!



	MODEL STE2902C	FEATURES <ul style="list-style-type: none"> • Dual rack mount shock case configuration • Designed for WLAN testing • Front loading swing away doors • Dual ventilation or fan forced cooling • Exclusive double lip RF tight gaskets • Universal I/O connector interface plates • RF absorbent foam liner • Optional security locking latches available 	CONNECTORS None provided standard. Custom configured, see options below.	ISOLATION -90dB @ 1GHz -90dB @ 3GHz -80dB @ 6GHz	DIMENSIONS 19.25"H x 25"W x 22.5"D 10"H x 7"W x 13"D (Nom. Inside Dimensions per chamber)	COST \$2,495.00
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STE2950

The "Top Load version of the STE2900! Also designed for individual bench top or dual rack E mount installations, the STE2950 makes it simple to load and unload the device under test with its top load access door. The dual rack mount configuration allows multiple installations for dense pack environment testing. The dual rack version STE2952 includes a custom rack slide allowing the entire enclosure to be pulled out for top access.

To allow proper cooling of the DUT each STE2950 includes a built-in passive 60mm vent option. Optional forced-air fans can be ordered for additional cooling. Like other Ramsey STE's our universal I/O panel on the back wall is included and ready for your custom configuration to meet your application. Heavy duty, rugged .090 and .125 aluminum is used throughout and our double lip, high performance gaskets are used at all joint locations assuring a reliable RF tight closure. RF absorbent foam lines the interior to provide a typical RF attenuation of -90dB @ 3GHz! If you are looking for an off-the-shelf RF enclosure system providing enough room to test any size wireless device, from Cellular phones to MIMO access points, you can count on the STE2950 to keep the device isolated.


The STE2952 includes dual STE2950's mounted on a custom 19" rack mount slide ready for installation into your rack. Access to the DUT is easy by the pull-out slide giving you full access to the hinged top mounted shielded doors. If you don't have available rack space or need high density testing in the field, our STE2952C has dual STE2950's pre-mounted and configured in a custom shock mounted road case. Great for field service trips.

 	MODEL STE2950 STE2952	FEATURES <ul style="list-style-type: none"> • Designed for WLAN and MIMO testing • Top loading swing up door for easy loading • Dual ventilation or fan forced cooling • Exclusive double lip RF tight gasket • Universal I/O connector interface plate • RF absorbent foam liner • Optional security locking latch available <ul style="list-style-type: none"> • Dual 19" rack mount configuration • Easy top loading access and doors • Pull-out slide included for standard racks 	CONNECTORS None provided standard. Custom configured, see options below.	ISOLATION -90dB @ 1GHz -90dB @ 3GHz -80dB @ 6GHz	DIMENSIONS 11.7"H x 8.325"W x 18"D 10.5"H x 7.125"W x 16.8"D (Nom. Inside Dimensions) 11.7"H x 16.65"W x 18"D 10.5"H x 7.125"W x 16.8"D (Nom. Inside Dimensions Per Chamber)	COST \$1,195.00 \$2,395.00
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**STE3000B**

The RF Test Enclosure that started it all! How do you troubleshoot, tune, align, and test a device in an RF free and interference free environment? Well, up until now you had to invest in a very expensive RF screen room. Our patented STE3000B brought that technology right down to your bench... and the cost all the way down to affordable!

Now you can work and see inside the box rather than sit inside an expensive screen room. Working access is made possible with our custom designed, silver impregnated, ultra fine mesh gloves. These gloves offer an RF tight seal to the box yet give you excellent manual dexterity and hands on access to devices under test. Once the cover is closed, a large RF tight viewing window overlooks the entire working area that is illuminated with built-in noise free lighting. It doesn't get much easier than that! All I/O connections and options are milled into a removable 304 stainless steel panel to allow for future changes. Simply choose the I/O's and interfaces you require when ordering and the STE3000B will be custom designed to your spec. Sounds too good to be true? We thought so too; that's why we have a patent on it!


	MODEL	FEATURES	CONNECTORS	ISOLATION	DIMENSIONS	COST
	STE3000B	<ul style="list-style-type: none"> RF absorbent foam liner Exclusive double lip RF tight gasket Universal I/O connector interface plate RF tight "hands-on" silver mesh gloves RF tight illuminated viewing window Gas filled cover strut Designed for hands-on adjustment and alignment of devices 	6 pole filtered 120VAC AC outlet strip; 6 pole filtered barrier strip feedthrough. Custom configured, see options below	-90dB @ 1GHz -90dB @ 3GHz -80dB @ 6GHz	12 ³ / ₄ "H x 18"W x 12"D 8"H x 16 ³ / ₄ "W x 10 ¹ / ₂ "D (Nom. Inside Dimensions)	\$1,295.00

STE3000F (Forensics Edition)

The STE2200F preserved the wireless device at the scene, and got it to your lab. The STE3300F stored wireless devices in a powered-up secure environment. But when it's time to gather the hard evidence, the STE3000F is your key to successful recovery.

The patented design of our STE3000F gives you full hands-on manipulation and visual observation of the cell phone or wireless device, while keeping it powered up in complete RF isolation from the outside world! Our exclusive dual RF isolated gloves permit full two handed access to any device or accessory within the shielded test enclosure. From navigating through cell phone menus, screens and displays, to removing SIMS, SD cards, and other memory devices, to plugging in USB and data transfer cables... You can do it all in full RF isolation from the network carrier. The entire work area inside the enclosure is illuminated for viewing through the large RF-tight viewing window. All of this can be done, while the device is still securely locked within the enclosure to preserve the chain of custody.


Just like the STE3300F, heavy duty double lip construction and high performance RF gaskets and absorbent foam is used to provide over -90dB isolation at 3GHz. Two standard RF filtered DB9/USB1.1 bulkhead feedthru's are provided for easy data connection to the wireless device, even while being isolated from the network carrier. Likewise, an RF filtered 6 pole 120VAC outlet strip is also standard to provide external power to device chargers and power supplies. From the smallest cell phone to the latest "Micro PC" devices, the STE3000F will securely give you the hands-on advantage you need.

	MODEL	FEATURES	CONNECTORS	ISOLATION	DIMENSIONS	COST
	STE3000F	<ul style="list-style-type: none"> Designed specifically for forensic wireless device isolation and data retrieval RF absorbent foam liner Exclusive double lip RF tight gasket Universal I/O connector interface plate RF tight "hands-on" silver mesh gloves RF tight illuminated viewing window Gas filled cover strut 	6 pole filtered 120VAC AC outlet strip; 6 pole filtered barrier strip feedthrough, filtered RS-232 serial feedthru, filtered USB1.1 feedthru Additional connectors available, see options below.	-90dB @ 1GHz -90dB @ 3GHz -80dB @ 6GHz	12 ³ / ₄ "H x 18"W x 12"D 8"H x 16 ³ / ₄ "W x 10 ¹ / ₂ "D (Nom. Inside Dimensions)	\$1,495.00

STE3300

Designed from the ground up to be functional, fast, and convenient for the design, production, testing, and maintenance of wireless LAN, Bluetooth, and other microwave frequency applications. Durability is assured because the STE3300 is constructed of rugged .090 and .125 aluminum with dual heavy-duty latches.


Unmatched RF isolation is achieved by the use of the two rows of high performance flexible RF gaskets. The entire interior is lined with RF absorbent foam that provides 24dB reflective attenuation to eliminate nulls and hotspots. The inside working space is large enough to test your devices as a complete system or use multiple enclosures to eliminate interference between work stations. A large variety of connector options are available for specific customer applications. All connectors are milled into a removable 304 stainless steel panel to allow for future requirements when needed.

	MODEL	FEATURES	CONNECTORS	ISOLATION	DIMENSIONS	COST
	STE3300	<ul style="list-style-type: none"> RF absorbent foam liner Exclusive double lip RF tight gasket Universal I/O connector interface plate Easy release latch system Steady-hold hinge system Designed to test complete systems 	None provided standard. Custom configured, see options below.	-90dB @ 2GHz -90dB @ 4GHz -80dB @ 6GHz	9 ³ / ₄ "H x 18"W x 12"D 8 ¹ / ₄ "H x 16 ³ / ₄ "W x 10 ³ / ₄ "D (Nom. Inside Dimensions)	\$895.00

STE3300F (Forensics Edition)

The STE3300F is the big brother to the STE2200F. It is specifically designed to secure and power multiple cell phones and other communications devices, as well as larger PDA's and the latest and very popular "Wireless Micro PC's", such as the Sony Vaio® UX series. 120VAC filtered power inputs are standard, terminating in a 6 pole AC outlet strip inside the enclosure to plug in various chargers for the isolated devices. An RF filtered DB9/USB 1.1 bulkhead feedthru is also provided standard to give you data access to the wireless device under test or observation. Both interfaces are built into the standard Ramsey removable I/O panel giving you ample room for additional connectors and interfaces to meet your custom requirements, while maintaining non-custom stock delivery schedules.

Just like the STE2200F, heavy duty, rugged .090 and .125 aluminum is used throughout, and our double lip, high performance gaskets are used at all joints assuring a reliable RF tight closure. 1/2" RF absorbent foam lines the entire interior of the STE3300F providing an overall isolation greater than -90dB at 3GHz! Dual padlockable latches and tamper-proof hardware is used to maintain security of the enclosed devices. If you are looking for large secure and RF isolated storage for multiple cell phones, the STE3300F will hold approximately 60 average size cell phones in a secure RF isolated environment.

	MODEL	FEATURES	CONNECTORS	ISOLATION	DIMENSIONS	COST
	STE3300F	<ul style="list-style-type: none"> RF absorbent foam liner Exclusive double lip RF tight gasket Universal I/O connector interface plate Easy release latch system Steady-hold hinge system Designed to test complete systems 	6 pole filtered 120VAC AC outlet strip; 6 pole filtered barrier strip feedthrough, filtered RS-232 serial feedthru, filtered USB1.1 feedthru Additional connectors available, see options below.	-90dB @ 2GHz -90dB @ 4GHz -80dB @ 6GHz	9 ³ / ₄ "H x 18"W x 12"D 8 ¹ / ₄ "H x 16 ³ / ₄ "W x 10 ³ / ₄ "D (Nom. Inside Dimensions)	\$1,095.00



STE3500

Designed specifically for Wireless Communications circuit board production testing where there is a need for a large footprint for isolating oversized boards and minimal height to allow for easy device placement. The lid opens automatically using the internally mounted dual precision air pistons once the dual heavy duty latches are released.

Construction meets the same standards as our popular STE3300 and incorporates the same double gasketed lid to provide the highest attenuation factor at the best value. The I/O panel is located close to the bottom of the rear panel to keep the cabling as close to the device under test as possible. All connectors are milled into a removable 304 stainless steel panel to allow for future requirements when needed.

MODEL	FEATURES	CONNECTORS	ISOLATION	DIMENSIONS	COST
STE3500	<ul style="list-style-type: none"> RF absorbent foam liner Exclusive double lip RF tight gasket Universal I/O connector interface plate Easy release latch system Dual gas filled cover struts Designed to test complete systems 	<p>None provided standard.</p> <p>Custom configured, see options below.</p>	<p>-90dB @ 2GHz</p> <p>-90dB @ 4GHz</p> <p>-80dB @ 6GHz</p>	<p>9"H x 22"W x 17"D</p> <p>8½"H x 18¾"W x 15¾"D</p> <p>(Nom. Inside Dimensions)</p>	\$1,195.00

STE3600

One of our newest RF test enclosures designed for complete laptop integrated WLAN and Bluetooth testing. It's large 16" W x 24" D is designed to be either desktop mounted or to be integrated on a standard 19" sliding rack shelf. Dual gas struts provide easy top cover lifting for full top access to insert the largest laptop computer inside for RF isolated tests and measurements. A front handle is included to assist in carrying the STE as well as front rack mount sliding.

Construction meets the same standards as our popular STE3300 and incorporates our exclusive double RF gasketed cover to provide the highest attenuation available. The universal I/O panel is located on the rear of the enclosure to provide easy cabling inside sliding rack mount installations. For full size laptop testing and measurement, the STE3600 has been designed to make your life a lot easier!

MODEL	FEATURES	CONNECTORS	ISOLATION	DIMENSIONS	COST
STE3600	<ul style="list-style-type: none"> Designed for wide format laptops and other large scale wireless equipment RF absorbent foam liner Exclusive double lip RF tight gasket Universal I/O connector interface plate Easy release latch system Dual gas filled cover struts Dual ventilation or fan forced cooling 	<p>None provided standard.</p> <p>Custom configured, see options below.</p>	<p>-90dB @ 2GHz</p> <p>-90dB @ 4GHz</p> <p>-80dB @ 6GHz</p>	<p>12"H x 17"W x 24"D</p> <p>11"H x 16"W x 23"D</p> <p>(Nom. Inside Dimensions)</p>	\$1,625.00

STE3800

If you are looking for the ultimate enclosure for TDMA, CDMA, AMPS, PCS, GSM, P2T, PDA, and other wireless communications devices the STE3800 is the enclosure for you. The STE3800 is configured with a built-in Ramsey RTF Radiating Test Fixture to give you flawless go/no-go testing with guaranteed repeatability.

It is designed around the STE3300 to give you a whopping 5½"H x 15¼"W x 9¼"D inside working space. The RTF provides a broadband coupling response from 800 MHz all the way up to 8 GHz. The heavy duty universal clamp system positions and holds the device under test in an exact position that can be easily duplicated for repeatability. Because frequent tests require the operator to visually inspect the device display (cell phone, PCS phone, etc.), the STE3800 features a large RF tight viewing window that overlooks the entire working area. The entire display and any indicators, LEDs, etc. located on the device can easily be seen throughout the test process!

Double thickness 24dB RF absorbent foam lines the entire work area for a flat response. As with the STE3300, double row RF gaskets are used to provide RF isolation up to -90dB at 4GHz. A Type-N female connector is provided standard for the RTF antenna connection and is located on the removable 304 stainless steel I/O panel that can be custom configured with any available I/O options.

MODEL	FEATURES	CONNECTORS	ISOLATION	DIMENSIONS	COST
STE3800	<ul style="list-style-type: none"> Integral RF radiating test fixture (RTF) Flat Coupling Factor 800MHz - 8 GHz Provides absolute repeatability testing RF tight illuminated viewing window to see device displays and indicators 1" RF absorbent foam liner for a flatter response Exclusive double lip RF tight gasket Universal I/O connector interface plate 	<p>Type-N female capped to built-in RTF antenna. 2nd SMA female bulkhead capped.</p> <p>Additional connectors available, see options below.</p>	<p>-90dB @ 2GHz</p> <p>-90dB @ 4GHz</p> <p>-80dB @ 6GHz</p>	<p>12¾"H x 18"W x 12"D</p> <p>5½"H x 15¼"W x 9¼"D</p> <p>(Nom. Inside Dimensions Above RTF)</p>	\$1,995.00

STE4400

High performance RF test enclosure specifically engineered for the production floor! Designed to the same exacting specifications of the STE3300, the STE4400 offers a unique swing-down front door opening for easy device placement and removal. Easily accommodates a laptop computer to fit any test application.

Extra deep work space accommodates the largest devices. Like the STE3300, your custom I/O configuration is milled into a removable 304 stainless steel panel to allow for future requirements when needed, giving you off the shelf delivery of your custom order!

MODEL	FEATURES	CONNECTORS	ISOLATION	DIMENSIONS	COST
STE4400	<ul style="list-style-type: none"> RF absorbent foam liner Exclusive double lip RF tight gasket Universal I/O connector interface plate Large hinge-down front door Designed for your own test fixtures 	<p>None provided standard.</p> <p>Custom configured, see options below.</p>	<p>-90dB @ 2GHz</p> <p>-90dB @ 4GHz</p> <p>-80dB @ 6GHz</p>	<p>15½"H x 22½"W x 19"D</p> <p>14¼"H x 21¼"W x 17½"D</p> <p>(Nom. Inside Dimensions)</p>	\$1,725.00

STE4500

The popularity of the STE4400's larger size along with the patented hands-on manipulability of the STE3000B brought you the STE4500! The exclusive RF tight hands-on silver mesh gloves and illuminated viewing window are integral to the large 22.5"W x 18" H wide front of the enclosure. Dual gas filled struts hold the hinged top open for easy access for the largest devices, including laptops! Like other STE series enclosures, a universal stainless steel I/O connector interface plate is used to provide you any combinations of "custom" milled connectors and I/O's that you may require. See the options below.

MODEL	FEATURES	CONNECTORS	ISOLATION	DIMENSIONS	COST
STE4500	<ul style="list-style-type: none"> Designed for hands-on manipulation of larger devices under test Exclusive double lip RF tight gasket Universal I/O connector interface plate RF tight "hands-on" silver mesh gloves RF tight illuminated viewing window Dual gas filled cover struts 	<p>None provided standard.</p> <p>Custom configured, see options below.</p>	<p>-90dB @ 2GHz</p> <p>-90dB @ 4GHz</p> <p>-80dB @ 6GHz</p>	<p>19"H x 22½"W x 15½"D</p> <p>18"H x 21¼"W x 14"D</p> <p>(Nom. Inside Dimensions)</p>	\$2,395.00



STE5000

The STE5000 enclosure represents a breakthrough in RF shielded enclosure design and value. The enclosure is roomy enough to hold even 19" rack sized instruments and provides -110dB of shielding, enabling one to test anywhere in your facility!

The box is constructed of type 304 stainless steel and lined with microwave absorbent foam. Our unique double lip gasketed closure maintains maximum shielding while allowing a full 24" X 18" opening. Heavy-duty hinges and latches plus interior bracing insures the physical integrity of the enclosure. RF attenuation is -110 dB at 1GHz, and -80dB at 18GHz! A 3.5" x 6" precision machined removable 304 stainless steel panel has been integrated into the design of the enclosure. Also available with our exclusive RF Tight illuminated viewing window in the STE5100.

	<p>MODEL STE5000</p>	<p>FEATURES</p> <ul style="list-style-type: none"> • Designed for full size and rack mounted equipment testing • RF absorbent foam liner • Exclusive double lip RF tight gasket • Universal I/O connector interface plate • Large sturdy stainless construction 	<p>CONNECTORS</p> <p>None provided standard.</p> <p>Custom configured, see options below.</p>	<p>ISOLATION</p> <p>-110dB @ 1GHz -100dB @ 3GHz -95dB @ 6GHz -80dB @ 18GHz</p>	<p>DIMENSIONS</p> <p>19"H x 25"W x 25"D 17½"H x 23½"W x 23½"D (Nom. Inside Dimensions)</p>	<p>COST</p> <p>\$3,495.00</p>
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STE5100

The stainless steel STE5000 set records for both equipment compatibility and reliability in a high volume manufacturers environment. Designed to fit the largest equipment inside for rock solid EMI and RF isolated tests and measurements. Built to the same design specifications as the STE5000 above, the STE5100 also includes our exclusive illuminated RF tight viewing window on the front door. Now you can see indicators, displays, and screens on your DUT inside the STE while the tests are underway. Critically important for laptops, wireless terminals, and other devices that must be seen under test.

	<p>MODEL STE5100</p>	<p>FEATURES</p> <ul style="list-style-type: none"> • RF tight illuminated viewing window to see device displays and indicators • Large sturdy stainless construction • Designed for full size and rack mounted equipment testing with visual displays 	<p>CONNECTORS</p> <p>None provided standard.</p> <p>Custom configured, see options below.</p>	<p>ISOLATION</p> <p>-110dB @ 1GHz -100dB @ 3GHz -95dB @ 6GHz -80dB @ 18GHz</p>	<p>DIMENSIONS</p> <p>19"H x 25"W x 25"D 17½"H x 23½"W x 23½"D (Nom. Inside Dimensions)</p>	<p>COST</p> <p>\$3,995.00</p>
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CUSTOM CONFIGURATION OPTIONS

- | | |
|---------------------------|---|
| RF Feedthrough: | BNC, TNC, SMA, SMB, UHF, Type-N |
| Fiber Optic: | Fiber optic bulkhead feedthrough |
| Dust Covers: | Dust cover caps with security chains available for all RF feedthrough connectors |
| RF Filtered Data: | DB9 (10pF), DB9 (100pF), DB9 (1000pF), DB15 (100pF), DB15 (1000pF), DB25 (1000pF), DB37 (1000pF), RJ45/DB9 Filtered, RJ11/DB9 Filtered, USB/DB9 Filtered |
| Ethernet 10/100: | Filtered DB9/RJ45 bukhead feedthrough |
| Ethernet Gigabit: | Fiber transceiver system for Ethernet gigabit I/O connections |
| Power Connections: | 4-Pole filtered power strip, 6-Pole filtered power strip, surge protected power strips |
| Ventilation Options: | Dual side mounted RF shielded vents with single shielded exhaust muffin fan |
| RF Safety Inhibit Option: | Provides RF relay to automatically switch circuit to internal load when cover is opened |
| AC Safety Inhibit Option: | Disables AC power to filtered power strips when cover is opened |
| RF Absorbent Foam: | Standard ½" thick RF absorbent foam liner provides 24 dB attenuation. 1" thick foam is standard on the STE3800 and available as an option to provide a flatter response |
| USB2.0/Firewire: | Fiber Transceiver System available for high speed devices including USB2.0, Firewire 480/800, Gigabit Ethernet, etc. |

Note: RF Isolation specs are measured at 1M with terminated RF feedthrough coaxial connectors installed. Actual isolation & attenuation can be affected by adding additional filtered and non-filtered connectors. Check with Ramsey for specific connector specifications.

AMPS, CDMA, TDMA, PCS, GSM, 3G, RFID, PDA, ZigBee, Bluetooth®, Wibree, 802.11a, b, g, n, WiFi, WiMAX®, WLAN, PCMCIA, USB, QNC, P2T, Forensics, Flex®, Reflex®, POCSAG, Gologay... YOU NAME IT, WE'VE GOT YOU ISOLATED!

Call our wireless experts today to configure an RF Shielded Test Enclosure to meet YOUR specific application!

800-446-2295



STE2800 With Built-In Radiation Test Fixture



STE3000B "Hands-On" RF Isolation

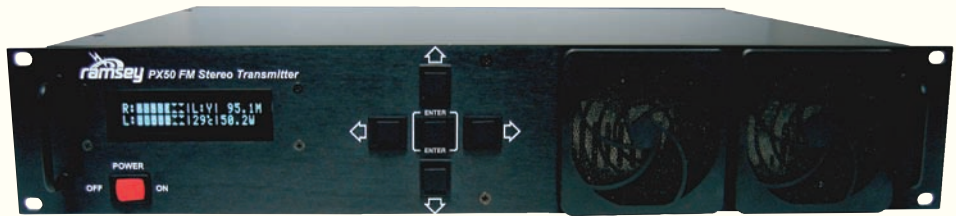


8 STE2900's installed in a Veriwave dense-pack test rack



50 Watt FM Stereo Transmitter

- ✓ 50W RF output, continuous duty
- ✓ FCC Certified under parts 2, 73, and 74
- ✓ Automatic monitoring
- ✓ Automatic VSWR protection
- ✓ Automatic temperature protection
- ✓ Automatic battery backup
- ✓ Digital display of all parameters
- ✓ Runs on 85 to 264 VAC primary power
- ✓ Super efficient yet quiet forced air cooling
- ✓ Only two rack units high



Stay On-The-Air With The PX50!



General Display
(Default)



RF
Frequency



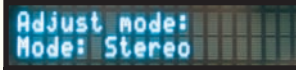
Audio
Levels



RF Output
Power



Antenna System
VSWR



Stereo/Mono
Mode



Internal
Temperature



Station
ID



VCO Deviation
Levels



Option
Display



Audio
Levels



Controls
Locked/Unlocked

WHAT DO YOU WANT IN A TRANSMITTER?

We asked LPFM licensees and users what they really wanted and needed in an FM stereo transmitter. We listened to a lot of current customers already using our very popular PX1 transmitter about features they would like. We even listened to people using competitive equipment telling us what they really wanted!

WE LISTENED!

What did we hear? You wanted an ultra-reliable transmitter with automatic protection circuits that would keep you on the air rather than shut you down. You asked for constant diagnostics on all critical circuits and functions. You wanted to use it anywhere in the world, regardless of input voltage or frequency plan.

You wanted to have automatic battery backup to eliminate costly standby generators. You asked for more power than 35 watts but wanted it to run extremely cool while remaining extremely quiet. You wanted full digital display of all functions, parameters, settings and alarms.

FCC CERTIFIED!

Because of the confusion with the FCC equipment requirements you wanted an **FCC CERTIFIED** transmitter, not just a verified transmitter. You told us what you wanted... **CONSIDER IT DONE!** The PX50 Professional LPFM transmitter, designed specifically to **YOUR** specs!

SIMPLE TO INSTALL AND OPERATE!

Operation of the PX50 is simple and intuitive via the front panel navigation switch matrix. All functions, controls, and status messages are displayed on the 2 line by 20 character vacuum fluorescent display. Installation of the PX50 is a breeze. A standard Type-N connection is provided for RF Output.

Balanced (XLR) left and right audio inputs are provided to properly interface with any audio source you have. In addition, BNC SCA/Digital/RDS inputs are provided along with a quick disconnect connector for a 12 VDC standby/back-up power input. In short, connect your audio sources and antenna, power it up, set frequency and power level via the front panel navigation switch matrix, and you're on the air! It doesn't get any simpler!

SPECIFICATIONS

Frequency Range:	87.5 to 108.1 MHz
Primary Power Input:	85-264 VAC, 47-63 Hz; 120-370 VDC
Backup Power Input:	12-14 VDC
Broadcast Modes:	Stereo/Mono + SCA and Digital RDS Inputs.
Bandwidth:	±75 kHz when properly adjusted, auto adjust feature prevents overmodulation.
Separation:	Better than 50 dB (typical 60-70 dB)
Crosstalk:	Better than 50 dB.
Asynchronous:	Better than 60 dB.
THD:	Better than 0.3% with processing.
Audio Inputs:	Standard Balanced Inputs +4 dBu/1.228V rms/3.47 V p-p; -10 to +10 dBm range.
Audio Input Impedance:	22K Ohms
SCA and Digital Inputs:	BNC (50 Ohms)
RF Output:	50W Continuous into a 50 ohm load. Fully adjustable from 1 watt to full power.
Harmonic Suppression:	Better than -81 dBc
Display:	2 lines x 20 characters vacuum fluorescent display.
Controls:	5 navigation controls (Up, Down, Left, Right, Enter)
Cooling:	High CFM Fan, dual filtered front intake, rear exhaust.
Over-Power Protection:	Continuously checks for proper power output to within 5%.
VSWR Protection:	Continuous VSWR monitoring, controlled via Power Reduction On Error and Power Restoration Timer settings.
Over-Temperature Protection:	Auto over-temperature control, 70°C max. fixed, controlled via Power Reduction On Error and Power Restoration Timer settings.
Auto Power Reduction On Error:	Automatically reduces power output to 85%, 75%, 50%, 25% or full disable of set power level.
Auto Power Restoration Timer:	Sets the time interval for automatic error checking to clear reduced power modes and to restore full set power level.
Overmodulation Protection:	Auto control of audio modulation levels, on/off.
Audio Frequency Range:	20 Hz to 16 kHz ±1 dB. Steep "brick wall" 16 kHz low phase shift, low pass filter, down 68 dB @ 19 kHz and above.
Adjustments:	Audio input levels, Modulation Level, Power Level, Frequency (in 100 kHz steps), Stereo/Mono mode, Auto Adjust Modulation mode (On/Off)
Regulatory Approval:	Meets or exceeds FCC 47CFR Parts 15.107(b), 15.109(b); FCC CERTIFIED FCC 47CFR Parts 2, 73, and 74 (ID: PF3PX50)
Dimensions:	Standard 2-unit rack-mount case, 19" wide, 14.25" deep, 3.5" high. (Note: The end user is responsible for complying with all FCC rules & regulations within the US, or any regulations of their respective governing body in regards to the application and use of the PX50).



New For 2008



PXB FM Broadcast Complete "Station-In-A-Box"

- ✓ 50W RF output continuous duty transmitter!
- ✓ FCC Certified under parts 2, 73, and 74
- ✓ Your choice of cases!
- ✓ Your choice of integrated mixers!
- ✓ Your choice of integrated audio production equipment!
- ✓ Antenna and coax included
- ✓ Installed and factory prewired to your configuration!
- ✓ Get on the air quick

Don't Install Any Studio Equipment... We'll Do It For You, And Get You On-The-Air Quick!

YES...A COMPLETE STATION IN-A-BOX!

LPFM licensees, overseas customers, and municipal customers often need a way to quickly "get on the air" at either temporary locations or in the interim to their installed studio transmitter locations. A number of overseas customers also had to originate short term programming from various remote origination sites for disaster preparedness broadcasts! In fact, a number of PXB's were immediately deployed to the Hurricane Katrina areas to broadcast instructions and disaster relief information! Well, there you go...a Radio Station In-A-Box! Each PXB is factory prewired and tested, and ready to go on the air the moment it is received!

The PXB50 became extremely popular last year and continues to be the quick and easy Station In-A-Box to get you on the air quickly. All PXB50 series packages feature our FCC Certified PX50 transmitter which is packed with automatic features to keep you on the air 24/7 (Check out the PX50 specs). Although extremely popular, and still a best seller, customers frequently requested additional features. So we took their suggestions, sat down with our production engineers, and developed a new series of PXB packages to meet all of your require-

ments!

First up, for road transport use, a dual shock impact case was frequently requested. Consider that done with the addition of a new 8 and 12 rack unit dual shock insulated road cases. The non-shock mount PX50 is still available and very popular for stationary applications.

Next issue was the ability to play multiple format audio sources, play MP3's, record CD's on standard CD-R/RW format, play/record cassettes, and a lot more. Our engineers took a long look at these requests and came up with a nice assortment of suitable equipment to complement the PXB series. Each piece of equipment and each combination was installed in new cases and burned in for several months to assure ultimate uptime reliability in regards to RF and heat. Only problem? Not everybody's needs are the same so we decided to provide the most popular PXB configuration in the new PXB54 as well as a bare-bones RF only package so you can customize your own audio production equipment.

THE LATEST EQUIPMENT AVAILABLE, READY TO GO!

For 2008 we started from the ground up and designed the new PXB54 for optimum user compatibility and performance based on the latest production equipment available today. We started with the new, extremely popular Denon DNX500 professional DJ Talent mixer. It features a matrix of 8 line inputs and a host of advanced features to help you make your broadcast sound first class all the way! Then, as cassettes have faded in popularity (finally!) we focused on MP3 and CD sources. Next up is a pair of Tascam CD160MKII CD, CD-R/RW, and MP3 players. This gives you two separate and dedicated CD and MP3 sources to cue into your mixer. Following customer requests for audio program monitor outputs, we integrated the Samson Servo 120A 120 watt audio amplifier. Topping it off we put the Samson PowerBright Pro power conditioner at the top, giving all your power surge protection, peak voltage spike clamping and RFI/EMI filtering. Plus it gives you front panel digital readouts of AC voltage and current and pull-out LED illuminators for the entire rack. We also include a professional hand-held dynamic microphone with cable and desk stand.

OR CUSTOMIZE IT YOURSELF!

You can also start with a bare bones PXB5008 or PXB5012 in an 8 or 12 rack unit shock case and customize it to suit your specific application. If you would like to select equipment from our tested line of professional A/V products, we can custom build your system to your own specifications. Give our specialists at call at 800-446-2295!

All PXB units also include our extremely popular FMA200 5/8 wave collinear vertical FM broadcast antenna and 100' of LMR400 low loss transmission line pre-connectorized for a simple antenna connection. All equipment is factory prewired, tested, burned in, and ready to use the moment it's received! Note: All PXB series are 110VAC/60Hz. 220VAC/50Hz export versions are available on special order; contact Ramsey for details and pricing.

250 and 500 Watt PXB Series Station-In-A-Box series now available! Visit www.ramseyfm.com or call for details!



PXB50 FM STEREO TRANSMITTER IN A BOX

- PX50 FCC Certified FM Stereo Transmitter
 - PAC750 Superscope CD/Cassette player multi channel mixer, (see www.ramseyaudio.com for details)
 - FMA200 5/8 Wave 3.4dBi gain FM antenna, easy to install and tune to your frequency, 100' LMR400 low loss coax
- All installed in a standard 6 rack unit road case, provided with a broadcast quality dynamic microphone and XLR cable



PXB54 LIVE ORIGATION FM STEREO TRANSMITTER IN A BOX

- PX50 FCC Certified FM Stereo Transmitter
 - DNX500 Denon Professional DJ Mixer, (see www.ramseyaudio.com for details)
 - CD160MKII Two Tascam CD, CD-R/RW, MP3 players, (see www.ramseyaudio.com for details)
 - SA120A Samson SERVO120A 120 watt audio power amplifier, (see www.ramseyaudio.com for details)
 - SAPBPRO15 Samson PowerBrite Pro power conditioner with input display, (see www.ramseyaudio.com for details)
 - FMA200 5/8 Wave 3.4dBi gain FM antenna, easy to install and tune to your frequency, 100' LMR400 low loss coax
- All installed in an 12 rack unit shock isolated road case, provided with a broadcast quality dynamic microphone and XLR cable



PXB5008 BASIC FM STEREO TRANSMITTER IN A BOX, 8 RACK UNITS

- PX50 FCC Certified FM Stereo Transmitter
 - SHOCK8 8 Rack Unit Shock Isolated Road Rack Case
 - FMA200 5/8 Wave 3.4dBi gain FM antenna, easy to install and tune to your frequency, 100' LMR400 low loss coax
- All installed in an 8 rack unit shock isolated road case, ready for your custom audio integration

PXB5012 Shown

PXB5012 BASIC FM STEREO TRANSMITTER IN A BOX, 12 RACK UNITS

- PX50 FCC Certified FM Stereo Transmitter
 - SHOCK12 12 Rack Unit Shock Isolated Road Rack Case
 - FMA200 5/8 Wave 3.4dBi gain FM antenna, easy to install and tune to your frequency, 100' LMR400 low loss coax
- All installed in an 12 rack unit shock isolated road case, ready for your custom audio integration

PXB50	Standard FM Stereo Transmitter In A Box, 110VAC Operation	\$3995.00
PXB54	Live Origination FM Stereo Transmitter In A Box, 110VAC Operation	\$4495.00
PXB5008	Basic FM Stereo Transmitter In A Box, RF Only, 8 Rack Shock Isolated Road Case, 110VAC Operation	\$2895.00
PXB5012	Basic FM Stereo Transmitter In A Box, RF Only, 12 Rack Shock Isolated Road Case, 110VAC Operation	\$2995.00



Allen & Heath Xone:S2 Pro DJ Mixer

New For 2008

- ✓ Plays CD's, CD-R/RW's, 12cm, and 18cm CD's and MP3's!
- ✓ 4 stereo dual input channels with 3 band equalizer
- ✓ 5 outputs
- ✓ Analog filter section with filter type, frequency, and resonance controls
- ✓ 2 Mono Mic/Stereo Line channels with 2 band EQ
- ✓ Front panel XLR mic inputs for gooseneck talent mics or external microphone connections
- ✓ Front panel guest DJ RCA input
- ✓ Extensive channel and output metering
- ✓ Mic auto ducking control with adjustable depth and release
- ✓ Assignable crossfader with scratch/mix curve control
- ✓ Soft switched global effects loop
- ✓ External line input with level and cue
- ✓ Remote level control for Zone output (0-10V)
- ✓ USB audio interface for computer-based file replay, recording software, and FX
- ✓ CD fader starts on each music channel
- ✓ Recessed level trims on back for music channels
- ✓ Adjustable output level limiter
- ✓ Alarm input override ducks all music channels with dedicated alarm message audio input
- ✓ Universal input voltage internal power supply, 100-240VAC



Feature Rich Quality & Ultimate Dependability!

PERFORMANCE AND RELIABILITY AT ITS FINEST!

The Allen & Heath Xone:S2 is a brand new top-of-the-line analog installation DJ mixer with tons of features! You'll be amazed at what Allen & Heath packed into 4 rack units of space! 4 stereo dual-input channels with 3 band equalizer, the legendary Xone analog filter with customizable controls, 2 mono mic/stereo line channels with EQ, comprehensive per-channel and output metering, auto-mic ducking and tons more!

Ultra-high end specs make the Xone:S2 the ultimate performance mixer. Each of the four main music channels is equipped with a 3 band equalizer providing a safe +6dB of boost and total kill for complete frequency isolation! Nine point metering on each channel is great for precise matching of signal levels and the smooth VCA faders ensure a perfect mix. Individual channels can be routed to either side of the VCA crossfader which has an adjustable curve control. Add fader starts for each channel and you've got everything you need in one superb package! And for those of you that simply prefer rotary faders, no problem! You can order the Xone:S2 with either linear or rotary VCA channel faders! You can even change the fader bank in the field from linear to rotary or vice versa! Of course, the industry standard crossfader is also field replaceable.

INPUTS FOR TOMORROW'S TECHNOLOGY... TODAY!

The Xone:S2 is the only mixer on the market to feature a USB audio interface. You'll find that the possibilities are endless when you have a direct connection between your PC and your mixer for easy integration of digital media. Use it to record directly from the mixer, play back directly from a computer, or best of all, combine with computer audio effects software to get great effects without a hardware effects unit!



Linear or Rotary Faders... Your Choice!

Two front panel mic/line inputs combined with auto mic ducking (when you talk, the music volume lowers automatically) mean you can easily make announcements whether you are on the air or going over the PA. What about additional sources of audio like the now-ubiquitous iPod? The Xone:S2 has you covered with an additional stereo input (RCA) accessible from the front panel - plug in any line level audio source quickly and easily! For headphone monitoring, a powerful headphone amp delivers more than adequate monitor levels to both 1/4" TRS and 3.5mm mini-jacks provided on the front panel and an 1/4" jack in the rear.

ADVANCED FEATURES

The Xone:S2 is the perfect choice for broadcast FM talent mixers as well as well as a great choice for club installers for DJ systems. The advanced features are designed to integrate it into your system application. An active output limiter system enables the installer or station engineer to preset the maximum output level of the mixer (stop that inevitable volume creep from pesky DJs and save your PA system and perhaps even your license!). In case of emergency, a dedicated alarm input automatically mutes all music channels and delivers the alarm message audio.

5 OUTPUTS!

The five outputs make the Xone:S2 fit any application, both present and for future expansion:

- Main Mix (balanced XLR) - Main balanced output. When meter LEDs are at 0dB output will be +4dB.
- Monitor/Booth (unbalanced RCA) - Line level stereo feed not affected by master fader/cue system
- Remote Zone (balanced TRS) - Use to feed a separate audio to a different location/transmitter
- Mono/sub (balanced XLR) and record (unbalanced RCA) - Can be configured for sub output.
- Lighting controller audio feed - A high impedance ground isolated mono output for lighting systems

THE BEST OF THE BEST!

The name Allen & Heath is synonymous with high quality, professional audio equipment, and the Xone:S2 is no exception. From top to bottom, the Xone:S2 has been designed and built to be as elegant and user friendly as possible while still being rugged enough to withstand constant use under live performance and travel conditions. Every component meets these standards, from the high quality dual-rail channel faders that let you adjust the signal easily and quickly, right down to the attractive light-up switches used to toggle features.

If you need the ultimate mixer that will be 100% reliable and will survive the worst operating and travel environment - look no further. For full specifications visit our pro audio website at www.ramseyaudio.com.

SPECIFICATIONS

Input	
RIAA input sensitivity	7-100mV
Line Inputs	-10dB to +15dB RCA
Mic Sensitivity	-57 to -27dBu Balanced XLR
USB Audio In	0dBu RCA
Alarm Input	-2dBu RCA
Channel Insert Return	0dBu 1/4" TRS Jack
Filter External In	0dBu RCA
Output	
Main Outputs	+4dBu XLR
Monitor	-2dBu RCA
Record	-8dBu RCA
Zone	+4dBu Balanced 1/4" Jack
Mono	+4dBu Impedance Balanced XLR Sub Filter
	Range 30Hz -- 250Hz
USB Audio Out	0dBu RCA
Mix Insert Send	-2dBu RCA
Filter External Out	0dBu RCA
Channel Insert Send	0dBu 1/4" TRS Jack
Freq Resp Line in to Mix Out	10Hz to 20kHz ± 0dB (-1.5dB @ 50kHz)
Distortion at 1kHz Line in at +0vu out	Less than - 0.05% Channel In to Mix Out
Main Mix Noise 22Hz-22kHz	Less than -73dBu (-77dB S/N)
Residual Mix Noise 22Hz-22kHz	Less than - 90dBu
Equalisation	+6dB to minus infinity (total kill)
Fader Shutoff	Greater than- -86 dB

XONES2L	Allen Heath Professional DJ Mixer, Linear Fader Bank	\$1998.95
XONES2R	Allen Heath Professional DJ Mixer, Rotary Fader Bank	\$1998.95
003724	Replacement Alpha Crossfader	\$78.95
XONELFB	Replacement Linear Fader Bank	\$258.95
XONERFB	Replacement Rotary Fader Bank	\$348.95



Denon Professional DJ Mixers

New For 2008

- ✓ 8 matrix assignable inputs
- ✓ 8 line, 2 phono switchable (DNX500)
- ✓ 8 line, 3 phono switchable (DNX900)
- ✓ 4 digital inputs, 2 digital outputs (DNX900)
- ✓ Professional Flex Fader with contour
- ✓ 4 smooth 60mm VCA channel faders
- ✓ Responsive 45mm VCA Cross Fader with contour
- ✓ Independent Channel PFL meters
- ✓ Independent 3-Band EQ kill (high-mid-low)
- ✓ Independent EQ on/off switch
- ✓ Booth output assign selector
- ✓ Independent channel A-B post switch (crossfader)
- ✓ Powerful clean headphone output
- ✓ Fader start (5V pulse)
- ✓ Independent 3-band main and aux mic EQ
- ✓ Independent CUE system (all channels)
- ✓ Mic talkover function with sensitivity adjustment
- ✓ Split/Cue headphone monitor with PFL metering
- ✓ Record out - RCA unbalanced
- ✓ Subwoofer/Lighting output with frequency adjust
- ✓ Digital Track Mark feature (DNX900 only)
- ✓ Compact 4U rack space with recessed rear terminals



DNX500 For Analog Only Applications



DNX900 Includes Digital Toslink/SPDIF I/O's!

Analog Or Digital At An Affordable Price!

ANALOG PERFORMANCE YOU CAN COUNT ON!

The all new DNX500 and DNX900 rackmount mobile/club DJ mixers feature rock solid construction, superb audio fidelity, high quality parts, and of course reliability! The DNX500 and DNX900's are packed with great features that will give you tremendous flexibility, whatever your needs. Intuitive controls make using the Eight-channel input matrix routing easy, allowing you the ultimate freedom to move any source to any channel or even the same source to multiple channels for remixing!

The features don't stop there though! The DNX500/DNX900 also offer practically any feature demanded by todays discerning DJs! Pre-fader level metering and gain control, individually replaceable 60mm smooth channel faders, three-band EQ with full output kill, booth output with channel select, two mic inputs with talkover sensitivity and effects send/return with cue, dry/wet knob and channel select... and more! They also boast Independent PFL channel meters to help DJs to optimize and match levels for each source, ensuring a smooth transition between sources when crossfading!



...OR GO DIGITAL!

In addition to the DNX500, the DNX900 takes the DJ mixer to new heights with a groundbreaking combination of digital and analog technologies. If the digital domain hasn't become a part of your world yet, the DNX900 analog/digital combo mixer will certainly give you plenty of reasons to make the switch! The DNX900 includes all the great features of its little brother, the analog DNX500, but adds numerous digital enhancements. Computer based DJs have been looking for an alternate means to move digital audio "from" and "to" their sound cards while maintaining the utmost fidelity, and the DNX900 is the perfect choice! In addition to eight analog line inputs and three phono switchable, the DNX900 offers four coaxial digital inputs with 24-bit digital processing and two digital outputs in S/PDIF coaxial and TOSLINK formats that can feed your CD burner or computer for recording purposes - with a unique Track Mark ID function!

DENON QUALITY

The DNX500 and DNX900 are the perfect choice for anyone who needs reliable yet affordable mixing solution. Whether on the road, in the club, or on the air, these Denon mixers will get the job done!

GENERAL		SPECIFICATIONS	
Dimensions	19.0"W x 6.9"H x 4.4"D	Output Level and Impedance	Balanced 4 dBm (1.23 V) 600 ohms Unbalanced 0 dBV (1.0V) 1 kohms Booth/Zone (Balanced) 4 dBm (1.23 V) 600 ohms Rec (RCA) -10 dBV (316 mV) 1 kohms Effect (Send) -14 dBV (200 mV) 1 kohms Subwoofer/Lighting 2 dBm (975 mV) 600 ohms Headphone 0 dBV (1.0 V) 32 ohms
Weight	13 lbs (5.9 kg)	Total Harmonic Distortion Rate	Line Below 0.05% Phono Below 0.05% Cross talk Over 70 dB
Power Supply	AC120 V ±10%, 60 Hz	Channel Equalizer	Hi +10 dB, -35 dB (16 kHz) Mid +10 dB, -35 dB (1 kHz) Low +6 dB, -35 dB (60 Hz)
Power Consumption	33 W	Microphone Equalizer	Hi +12 dB, -12 dB (10 kHz) Mid +12 dB, -12 dB (1 kHz) Low +12 dB, -12 dB (100 Hz)
AUDIO		DIGITAL (DNX900)	
Audio Inputs	8 inputs, matrix assignable	Digital Output (COAX/TOSLINK)	Signal format IEC958 Type II Output level 0.5 Vp-p 75 ohms Output signal level -6 dB 32-48kHz 16,20bit Input Level 0.5 Vp-p 75 ohms
Input Level and Impedance	8-Line -14 dBV (200 mV) 50kohms 3-Phono -50 dBV (3.0 mV) 50kohms (DNX900) 2-Phono -50 dBV (3.0 mV) 50kohms (DNX500) Effect (Return) -14 dBV (200 mV) 50 kohms Main Mic -54 dBV (2.0 mV) 10 kohms Aux Mic -60 dBV (1.0 mV) 10 kohms	Digital Input (COAXIAL) SPDIF	
Frequency Response	Line 20 to 20 kHz ±2 dB Phono 20 to 20 kHz RIAA ±2 dB Mic 20 to 20 kHz ±2 dB		
Signal to Noise Ratio	Line 82 dB (0 dBm, 1 kHz, EQ flat) Phono 75dB (0 dBm, 1 kHz, EQ flat) Main Mic 65 dB (0 dBm, 1 kHz, EQ flat)		

DNX500	Denon Analog Professional DJ Mixer	\$398.95
DNX900	Denon Digital Professional DJ Mixer	\$598.95
ACD46	Rotary Channel Fader Kit (order up to 4 to replace linear faders provided)	\$44.95



Tascam 1 Rack Unit Pro CD/MP3 Player

- ✓ Plays CD's, CD-R/RW's, 12cm, and 18cm CD's and MP3's!
- ✓ 20 second RAM buffer for shock protection
- ✓ S/PDIF optical digital output
- ✓ Unbalanced RCA analog outputs in CD01U
- ✓ Balanced XLR analog outputs in CD01UPRO
- ✓ ±12% pitch control
- ✓ Key Original mode to change speed without pitch
- ✓ RS232 serial control
- ✓ One 19" single rack unit



CD01U - Features RCA Unbalanced Audio Outputs



CD01UPRO - Features XLR Balanced Audio Outputs

When You Need It All... In ONE RACK UNIT!

The CD01U is a top-of-the-line full featured CD and MP3 audio player that still manages to fit in only one rack unit! A perfect addition to one of our custom station-in-a-box units, or drop it into your existing setup and experience the power and versatility of professional quality CD playback. Tascam's patented slot-loading transports mean years of trouble-free use! Includes handy features like ±12% pitch control, speed change without pitch shift, auto ready, auto cue, call, track programming and editing, fade-in, fade-out, time switching, event start/stop, eject blocking to prevent accidental ejection during play, and much, much more!

There are two models available, designed to meet your specific audio configuration. The CD01U features analog stereo unbalanced outputs that are brought out to standard RCA connectors for simple connections to consumer and other unbalanced audio inputs. The CD01UPRO features analog stereo balanced outputs that are brought out to standard balanced XLR connectors for use in broadcast and other professional audio circuits utilizing balanced XLR inputs. In addition, an optical SPDIF digital output is provided. RS232 serial control is provided and is fully compatible with AMX and Crestron remote programming equipment. Operates on 110VAC. 220VAC available as a special order. For additional information, visit our pro audio website at www.ramseyaudio.com.

CD01U	Professional CD-MP3 Player, Single Rack Unit, RCA Unbalanced Audio Output	\$498.95
CD01UPRO	Professional CD-MP3 Player, Single Rack Unit, XLR Balanced Audio Output	\$598.95



The Industry Standard... Just Got Better!

Tascam Professional CD/MP3 Player

- ✓ CD, CD-R/RW, and MP3 playback
- ✓ Single Repeat, all repeat, and folder repeat (Repeat Album) for MP3 CDs
- ✓ Optical and Coaxial S/PDIF digital outputs
- ✓ RCA unbalanced analog outputs
- ✓ 40 second Electronic Shock Protection (ESP)
- ✓ Headphone output with level control
- ✓ ±12% pitch control
- ✓ Intro Check
- ✓ Shuffle play and program play modes
- ✓ 19" rack mounted, 2 rack units high

Tascam's industry-standard CD160 gets an upgrade! The CD160 was already the most widely used professional CD player on the market, and the newly available CD160MKII adds invaluable new features like MP3 playback and both optical and coaxial digital outputs. Extremely affordable price-point means you can add professional CD and MP3 CD playback to your FM station without breaking the bank!

The C160MKII fits in two standard rack units. If your rack space is limited or you need balanced outputs, check out the CD01U. Operates on 110VAC. 220VAC/50Hz available as a special order. For full specifications visit our pro audio website at www.ramseyaudio.com.

CD160MKII	Professional CD/MP3 Player, 2 Rack Units	\$298.95
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Tascam 5-Disc CD Changer

- ✓ Automatic 5-disc carousel changer
- ✓ 8x Oversampling
- ✓ D/A: 1-bit Dual D/A Converter
- ✓ Channel Separation: More than 85 dB (1kHz)
- ✓ RCA unbalanced analog outputs
- ✓ XLR balanced analog outputs
- ✓ Optical and Coaxial S/PDIF digital outputs
- ✓ Frequency response: 20 Hz to 20 kHz (+/- 2dB)
- ✓ Signal to noise ratio: More than 100 dB
- ✓ Total harmonic distortion: Less than .02% (1 kHz)

Automatically Play 5 CD Or MP3 Discs!



Repeat. Thanks to its MP3 playback capability, the CD355 can offer an astounding 50 hours of playback (assuming standard MP3 compression ratios)! Just imagine the possibilities for the LPM broadcaster!

Operates on 110VAC. 220VAC/50Hz available as a special order. For full specifications visit our pro audio website at www.ramseyaudio.com.

CD355	Professional 5-Disc CD/MP3 Player, 3 Rack Units	\$348.95
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Tascam CD/MP3/Cassette Combo Player

- ✓ Integrated CD player and reversible cassette deck!
- ✓ RCA unbalanced inputs and outputs
- ✓ XLR balanced inputs and outputs (CDA700)
- ✓ ±12% pitch control for cassette (CDA500)
- ✓ ±12% pitch control for CD and cassette (CDA700)
- ✓ S/PDIF digital CD player output (CDA700)
- ✓ Parallel control port (CDA700)
- ✓ CD sync feature
- ✓ Continuous play between cassette and CD
- ✓ 19" rack mounted, 3 rack units high

The Cost Effective Solution For CD and Tape!

If you need to save space and you need a professional cassette deck and a CD player, the CDA series decks have come to your rescue... and at an attractive price! They are also available in unbalanced or balanced audio models!

These CD/cassette combo players take the two most popular consumer audio formats and combine them into an attractive package that delivers both functionality and value. The CDA series include handy features like an easy-to-read front panel display to keep track of your audio and a front mounted headphone jack for easy previewing. Don't want to sit in front of your rig to control playback? No problem, a full-featured wireless remote comes standard!

Playback can be continuous from deck to deck in either direction, making this unit invaluable in long play systems. In addition to broadcasting and DJing applications, the CDA series also makes the process of duplicating entire CDs or individual tracks to cassette easier than ever! The CD sync feature will give you perfect tape duplicates every time.

The CDA500 will meet the needs of most amateur broadcasters and DJ's, but for audio professionals or anyone who needs balanced outputs, the CDA700 will be your machine of choice. With the CDA700 you get combined XLR balanced outputs for cassette and CD playback, dedicated CD XLR outputs, S/PDIF digital CD output, parallel port control, and ±12% pitch adjustment on cassette and CD player! (The CDA500 offers pitch adjustment on cassette playback only.)

Operates on 110VAC. 220VAC/50Hz available as a special order. If are looking for a CD/cassette combo with MP3 playback and CD-R/RW recording capabilities, check out the CC222SL. It does it all and then some! For full specifications visit our pro audio website at www.ramseyaudio.com.

CDA500 Professional CD/Cassette Combo Player, RCA Unbalanced I/O's

\$398.95

CDA700 Professional CD/Cassette Combo Player, XLR Balanced & RCA Unbalanced I/O's

\$548.95



CDA700 rear panel with balanced XLR inputs and outputs



Tascam CD Recorder-Cassette/CD/MP3 Combo

- ✓ Records and plays standard CD-R and CD-RW's!
- ✓ MP3 playback with directory navigation!
- ✓ S/PDIF coax and optical digital I/O's!
- ✓ Copy protection recording
- ✓ RIAA phono input for turntables
- ✓ Bi-directional cassette deck
- ✓ ±12% pitch control on cassette deck
- ✓ Unbalanced RCA I/O for CD-R deck
- ✓ Headphone out with level control
- ✓ Auto dub from cassette to CD-R/CD-RW
- ✓ Auto dub from CD-R/RW deck to cassette
- ✓ Fade-in, fade-out recording features!
- ✓ Patented slot-loading transport
- ✓ 19" rack mounted, 3 rack units high
- ✓ Much, much more!

The Ultimate! Plays Cassettes, Plays CD's, Plays CD-R/RW's, Plays MP3 Discs... AND RECORDS CD'S!

The miracle answer to the FM broadcaster just got even better! There is an obvious need for both a CD player and a cassette deck to support your program material sources. But having separate units takes space and connections, and sometimes that's an option you don't have. Now, in only three rack units, you can have BOTH! A professional bi-directional cassette deck as well as a professional CD player! But wait, it goes even further! What if the CD player also RECORDS CD's on STANDARD CD-R and CD-RW format? No problem with the CC222SL. It even plays MP3 CD's complete with display navigation through the MP3 directories!

Power-on play automatically starts CD playback when power is applied for installed or unattended systems. Optical as well as coaxial digital inputs and outputs are also provided. In addition, the Time Track Increment feature automatically adds a CD track ID every few minutes (adjustable from 1 to 10 minute increments), which is great for event recording. It can also add a track marker when the signal drops below a certain level or when the record button is pressed.

The CC222SL provides all the playback functions of cassette, MP3 disc, commercial CD, CD-R and CD-RW media. Professional cassette features include ±12% pitch control, bi-directional transport, Dolby B noise reduction, return to zero, record mute, repeat modes and much more. The professional CD-R/RW deck features a 24-bit digital to analog and analog to digital converter, sampling frequency converter, manual and automatic track divisions, one-touch fade in's, finalize, erase, edit, and a whole lot more. Multiple inputs provide for any combination from digital direct to dub pass-through. Recorded CD's can even be copy protected as FREE (can be copied), 1 GEN (single generation copies only), and PROH (copy prohibited)! To top it off, Tascam's patented slot-loading transports mean years of trouble-free use!

In addition to source recording on CD-R's, CD-RW's, and cassettes you can also directly DUB from cassette to CD-R/RW or from CD-R/RW to cassette using one touch dubbing with direct pass through audio! Auto track creation-division is selectable for CD-R/RW's based on cassette audio pauses! S/PDIF digital inputs and outputs are provided for BOTH coaxial and optical. Analog inputs and outputs for cassette and CD-R/RW, are provided via standard unbalanced RCA connectors. RIAA phono input with ground is also provided eliminating the need for an external phono preamplifier. Operates on 110VAC. 220VAC/50Hz available as a special order and subject to availability. What else can be said? A lot, but it's difficult to cram the information from the 36 page operating manual into this space so check our pro audio website at www.ramseyaudio.com for full details and specifications.

CC222SL Professional CD Recorder-Cassette Combo Deck

\$798.95



Tascam CD Recorder-CD/MP3 Player

New For 2008

- ✓ Records and plays standard CD-R's and CD-RW's!
- ✓ MP3 playback with directory navigation!
- ✓ Key Original, changes playback speed without changing pitch!
- ✓ ±16% pitch control in 0.1% steps
- ✓ Fade-in, fade-out recording features!
- ✓ PS/2 keyboard input for CD text and naming tracks
- ✓ Auto track increment by level with trim
- ✓ Un-finalize function for CD-RW's
- ✓ Automatic Power-on play
- ✓ RCA unbalanced audio inputs and outputs on the CDRW900SL
- ✓ XLR balanced AND RCA unbalanced audio I/O's on the CDRW901SL
- ✓ S/PDIF coax and optical digital I/O's
- ✓ Patented slot-loading transport
- ✓ Additional professional features on the CDRW901SL
- ✓ 19" rack mounted, 2 rack units high

Now The Best Just Became... "More Best"!

The legacy continues with the Tascam CDRW900SL. It is the latest generation of the most popular CD recorder on the market. The CDRW900SL now adds Tascam's patented slot-loading transport to give you years and years of reliable service. Indispensable features like MP3 playback, pitch and key control, keyboard input, and more are also included! MP3 playback reads ID3 tags for track name displays and features directory navigation.

Sample rate conversion makes it easy to record CD's. Since audio CDs must be recorded at 44.1kHz, the CD-RW900SL offers sample rate conversion for the digital input. This allows a 48kHz recording session from a digital console, computer DAW system or DAT recorder to be recorded to CD without converting to analog and back to digital. Naturally, the converter can be defeated for a pure digital signal path for digital signals that don't need conversion. With digital level adjustment, the digital signal input of the CDRW900SL can be adjusted as easily as the analog signal level. The PS/2 keyboard input allows the user to name tracks while recording. It also provides keyboard shortcuts to commonly used recording features.

You can vary the pitch easily with up to 16% pitch control during playback, and the Key Original feature that lets you change the playback speed without changing the pitch! The CDRW900SL provides unbalanced RCA analog inputs and outputs for use with common consumer audio equipment. The CDRW901SL provides both balanced XLR analog inputs and outputs for use in broadcast and other professional installations requiring balanced audio as well as unbalanced RCA inputs and outputs. Of course, coaxial and optical digital inputs and outputs are provided!

The CDRW901SL also provides additional professional features including RS-232 control, AES/EBU digital I/O, timed track increment (selectable from 1 to 10 minutes) for adding CD track ID markers during recording, Continuous Recording between two CDRW901SL's, and a wired remote control. Like all Tascam products, the CDRW900SL and the CDRW901SL were designed with usability in mind. A good interface is the most important feature of all! Operates on 110VAC. 220VAC/50Hz available as a special order, subject to availability. For additional information, visit our pro audio website at www.ramseyaudio.com.

CDRW900SL Professional CD Recorder-MP3 Player, RCA Unbalanced Audio I/O's

\$598.95

CDRW901SL Professional CD Recorder-MP3 Player, RCA Balanced Audio I/O's

\$898.95



CDRW900SL - Features RCA Unbalanced Audio I/O's



CDRW900SL - Features XLR Balanced & RCA Unbalanced Audio I/O's



Tascam Professional CD Recorder/Duplicator

- ✓ Record audio CDs and create 1-off CD duplicates
- ✓ Multiple disc copying modes
- ✓ 4x duplication speed
- ✓ Duplicates audio CDs and CD-ROMs using CD-R, CD-RW, CD-R-DA, and CD-RW-DA media
- ✓ TOC edit function
- ✓ Supports CD-Text with front-panel computer keyboard connector
- ✓ Jog dials on both CD drives
- ✓ Sample rate converter
- ✓ ±9.9% pitch control on CD player
- ✓ Multiple playback functions: continuous play, shuffle play, auto cue, incremental play and more
- ✓ XLR balanced and RCA unbalanced analog I/O's
- ✓ Coaxial and optical digital inputs and outputs
- ✓ Parallel Control I/O port
- ✓ Headphone jack with source select switch and level control
- ✓ Includes wired remote

The Professional High Speed Studio Duplicator!

In one three-space rackmount unit, the CDRW402 offers professional-quality CD burning, high speed CD duplication and CD playback! Using the CDRW402, you can burn CDs of your music, create as many copies as you need and playback discs via your studio's monitoring system.

With its Table Of Contents (TOC) editing features, you can use the CD-RW402 to make custom mastering adjustments for your duplicated discs with controls to join, split and remove tracks. You can also adjust the incoming volume level of both analog and digital sources, create custom fade ins/outs, and mark your indexes the exact way you want.

The CDRW402's duplicator runs at 4x speed so you can create multiple copies quickly and easily. A great selection of CD playback functions (continuous play, shuffle play, program play and more) are also included. Also, a parallel port allows for external control of the CDRW402's most used functions. The unit provides both balanced XLR analog inputs and outputs for use in broadcast and other professional installations requiring balanced audio as well as unbalanced RCA inputs and outputs for use with common consumer audio equipment. Of course, coaxial and optical digital inputs and outputs are provided! If you're looking for a great solution for CD burning, duplication and playback with all the professional features your studio needs, look no further: the CDRW402 is here! Dimensions: 19" x 5.4" x 11.6". Operates on 110VAC. 220VAC/50Hz available as a special order, subject to availability. For full specifications visit our pro audio website at www.ramseyaudio.com.

CDRW402 Professional CD Recorder/Duplicator, XLR Balanced & RCA Unbalanced I/O's

\$998.95



When You Just Need A Good Cassette Deck That Will Last!

The 102MKII single well deck is the best value and choice for broadcasters, musicians, schools, and theaters for cassette playback and recording. Dual heads are provided for erase and record/playback. Front panel display includes dual peak level meters, tape counter, transport mode indicators, record/play indicators, CD sync indicator, and pause indicator. Record mute records 4 seconds of silence between your audio "tracks" to accommodate the automatic music search functions of most cassette players.

The intro check feature scans through the entire tape playing a short section at the beginning of each "track" allowing you to find the track you're searching for. Front panel input level and balance controls are provided as well as a standard headphone monitor jack. Operates on 110VAC. 220VAC/50Hz available as a special order, subject to availability. For full specifications, visit our pro audio website at www.ramseyaudio.com.

102MKII

Professional Single Well Cassette Deck

\$328.95

Tascam Dual Well Cassette Deck

- ✓ Dual auto reverse
- ✓ ±12% pitch control on tape deck 1
- ✓ Front mic input with level control
- ✓ Dolby B noise reduction
- ✓ Power on play and record
- ✓ Continuous recording
- ✓ Synchro reverse dubbing
- ✓ Blank scan, intro check, and timer playback
- ✓ Normal and high speed dubbing
- ✓ 19" rack mounted, 3 rack units high



When You Need TWO Good Cassette Decks That Will Last!

The 202MKIV has all the features of the 102MKII plus an additional tape deck and loads of new dual-deck recording features! Continuous playback and recording are great features for uninterrupted long-term recording. The deck will automatically switch to the second tape when the first one finishes playing/recording!

Parallel recording is also available to easily make multiple recordings of the same source and the high-speed dubbing feature uses internal pass-through audio for unrivaled quality. "Syncho-Reverse Dubbing" is a unique feature of the 202MKIV that will allow you to dub from shorter tapes to longer tapes or vice-versa without problems. If your source tape finishes a side before the destination tape, the source tape will stop and the destination tape will automatically record silence until it finishes its side. When the destination tape switches sides, the source tape will automatically resume playback and the destination tape resumes recording. Operates on 110VAC. 220VAC/50Hz available as a special order, subject to availability. For full specifications visit our pro audio website at www.ramseyaudio.com.

202MKIV

Professional Dual Well Cassette Deck

\$398.95



When You Need the Ultimate Pro Dual Cassette System!

Professional Dual Well Cassette Deck

- ✓ Optical leader sensing for quick auto reverse
- ✓ RS-232 serial control port
- ✓ ±10% pitch control independent for each deck
- ✓ Independent unbalanced RCA analog I/O for each deck
- ✓ RTZ (return to zero) function on each deck
- ✓ RC-322A wired remote included
- ✓ Headphone output with level control
- ✓ Independent cassette recording master or simultaneous recording master
- ✓ Normal (1x) and high (2x) speed dubbing capability
- ✓ Dolby B and C with HX Pro headroom extension

The 322 is considered the ultra high end bi-directional cassette workhorse for studio, broadcast, and live venues. When reliability really counts, and you need the most out of a cassette program source, the 322 is the answer!

The 322 offers independent audio input and output for each well, allowing total control over each deck. The 322 can even be set up so that one deck plays a tape while the other records an external source! This is perfect for recording a meeting and playing audio sources back or for playing music from tape and recording a performance on top of it. Independent inputs and outputs are also great for the LPFM broadcaster, utilizing each "well" as a separate program source that can be cued separately. One deck takes the place of two separate cassette sources. If the situation calls for a common I/O structure, you can switch it easily on the front panel. This makes it easy for creating dual masters or saving inputs on a mixer.

In addition, the 322 transports use an optical sensor for detecting leader on tapes. When the tape approaches the leader tape from the cassette, it will immediately flip the tape. This minimizes the amount of time lost when switching sides since the deck won't have to pass through the leader to the end of the reel and back to the recordable tape again. This makes the 322 the ideal machine for logging or long-form recording.

The 322 also includes an RS-232 port on the rear panel making it compatible with a number of third party tape automation controllers. In addition, a wired remote is included giving you full control of the deck. Cueing is easy with the built-in Return To Zero function. ±10% independent pitch control for each deck is also provided to make independent changes in speed.

The 322 utilizes three standard rack units of space and operates on 110VAC. 220VAC/50Hz available as a special order, subject to availability. For full specifications, visit our pro audio website at www.ramseyaudio.com.

322

Professional Dual Well Cassette Deck

\$498.95



Tascam Advanced MiniDisc Recorder/Player

- ✓ Balanced XLR and unbalanced RCA analog I/O
- ✓ S/PDIF optical I/O
- ✓ Front panel optical input
- ✓ Auto ready function (play one track & pause)
- ✓ Auto cue function (cue to first audio in track)
- ✓ Pitch control
- ✓ Headphone output with level control
- ✓ 74 Minute stereo & 148 minute mono record modes
- ✓ ATRAC v3
- ✓ Timer play function
- ✓ Program and shuffle play modes
- ✓ Complete TOC editing for changing track order



The Best MiniDisc Unit Around!

MiniDisc has long been the standard for quality live recordings thanks to the compact size and high quality of MiniDisc media. The MD-350 incorporates the latest advancements in MD technology including the latest ATRAC encoding scheme (version 3) which features new long play versions with up to 320 minutes of record time on a standard 80 minute MiniDisc! The MD350 is completely user friendly, and gives you total control with a front panel PS/2 keyboard port for easy editing of the MiniDisc's TOC (Table Of Contents) and track names!

A complete array of audio I/O makes integrating the MD-350 into any system easy. Balanced and unbalanced analog ports are available, plus digital optical ports. A front panel optical port can also be used to connect portable players digitally without having to get behind your rack. The MD350 fits into two rack units and includes a wireless remote for easy control. Operates on 110VAC. 220VAC/50Hz available as a special order, subject to availability. For full specifications visit our pro audio website at www.ramseyaudio.com.

MD350 Advanced MiniDisc Recorder/Player

\$488.95



Tascam MiniDisc Recorder/CD-MP3 Player Combo

The Best Of Both Formats...In 2 Rack Units!

- ✓ The ultimate MiniDisc combo!
- ✓ Record/playback MiniDisc, play CD and MP3 discs
- ✓ 4X automatic CD to MiniDisc dubbing
- ✓ ±12.5% MiniDisc pitch control
- ✓ ±16% CD/MP3 pitch control
- ✓ PS/2 keyboard input for title and control
- ✓ MiniDisc edit mode
- ✓ Supports ST, Mono, LP2 and LP4 MiniDisc modes

Take advantage of the benefits of MiniDisc's in your broadcasting studio, audio post production studio, and house audio systems with the Tascam MDCD1 combo! To start, you have an ultra reliable CD/MP3 player with a host of professional features. Not only does it play CDs and CD-R/RWs, but it also plays MP3 data discs and displays ID3 tags! Playback features ±16% pitch control allowing variable speed playback without changing the pitch! Speed up the playback to fit the spot time without having the "chipmunk" effect! Great for those "terms and conditions" at the end of a local spot! You can also change the Tempo without changing the Key. The CD/MP3 playback has its own dedicated RCA unbalanced analog outputs as well as coaxial and optical digital outputs.

From there we go to the MiniDisc mode. Start with the latest and greatest MiniDisc transport. It supports ST, Mono, LP2 and LP2 record and play modes. Edit functions are built-in for simply front panel audio editing. It also features overwrite recording. Similar to the adjacent CD/MP3 player, the MiniDisc player features a ±12.5% pitch control allowing variable speed playback without changing the pitch. In addition, RCA unbalanced analog inputs and coaxial and optical digital inputs are provided giving you unlimited recording versatility. If you need to dub from CD/MP3 to MiniDisc, no problem... the MDCD1 features 4X autodub for automatic one touch dubbing! The MDCD1 also includes a standard PS/2 keyboard input for easy titling of tracks and files as well as external control. A wireless IR remote control is also included giving you full control of the unit. All of this is packed into just 2 rack-units, making it perfect for space conscious environments and road case installations. Operates on 110VAC. 220VAC/50Hz available as a special order, subject to availability. For full specifications visit our pro audio website at www.ramseyaudio.com.

MDCD1 Professional MiniDisc Recorder/CD-MP3 Player Combo

\$798.95



Samson Servo 120A Stereo Audio Amp

Performance And Reliability In Only 1 Rack Unit!

- ✓ 120 Watts at 8 ohms bridged mono!
- ✓ 60 Watts per side at 4 ohms stereo!
- ✓ 1/4" TRS balanced AND RCA unbalanced inputs!
- ✓ 5-way binding post output connectors
- ✓ Switchable 120/230VAC power input standard!
- ✓ Small single rack unit height!
- ✓ Bi-polar design and toroidal transformer power supply
- ✓ Individual left and right level controls
- ✓ Bright 5-segment 3-color LED meters for each channel
- ✓ Headphone jack with speaker output mute
- ✓ Three year factory warranty

As our "Radio Stations In A Box" have grown, the most requested option was a good audio amplifier for local monitor speakers. That sounds easy, but when road cases are packed with equipment, each rack unit is precious. So we needed an amplifier that consumed as little space as possible. There are a lot of audio power amplifiers out there that seem to be a good bang for the buck, but they have to run continuous duty, often at their max, and need to survive... that's where the buck stops! At Ramsey we don't just sell any product or brand merely because it's out there, we first test it, run it through engineering to verify specifications, and then burn it in to assure US that it will survive for YOU! After all, our FM transmitters are in use around the world in some of the most severe environments. Audio amplifiers need to be as reliable as our transmitters... we insist on it!

The Servo120A is great 120 watt high performance amplifier for the small studio or portable broadcaster that requires rugged construction and efficient operation. These amplifiers are based on an innovative toroidal transformer design, providing a compact, light-weight, and power-efficient solution. Boasting an all-steel chassis with titanium finish, they are tough enough to take on the road, and light enough too thanks to the lightweight anodized aluminum heatsink. The entire unit is convection-cooled without noisy fans, so it's also perfect for "quiet" all-in-one studio/equipment room/home theater applications! When you need an amplifier to work in any environment without question, the Servo120A is your answer! It's also backed by the manufacturer's three year warranty!

On the front panel, you've got level attenuators for each channel, bright segmented LED level meters for each channel, speaker on/off switch, and a stereo headphone jack so there's no need to mess around behind your rack all the time! The front panel display also notifies you of overheating or faulty wiring conditions and the built-in protection relay circuitry (linked to the DC offset circuitry) prevents "thumps" when powering on or off - this means you can plug your Servo120A into the same power strip as your mixers and other audio devices without fear of damaging sensitive speakers! 1/4" TRS balanced input at +4dBu and RCA unbalanced at -10dBu achieve rated output. Power input is switchable between 120/230VAC making it perfect for both domestic and international use. For full specifications visit our pro audio website at www.ramseyaudio.com.

SA120A Professional 120 Watt Audio Power Amplifier

\$178.95


**TOP
SELLER!**

Tascam High Resolution Digital Recorder

- ✓ Records and plays standard CD-R and CD-RW's!
- ✓ High-quality stereo recording at up to 192kHz/24-bit or DSD format
- ✓ Records to Built-in 60GB hard drive, DVD+RW, CD-R/RW media
- ✓ Archives to DVD-R, DVD-RW, DVD+R and DVD+RW discs
- ✓ Multiband compression and 3-band EQ mixdown effects
- ✓ USB 2.0 connection to PC for use as DVD data drive
- ✓ Balanced XLR and unbalanced RCA inputs and outputs
- ✓ Balanced AES/EBU inputs and outputs, running at normal, double-speed and double-wire formats
- ✓ SDIF-3 DSD input and output for external conversion and processing of DSD audio
- ✓ Word Sync In, Out, Thru
- ✓ RS-232C serial control
- ✓ PS/2 keyboard connector for title editing
- ✓ User-definable function keys
- ✓ Records to standard CD-DA, Broadcast Wave and DSDIFF formats
- ✓ Dedicated input level control and adjustable maximum output level
- ✓ ±6% pitch control
- ✓ Fade in/out
- ✓ Wired remote control (RC-RA1000) included

**The Quintessential High-Definition Digital Recorder!
The Ultimate Mastering Machine!**

PRO-LEVEL FEATURES, AMATEUR ACCESSIBLE PRICE!

The TASCAM DV-RA1000HD is your best bet for high-resolution mixdown, mastering and event recording! It supports recording to CD, DVD or hard disk media at up to 192kHz/24-bit PCM resolution. Like its predecessor, the DV-RA1000, it also records Direct Stream Digital audio, Sony's revolutionary format created for Super Audio CDs. These are the only devices to offer Direct Stream Digital recording for under \$10,000, making the format attainable for audiophile archival and professional studio mixdown!

DVD+RW RECORDING AND PLENTY OF ONBOARD STORAGE FOR HOURS OF ULTRA-HIGH QUALITY AUDIO!

The DV-RA1000HD includes real-time effects such as multiband compression, DSP, and EQ. Its USB 2.0 jack allows it to be used as a DVD+RW drive when connected to a Mac or Windows computer - just plug and play (or rather, plug and record!) Its rear panel is also jam packed with all the connections professionals demand. You can record direct to CD-R/W and even DVD+RW media for hours of better-than-CD quality storage! However, even the high capacity of DVD+RW media can only handle around five hours of top quality audio -- That's where the DV-RA1000HD's built-in 60GB hard drive comes in! With it, you have more than 60 hours of uncompressed high definition recording and storage at your fingertips! Designed for recording studio mixdown, audiophile archival, live recording and installed sound, you can trust the DV-RA1000HD with your most treasured master recordings.

ALL THESE FEATURES, PLUS A POWERFUL AND EASY-TO-USE INTERFACE!

Tascam is known for the high-quality and user-friendly interfaces on their hardware and the DVRA1000HD continues that tradition. The sleek and attractive 2-rack unit high front panel has a headphone jack, level control, timer control, power switch, and transport control. The open/close selector for the disc tray doubles as a shut-down button for DVD recording. Above that, bright status lights and LEDs indicate PCM or DSD recording modes. The "Ready" button doubles as a pause key and when it is pressed together with Play, the data wheel can be used to scrub the audio for editing straight from the unit! That means no need to fire up the computer, as most normal editing tasks can be performed from the DVRA1000HD itself. The Mute button is a smart key that latches when engaged quickly and can also be held down to engage a non-latching mode for longer periods of silence. Track-skip reverse and forward keys double as 10x search fast forward/reverse when held down.

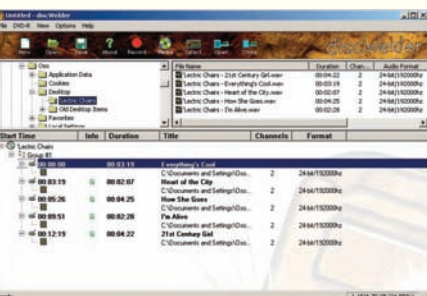
A spacious and easy-to-see LCD screen on the front panel displays dBfs level meter, input and clock assignments, media type, sampling rate, bit rate, total tracks, and current track number and time. Programmable function keys mean you can set up shortcuts to menu operations however YOU want! An included RC-RA1000 remote control offers one-touch accessibility for many functions that are otherwise found in onscreen menus. The remote plugs in to the recorder with a detachable 12-foot cable and requires no batteries. Since there are so many features, Tascam has included a well written user manual that is comprehensive while still being easy-to-read!

A FULL ARRAY OF BALANCED AND UNBALANCED I/O, PLUS DIGITAL DSD IN AND CLOCK-SYNC!

On the back of the DVRA1000HD you will find analog inputs and outputs for either RCA or balanced XLR pairs. For digital I/O, S/PDIF and AES/EBU jacks are provided for double-wire formats. It also supports double-speed, single-wire connections at 88.2 and 96kHz. Two pairs of BNC jacks (one for SDIF-3 and one for DSD-raw) are used for digital DSD recording. The USB 2.0 jack allows the DVRA1000HD to act as a data drive on any computer, reading from all recordable CD and DVD media and recording DVD+R single and dual-layer discs, as well as complete access to the unit's 60GB internal drive. Also on the rear panel are word-clock in/out/thru and a 9-pin RS232-C jack for use with remote control systems like Crestron and AMX.

YOUR RECORDINGS HAVE NEVER SOUNDED BETTER!

Because it includes above-average converters, the DVRA1000HD also doubles as an amazing-sounding audio playback unit. Compared to consumer CD players, the Tascam DVRA1000HD gives you the awesome benefits of improved resolution and superior digital/analog conversion. You will notice improved depth and subtlety from any 16-bit recording! The included EQ program is easy-to-use and gives you great sound with no distortion. Another excellent feature is the output level control at the end of the effects chain allowing for smooth fades without quantization or zipper noise.



Minnetonka's Tascam Special Edition DiskWelder Bronze 1000is included free with the DVRA1000HD!

INCLUDED SOFTWARE LETS YOU HARNESS THE AMAZING QUALITY OF SONY DSD!

As an added bonus, software especially created for the DV-RA1000HD is included! Tascam and Minnetonka Audio Software have teamed up to bring users an exclusive version of Minnetonka's award-winning DiscWelder DVD-Audio creation software. DiscWelder Bronze 1000, available for free to all registered DV-RA1000HD owners, adds three useful audio mastering features to professional and amateur studios looking to do more with their high-resolution recordings.

First, the software will convert from Direct Stream Digital (DSD) audio to a PCM WAVE file that can be imported into any DAW software. Second, the software allows users to burn a DVD-Audio disc with up to 192kHz/24-bit stereo mixes. Also included in the software is the ability to create a DVD disc that will play on any DVD player - not just those set up for DVD-A playback.

"The DV-RA1000HD puts DSD recording - the best-sounding digital recording format available - within the reach of anyone," says John Larabee, Director of Sales for Tascam. "Now, powered by Minnetonka's authoring software, owners of the DV-RA1000HD can record and archive in DSD format and then distribute their material in any resolution or format needed. DiscWelder Bronze 1000 allows DV-RA1000HD users to convert their DSD files to WAVE files at any resolution for use in DAW and mastering software like Pro Tools, WaveLab, Peak and others. In addition to that, artists can now burn either DVD-Audio discs of their mixes or burn standard DVD discs which can be played in any of the millions of DVD players in the world."

Audiophiles know that DSD/Super Audio is the format of choice for maximum definition. The DVRA1000 series combined with the included DiscWelder Bronze 1000 software is the most affordable way to get the next generation of recording quality into your studio setup! Operates on 110VAC. 220VAC/50Hz available as a special order, subject to availability. For full specifications visit our pro audio website at www.ramseyaudio.com.

DVRA1000HD High Resolution/DSD Master Recorder With 60GB Hard Drive

\$1,998.95



Tascam Portable High-Resolution Recorder

- ✓ Stereo recording to Compact Flash media
- ✓ 44.1kHz to 192kHz recording resolution at 16- or 24-bit
- ✓ Time-stamped Broadcast WAVE file format is easily imported into DAW software and spotted into projects with sample accuracy
- ✓ Retake button allows user to re-do last recording with a single button press
- ✓ Audio files continually re-saved to safeguard against data loss
- ✓ Comprehensive system and transport control from the front panel or a PS/2 keyboard
- ✓ XLR mic inputs with phantom power and analog peak limiter
- ✓ Unbalanced stereo RCA I/O
- ✓ S/PDIF digital I/O
- ✓ Headphone output
- ✓ Built-in mono microphone and speaker for desktop interview applications
- ✓ Analog level controls for easy operation without the need to look at the unit
- ✓ FireWire interface for fast data transfer to a computer
- ✓ SMPTE/LTC timecode input on locking XLR balanced jack
- ✓ Timestamps Broadcast WAVE recordings from SMPTE input
- ✓ Chase locks to incoming SMPTE timecode
- ✓ Video clock input resolves to house clock
- ✓ Tri-level sync support for HDTV applications
- ✓ Includes Frame Lock, Lock and Release and flexible Freewheel settings for unpredictable timecode sources
- ✓ Pull-up and Pull-down sample rates included for video format compatibility



On Location Recording Made Easy... And Professional!

The TASCAM HDP2 Portable High-Resolution Stereo Audio Recorder is a mind-blowing professional solution for challenging live and on-location recording! Records at up to 192kHz/24-bit resolution to Compact Flash media, and its audio files are instantly available to DAWs through the built-in high-speed FireWire computer connection. Unlike consumer MP3 sketchpads, the professional HDP2 incorporates high-end features like a SMPTE timecode input for synchronization to external devices while in record or playback. The user interface is designed for fast and intuitive use under stressful one-take-only situations and its large, angled LCD is perfect for any application from over-the-shoulder location recording to concert recording and commercial use.

The shoulder-slung design of the HDP2 with its included locking strap makes it a natural choice for film production recording. The Compact Flash media is safely recessed and latched to prevent accidental ejection and audio can be recorded locked to timecode and video reference for a perfect sync every time. It runs for approximately 5.5 hours on AA alkaline batteries and weighs less than two pounds with batteries installed.

The HDP2 is perfect for live music recording! Compact Flash transport doesn't make any noise and limiter protects the recording against sudden transient distortion. With the high capacity of today's Compact Flash media, you might even be able to enjoy the performance without constantly watching the time remaining meter!

so you don't need to worry about machine noise on the recording. The high-quality mic preamps provide phantom power to handle sensitive condenser microphones and the analog limiter protects the recording against sudden transient distortion. With the high capacity of today's Compact Flash media, you might even be able to enjoy the performance without constantly watching the time remaining meter!

Although the HDP2 was designed for demanding film shoots and live concerts, it's still simple and affordable enough for use in everyday classrooms, churches and home studios. School band and orchestra leaders can use it to record rehearsals for students and then record concerts to sell for fundraising. Church leaders can record their services for duplication on CD, and its high-speed FireWire connection provides instant access to the recording so that CDs can be authored and duplication can begin even before the congregation leaves! How long can you record on a typical CF card? Check it out!

Sample Rate	44.1k/16-bit	48k/16-bit	48k/24-bit	96k/24-bit	192k/24-bit
512MB CF card	50 min	46 min	31 min	15 min	7 min
1GB CF card	1.6 hrs	1.5 hrs	1 hr	30 min	15 min
2GB CF card	3.3 hrs	3.1 hrs	2 hrs	1 hr	30 min
4GB CF card	6.7 hrs	6.2 hrs	4.1 hrs	2 hrs	1 hr
8GB CF card	13.5 hrs	12.4 hrs	8.2 hrs	4.1 hrs	2 hrs

With professional connectivity, built-in synchronization, high-resolution recording and Compact Flash convenience, the HDP2 is the professional solution for serious recording in a reliable, portable package. For more detailed information visit our pro audio website at www.ramseyaudio.com.

HDP2 Professional Portable Hi-Resolution Recorder
CSP2 Matching Carrying Case for HDP2

\$998.95
\$44.95



Tascam High-Resolution CF Recorder

- ✓ Compact flash card
- ✓ USB host interface for USB Flash cards
- ✓ Mic/Line XLR (with 20dB pad) balanced I/O
- ✓ Euroblock terminal (Input and Output)
- ✓ Front panel rotary input level controls
- ✓ Power on play (front panel selectable)
- ✓ S/PDIF digital in/out (coaxial and optical)
- ✓ Headphone jack w/level control
- ✓ Input through and auto fade function
- ✓ Input monitoring/mixing of live stereo input along with playback
- ✓ Program play, folder play, shuffle play, interval play modes, and more!
- ✓ Compact single rack unit height

New For 2008

**Solid State Recording...
With USB and Ethernet Access!**

Brand new from TASCAM, the HDR1 is the latest and greatest in rack-mounted recording/playback. Utilizing highly reliable Compact Flash media, the HDR1 records in a variety of modes from high quality 44.1/48 KHz, 16/24 bit PCM to storage-saving MP3 compression! For an example of the time/storage capabilities, check the chart above in the HDP2. To think we all used tape in the past... and not necessarily 1/4" tape!

ROBUST INTERFACE OPTIONS!

No matter where you are, you can always be in control of the HDR1! A variety of options are available for remote operation, including RS-232, direct 16-pin parallel, and even standard RJ45 Ethernet! In addition to remote control, file transfers are a snap thanks to the HDR1's ability to easily transfer files directly to or from the unit via Ethernet and USB. The HDR1 offers a host of I/O options so you'll be ready for anything! Unbalanced (RCA), Balanced (XLR and Euroblock), and S/PDIF Digital (Coaxial and Optical) are all ready to go! In addition, the HDR1 includes high-quality mic preamps (w/20dB pad) to boost your mic signals to line level while retaining maximum quality plus rear-panel selectable phantom power!

PACKED WITH FEATURES!

With the HDR1, not only do you get the latest and greatest in solid state recording, you also get helpful features like Power-on-Play, Front Panel Rotary Input Level Controls, a Headphone Jack with level control, and a variety of Playback Modes! All this is accessible thanks to a high quality user-friendly interface! And all these features are housed in a single professional rack unit that not only saves rack space, but makes the installation a snap!

Whether you need to record/playback on the air, in the studio, in the club, or even in the house of worship, the HDR1 is the perfect choice! Operates on 110VAC. 220VAC/50Hz available as a special order, subject to availability. For full specifications visit our pro audio website at www.ramseyaudio.com.

HDR1 Professional Hi-Resolution CF Recorder

\$1,098.95



**Hands Down, The
Most Versatile
Portable Recording
Device...EVER!**

Zoom H4 4-Track Portable Recorder

- ✓ Fits in the palm of your hand!
- ✓ Records up to 24-bit/96kHz uncompressed digital audio!
- ✓ Direct-to-MP3 recording up to 320kbps!
- ✓ Two built-in studio-quality X/Y pattern condenser mics for stereo recording
- ✓ Two combination XLR-1/4" input jacks with phantom power
- ✓ Onboard effects including compression, limiting, and mic modeling
- ✓ Use any size SD memory card up to 2GB (that's over 380 minutes of CD quality audio or 34 hours of MP3 audio!)
- ✓ USB interface allows you to back up to your computer, or record directly using the H4 as an audio interface!
- ✓ Includes 128MB SD card

A PRO-QUALITY MOBILE FIELD STEREO RECORDER - AT AN AFFORDABLE PRICE!

The Zoom H4 Handy Digital Recorder fits in your palm and is great for recording practically anything you need! Live musical performances, interviews, podcasts, meetings, classes, seminars, whatever! With the H4 you can record full uncompressed 24-bit/96 kHz digital audio or if you're low on SD card space, use the built-in MP3 compression!

With two studio-quality electret condenser microphones built in and configured in an X/Y pattern for true stereo recording, the H4 is ready to put your listeners in the audience! However, if you'd rather use your own mics, the H4 has you covered there too, with two combination XLR-1/4" input jacks with phantom power. The H4 is loaded with onboard studio effects such as compression, limiting and mic modeling. A mini-headphone jack lets you monitor the sound you're capturing in real-time.

The H4 records on to any standard Secure Digital (SD) media and includes a 128MB SD card to get you started. With a 2GB SD memory card, the H4 provides up to 380 minutes of recording in 16-bit mode (CD Quality) and 34 hours in MP3 stereo mode. When you're ready to transfer your recordings to a PC or Mac, just use the included USB mass-storage interface!

The H4 provides four hours of continuous recording operation from 2 AA batteries. Of course you can also plug in with the included AC adapter for uninterrupted power as long as you need it. The 128x64 pixel LCD is back-lit, providing you full control in any lighting conditions (like the back of a dark club)! USB cable, windshield cover and tripod adapter are all included!

DID WE MENTION IT'S ALSO A 4-TRACK RECORDER?!

Unlike other field recorders, the H4 also has a 4-track recording mode for easy-to-use mobile multi-track recording. Use the H4 to get your ideas recorded anytime, anywhere, with ease! The H4 will also render 4-track audio with CD quality, 16-bit/44.1 kHz resolution. Songwriters and musicians can use the combination XLR-1/4" high-impedance phone inputs for vocals, guitars, bass or keyboards. Also onboard are Zoom's excellent guitar and bass amplifier modeling effects.... accurately reproducing the sounds of the most famous guitar amps ever made!

AND AN AUDIO INTERFACE!

Recording directly to your computer has never been easier than with the Zoom H4 Handy Recorder. The H4 is the only portable digital recorder that also serves as your USB audio interface, allowing direct recording of instruments and vocals to your computer! If you don't already have a DAW (Digital Audio Workstation,) don't worry! Every H4 comes bundled with Cubase LE, the perfect 48-Track Digital Audio Workstation for easy editing, mixing and mastering of your recordings on either Windows or Mac! For more detailed information visit our pro audio website at www.ramseyaudio.com.

H4 Professional 4-Track Portable Recorder

\$298.95

Zoom H2 Handy Recorder

- ✓ W-X-Y mic patterns with 4 mic capsules and signal processing allows Front 90° Super Cardioid, Rear 120° Cardioid, and 360° polar patterns
- ✓ Built-in USB 2.0 interface for data storage and audio interface
- ✓ Records in WAV 96kHz/48kHz/44.1kHz at 16-bit or 24-bit, MP3 to 320kbps and Variable Bit Rate (VBR) data formats
- ✓ Time Stamp and Track Marker functions in Broadcast WAV Format
- ✓ 512MB SD memory card included
- ✓ Accommodates up to 4GB SD memory cards
- ✓ Auto Gain Control (AGC) for pristine recordings
- ✓ Auto Start function means you're always ready to record
- ✓ Low-cut filter eliminates wind noise
- ✓ On-board chromatic guitar/bass tuner
- ✓ Powered external mic input
- ✓ 4 Hours of operation on two AA batteries

**New For
2008**



THE NEW GENERATION OF PORTABLE RECORDING DEVICES IS HERE!

It's a simple idea: provide brilliant stereo recording in an easy-to-use, ultra-portable device. Now everyone can record pristine audio in an infinite variety of applications. From seminars and conferences to electronic news gathering (ENG) and podcasting to musical performances, songwriting sessions and rehearsals, the H2 provides amazing recording quality. No matter what kind of music you perform or the instrument you play, the H2 can effortlessly record it in high-quality stereo.

FOUR MICROPHONES FOR PERFECT STEREO IMAGING!

The H2 is the ONLY portable recorder on the market with 4 mic capsules onboard, giving it 360° recording capabilities! You can record from the front of the H2 at 90° or from the rear at 120° or record 360° to 48kHz/24-bit and drop it straight into full 5.1 Surround - the H2 makes it easy! The H2 also features a powered 1/8" jack for plugging in an external stereo mic if required.

MANAGING AND STORING YOUR AUDIO MADE EASY!

1/8" stereo and headphone outputs mean you can play your recordings back straight from the unit anywhere and the USB interface makes it a snap to transfer your audio directly to your PC or Mac for further editing, sharing, etc. The H2 can also function as a USB microphone plugged directly into your computer using any standard recording software! Included with your H2 is a 512MB SD card but the H2 can accept SD cards up to 4GB! What does that mean for you? Try 2 hours of 96kHz audio, 6 hours of CD quality 44.1kHz audio, or 68(!) hours of high-quality MP3 audio!

VERSATILITY AND POWER!

That's all it takes to start recording! The H2 is a remarkably robust device that is incredibly easy to use. One button recording, gain controls on the side and an intuitive user interface mean you can always capture the moment. Set your levels, push record and go. It's that simple. Or use the Auto Start and Auto Gain Control functions to ensure complete capture at the right level. If you need to fine-tune your levels on the fly, we made it easy with gain control buttons on the front panel. Each H2 comes standard with all the accessories you need: 512MB SD card, mic clip adapter, AC adapter, tripod stand, a set of earbuds, 1/8" stereo to RCA cable, and USB cable! For more detailed information visit our pro audio website at www.ramseyaudio.com.

H2 Professional Portable Recorder

\$198.95



New For 2008

Take The Next Step To Multi-Tracking!

When you're ready to take your computer-based recording studio to the next level, check out the latest USB interface from TASCAM - the US1641! With sixteen inputs, you can record the whole band at once in a snap! Eight mic/line inputs plus six line inputs gives you plenty of channels for a large ensemble, drumset, live recording or worship service. Compatible with almost all standard multi-track recording software and using the latest high-speed USB 2.0 technology, the US1641 packs the interfacing power of a big console into just one rackspace!

The eight mic inputs feature TASCAM Pro mic pres for 60 dB of gain plus phantom power for studio-quality recordings. It boasts two balanced TRS line inputs on the front panel that are easily switchable to guitar level for direct-in recording of bass or guitar tracks. On the rear panel, you've got four more balanced line inputs and outputs plus with MIDI and S/PDIF digital inputs and outputs - that's a total of 16 inputs! A built-in power supply means there's no bulky wall-wart to screw with (or lose!) and connection to the computer is handled by USB 2.0 technology - 40 times faster than USB 1.1 and 20% more bandwidth than FireWire 400!

The US-1641 comes packed with powerful software so you can get started right away. Cubase LE4 is Steinberg's latest version of the 48-track, 96kHz recording workstation so you'll have plenty of power at your fingertips! Also included is TASCAM's Continuous Velocity Piano, a VSTi plug-in for Windows that uses Giga technology for totally authentic grand piano sounds. The US-1641 installs ASIO and Core Audio drivers for Windows XP, Windows Vista and Mac OS X with simple instructions for hooking up to a variety of recording software including Logic Pro, Cubase, Nuendo, Digital Performer, SONAR, Reason, Live and almost everything else! When you're ready for some serious professional style multi-tracking at a price the home-based musician can afford, check out the US1641! For more detailed information visit our pro audio website at www.ramseyaudio.com.

US1641 Professional 16x4 Audio/MIDI USB2.0 Computer Interface

\$398.95

Tascam FireOne 2x2 Firewire Audio Interface

- ✓ Up to 96kHz/24-bit audio resolution
- ✓ Two XLR mic inputs with phantom power and pad
- ✓ 1/4" high impedance input for recording guitar direct
- ✓ Two 1/4" stereo headphone outputs
- ✓ Weighted, backlit jog wheel
- ✓ Transport control keys: rewind, fast-forward, stop, play, record
- ✓ Eight DAW shortcut keys
- ✓ Stereo LED meter
- ✓ MIDI in and out
- ✓ 1/4" Footswitch input
- ✓ Bus powered through the FireWire connection or included power supply

New For 2008



The Interactive FireWire Audio Interface!

The FireOne has truly pushed the limits of what an audio interface can be! This FireWire Audio Interface with shortcut keys and a weighted & illuminated jog wheel was designed to inspire creative interaction with the artist's music! The FireOne is the first stereo audio interface in its class that records two mic ins and two outs over FireWire at 96kHz/24-bit audio resolution.

The standout feature of the FireOne is its large, weighted, backlit jog wheel which allows musicians to zip through their song quickly and easily while the backlight provides useful feedback such as a visual metronome! There has never been an easier and more intuitive audio interface!

The FireOne sports a pair of mic inputs with phantom power and pad switches plus a front panel guitar input for convenient direct recording of guitar or bass. MIDI input and output give you 16 channels of MIDI. Plus, it's the first FireWire interface in its class to record and play at up to 96kHz/24-bit resolution! In addition to its weighted & backlit jog wheel, the FireOne has transport keys and nine shortcut keys to control functions in most popular Digital Audio Workstation (DAW) applications.

The FireOne comes packed with a copy of Live Lite 6 TASCAM Edition, the music creation, production and performance software from Ableton. In conjunction with the FireOne, Live's drag and drop interface makes it easy to seamlessly move from basic song ideas, to studio production, and then to the stage! Streamline your creativity with the new FireOne from TASCAM! For more detailed information visit our pro audio website at www.ramseyaudio.com.

FIREONE Professional 2x2 Firewire Audio Interface

\$248.95



Professional Audio Recording And Mixing...On The Go!

We've seen our share of computer-based recording solutions and Tascam's US144 is the hands-down winner for ease-of-use and portability. An amazing tool for musicians and producers, the US144 allows you to record two tracks at once with zero latency from analog inputs. It's got the power you need for studio quality recording but its compact size also means you can take it along with your laptop anywhere you go!

Included with all TASCAM interfaces is a copy of Steinberg's Cubase LE recording software. This powerful software is easy to use but packs in more power than anything in its class. You get 48 tracks of recording at 96k, 64 MIDI tracks, even cool functions like VST plug-ins and notation editing. Though the US144 works with almost any software for Mac or Windows, Cubase LE lets you start making music right away. Full specifications available online at www.ramseyaudio.com.

Tascam Pro USB Audio/Midi Interface

- ✓ S/PDIF Digital Input & Output
- ✓ 4 in, 4 out operation (analog, S/PDIF)
- ✓ 2 analog line inputs (1 switchable to high impedance for use with guitars, basses, etc.)
- ✓ 1 MIDI input, 1 MIDI output
- ✓ 2 XLR mic inputs with phantom power
- ✓ USB 2.0 equipped (also supports USB 1.1)
- ✓ Up to 96kHz/24-bit for high quality recordings
- ✓ Zero-latency hardware monitoring
- ✓ Separate headphone output & level controls
- ✓ Bus powered for use with any PC, Mac, or laptop!

US144 Professional USB Audio/Midi Audio Interface

\$148.95



Tascam 24-Track 24-Bit Portastudio

- ✓ 24-track / 24-bit recorder (44.1kHz)!
- ✓ 250 "virtual" tracks available per song!
- ✓ 36-channel mixer!
- ✓ 80 Gig internal hard drive, CD-R/RW drive!
- ✓ 3-band EQ on 24 channels, 8-inputs, tone generator and stereo bus with high and low sweepable shelving bands and full parametric mid band
- ✓ Three aux sends on all channels except the effects return
- ✓ Loop effect provides reverb, delay, chorus and more on an aux send and return
- ✓ Assignable Guitar multi-effects processor for distortion, chorus, delay, flange and more
- ✓ Up to eight assignable dynamics processors for compression during recording or mixdown
- ✓ Dedicated Stereo Compressor on the stereo output
- ✓ Eight inputs: 4 XLR with phantom power double as 1/4" mic/line inputs, plus four dedicated 1/4" mic/line inputs
- ✓ Twenty 45mm faders including master fader
- ✓ LCD display for viewing meters and edit parameters
- ✓ CD-RW drive to record Red Book CDs, import/ export WAV files and backup hard drive
- ✓ 64-voice General MIDI sound module
- ✓ Standard MIDI File player
- ✓ High-speed USB 2.0 jack connects to PC or Mac for data backup and SMF/WAV file transfer



*The Ultimate In Home Studio Recording...
Bringing You To A New Level Never Before Imagined!*

MEGA BUCK QUALITY IS NOW AFFORDABLE!

If you're serious about the quality of your recordings, but don't want to spend a ludicrous amount of money, the Tascam 2488MKII is the perfect solution. 24 tracks is the industry standard for professional studios, and a few years ago a studio of this quality would have cost in the \$1M range! Now you can bring the same high quality studio editing and mixing into your home studio for a tiny fraction of that amount! The brand-new 2488MKII expands on the success of the 2488 by doubling the hard drive space, adding an all-new higher quality LCD-Display, new guitar effects, and even better CD mastering!

TRUE PROFESSIONAL SPECIFICATIONS!

By far the most affordable 24-track recording and mixing workstation ever made, the 2488MKII is the only model within three times its price range that can truly run 24 tracks at 24-bits / 44.1kHz. Eight simultaneously recordable inputs to XLR and 1/4", twenty physical faders for the mixdown channels, and each channel has 3-band EQ and built in effects processors. With the 2488MKII you can record up to 250 "spare" or "virtual" tracks per song! This is perfect to store different vocal versions, different bass versions, separate guitar takes, and any possible components of the song. Pick the best "takes" from the virtual tracks and simply assign them to your playback tracks!

Varispeed operation provides ±6% pitch control and Slow Speed Audition that allows you to rehearse tricky lead lines, etc. at a lower speed but the same pitch! Each mixer channel is equipped with phase reversal, pad, basic three-band EQ (high and low shelves plus a fully parametric mid-band), three aux sends, and an insert point (to accommodate an in-line effect or dynamics processor).

BUILT-IN MIDI GENERATOR AND LIBRARY!

The 2488MKII also incorporates a 16-part, 64-voice General MIDI tone generator, complete with an onboard Standard MIDI File player and metronome. This enables MIDI files to be loaded and used as backing tracks, for example. Hundreds of built-in MIDI backing tracks and drum kits are included, so there is no need to go digging through that pile of old CDs when you need to whip up a demo!

Full-featured editing, including cut/copy/paste/loop, is built-in and gives you DAW-like flexibility for building that next hit recording. All editing functions are highly intuitive for amateurs and pros alike! Relocate verses or solos with ease and speed. All editing is non-destructive with a comprehensive multiple undo function in case you screw it up!

HDD AND CD-R/RW INCLUDED!

A built-in 80 gig internal hard drive gives the user space for twenty to thirty 24 track songs and virtual tracks for comping vocals and multiple takes. Also gives you plenty of room for your stored MIDI library, working tracks, and imported files. In addition, a USB2.0 port is provided for backup to a PC or Mac.

**TASCAM 2488 is Music Trade's Product of the Year
Industry Publication Honors TASCAM on 25th Anniversary
of the Portastudio**

TASCAM's newest cutting-edge Portastudio—the 2488—was named "Product of the Year" by Music Trades magazine in its April 2004 issue. Debuting at the 2004 Winter NAMM conference in January, the 2488 is the latest in TASCAM's line of Portastudios, offering 24-track/24-bit digital audio at a musician-friendly price point. 2004 marked the 25th anniversary of TASCAM's first Portastudio introduction, the 144, the world's first portable four-track cassette recorder. Now the next generation 2488MKII takes over in style!



2488MKII 24-Track Portastudio

For the final mix, the built-in CD-RW drive can turn your 2-track master mixdown into a Red Book CD, or use it to back up the hard drive or import and export .WAV files. If you want the best of both worlds - a portable, compact workstation and the creative power of 24, 24-bit digital tracks - look no further. Measures 21.5W" x 14D" x 5.7H". Operates on 110VAC. 220VAC/50Hz available as a special order.

Whether you own a 2488MKII or are simply interested in all the incredible features, get the training and tutorial DVD. It takes you from a complete introduction to the 2488MKII all the way through the complete creation of a song with guitar tracks, vocal tracks, drum machine inserts, effects, editing, final mastering and production of a CD. You will be amazed!

Your host David Wills has been teaching musicians and studio owners how to use studio equipment for over 20 years, and now you can have the same training in the comfort of your own home. David has been a touring programmer and consultant for a number of top musicians including Michael Jackson, Whitney Houston, and Phil Collins. Watch David make the 2488MKII come alive as he produces a professional quality CD, the same as you will be able to do with YOURS! Operates on 110VAC. 220VAC/50Hz available as a special order, subject to availability. For full specifications visit our pro audio website at www.ramseyaudio.com.



Easy to see 2 1/2" x 2 1/2" backlight display!



Tutorial DVD Available!

2488MKII Professional 24-Track, 24-Bit Portastudio
2488MKIIDVD 2488MKII Training and Tutorial DVD

\$798.95
\$39.95



New For 2008



When You Only Need 8 Channels... But Professional Results!

MIXING MADE SIMPLE!

The "Little Brothers" to the infamous 2488MKII, these are the most complete, easy-to-use 8-track recording systems on the planet! The DP02 and DP02CF have the hands-on simplicity of classic 8-track recorders combined with the editing flexibility of CD-quality digital, and they're so simple anyone can use them! Just plug in and hit record on one of the eight channel strips and you're laying down a CD-quality track! No clunky digital menus here, you've got actual knobs and buttons for the most important functions!

EVERYTHING YOU COULD EVER ASK FOR!

These studio mixers use their LCD screens for what LCD screens are really good at... giving you visual feedback on levels, song position and track editing. Each of the 8 channel input/fader strips include high and low semi-parametric EQ with 100Hz and 10kHz center defaults; effects send controls the amount of effects on the channel; pan control for assigning a sound to the left or right in the stereo sound field; dedicated record button; mute LED; 45mm channel fader; and input buttons to assign your instruments or mics to a pair of the eight channels. In addition, there is an effects control strip with multiple reverb types, each with variable parameters; cursor controls; jog/shuttle for data input and editing; editing controls; real workstation controls for setting and locating in/out points, inserting segments, etc.; transport controls; stereo/dual mono input select; jack for optional footswitch (allows hands free punch-in and punchouts!); and a headphone output with level control. A phantom power switch lets you use high-quality studio condenser microphones.

BUILT-IN HDD AND CD-R/RW DRIVES! OR GET THE DP02CF FOR COMPACTFLASH RECORDING!

A built-in 40 gig internal hard drive on the DP02 gives the user plenty of space for tons of songs, vocal tracks, instrument tracks as well as storage of .wav files. The DP02CF has no hard drive, but records directly onto versatile and portable CompactFlash cards. For the final mix, both units have a built-in CD-RW drive that can turn your 2-track master mixdown into a Red Book CD or, back up the hard drive/CompactFlash card or even import and export .wav files! Simplicity in recording can't get any better! Perfect for anyone who needs better-than-cassette quality recording but without expensive hardware or complex computer-based recording systems. Plus, both units weigh in at less than 12 pounds, the DP02 and DP02CF are also truly portable! Operates on 110VAC. 220VAC/50Hz available as a special order, subject to availability. For full specifications visit our pro audio website at www.ramseyaudio.com.

DP02	Professional 8-Track Digital Portastudio, 40GB Hard Drive	\$498.95
DP02CF	Professional 8-Track Digital Portastudio, CompactFlash (Includes 1GB CompactFlash Card)	\$298.95

Tascam 8-Track Digital Portastudios

- ✓ Two XLR mic/line inputs with phantom power for condenser microphones
- ✓ Eight-track recording at uncompressed 44.1k/16-bit audio quality
- ✓ Portastudio-based interface with volume fader, pan, effect send, high and low EQ controls per channel
- ✓ EQ frequency button to access high and low EQ shelf frequencies
- ✓ USB 2.0 interface for transferring tracks, mixes and backup files to a computer
- ✓ Dedicated stereo master track for mixdown
- ✓ Internal metronome and bar/beat display for song position
- ✓ Headphone output
- ✓ Stereo line outputs on RCA analog and S/PDIF optical digital connectors
- ✓ 40GB internal hard drive (DP02) or CompactFlash (DP02CF)
- ✓ Multieffects processor with guitar, bass, vocal and drum programs
- ✓ Stereo reverb processor with send/return controls for multichannel mixing
- ✓ Built-in chromatic tuner
- ✓ Built-in CD-RW burner for CD mastering and song backup

Stanton Professional USB To Digital Turntable

- ✓ Pro-quality turntable with high-torque direct drive motor and unique design
- ✓ S-Shape tone arm for lower distortion and superior tracking
- ✓ Unique digital features like Key Lock (Master Tempo) and S/PDIF output
- ✓ 2 Start/Stop switches for mix or battle setup
- ✓ 3 playback speeds (33, 45, 78 RPM), plus Quartz Lock and target light
- ✓ Pitch control slider with selectable range (±8%, 12%)
- ✓ Includes Stanton 500B cartridge, slip mat and cloth dust cover
- ✓ Includes Cakewalk Pyro 5 music and sound editing software

New For 2008

Bring Your Classic Vinyl Into the Digital Age!



As music technology continues to march head-on into the digital era many of us are left staring at shelves full of classic albums wondering what to do with all that vinyl. Even devoted vinyl enthusiasts know that the format has its downsides: lack of portability, dust dirt and scratches, and worst of all, the unavoidable degradation that LPs undergo during normal playback. Unless you're a millionaire with an optical record player, every time you play your vinyl the grooves of the record are being worn down slightly, leading to ever worsening quality! The solution? Archive your vinyl in perfect digital files, preserving the physical media for your collection and for special occasions!

The Stanton T.90 USB is the perfect choice to preserve all your classic vinyl forever! A professional quality turntable with high-torque direct drive motor and a USB output, it combines the latest digital technology with a unique and stylish design. Simply plug the turntable directly into any personal computer, and your operating system will automatically detect it. There's no need to purchase additional software as the T90 USB comes bundled with Cakewalk Pyro 5 which makes converting vinyl to digital a simple task for even the least computer-savvy! You can record each side of the record in one pass then go back to clean up pops and scratches and automatically separate the tracks, all with an intuitive and user-friendly interface!

The features of the T.90 USB don't stop with its awesome archiving capabilities -- it's also packed with tons of the features professional DJs demand! Dual start/stop breaks, reverse, (to easily uncover those devious backwards-masked messages!) pitch controls with selectable 8 percent and 12 percent ranges, and a key-lock mode that lets you digitally adjust the speed of a song without changing the pitch! In addition to the USB output, the T.90 USB also features stereo RCA outputs with switchable phono/line impedance plus an S/PDIF digital coaxial output, so its ready to work with any setup!

For some, there just wasn't room in that new stereo setup for a bulky record player. For others, the motor went out on the turntable years ago and they just haven't had time to find a replacement... but even if your old turntable is still hanging in there, the awesome features and plug and play computer connectivity of the T.90 USB make it a great choice for any audio enthusiast, DJ, or broadcaster! For full specifications visit our pro audio web site at www.ramseyaudio.com.

	SPECIFICATIONS
Turntable Section	
Frequency Response	30 Hz to 20 kHz +/- 2 dB/ RIAA filter
THD+N	Less than 0.03% at 1 kHz
S/N Ratio: Line	Less than -65 dB
Digital Output (SPDIF)	0.5Vp-p (Load 75 ohms)
Type	3-speed full manual
Motor	8 pole, 3 phase, brushless DC motor
Speeds	33 1/3 and 45rpm and 78 rpm
Wow and Flutter	Less than 0.15% WRMS (JIS WTD) with 33 1/3 rpm
Pitch Controls	±8%, ±12%
Starting Torque	More than 1.6 kgf.cm
Starting Time	Less than 1 sec with 33 1/3 rpm
Braking Time	Less than 1 sec with 33 1/3 rpm
Braking System	Electronic Brake
Pitch Bend	±6%
Time for Speed Change	Less than 1 sec with 33 1/3 rpm Less than 1 sec from 45 to 33 1/3 rpm Less than 1 sec from 33 1/3 to 78 rpm
Audio Output	
USB Function	Phono/Line output
Computer interface:	A/D,D/A 16BIT 44.1KHz or 48KHz USB SELECTABLE USB 1.1 compliant, WINDOWS XP or Mac OSX
Tone Arm Section	
Tone arm type	Measurement Static balanced S-Shape tonearm for lower distortion and reduced record-wear
Effective Arm Length	230.5mm
Tracking Force Range	0-3g
Applicable Cartridge Weight	3-4g



20-Channel Tabletop Powered Mixer

- ✓ High-quality mic preamps
- ✓ 500 Watts stereo/1000 watts bridged mono
- ✓ 4 Aux sends (1 pre, 1 pre/post, 2 effects)
- ✓ Dual 9-band graphic EQ
- ✓ Dual internal 24-bit effects processor with 100 preset programs
- ✓ Mono sub output with variable low-pass filter
- ✓ 1/4" Phone and Speakon™ outputs

**It's The Big One...
That's Affordable!**



Samson's TXM20 is a twenty channel powered mixer in an ergonomically correct, attractively appointed tabletop enclosure! It features a massive 1000 Watt power amplifier capable of running in 2x500 Watt stereo, 500 Watt main plus 500 Watt monitor, or 1000 Watt bridged mono. A 9-band stereo graphic equalizer for the main left and right outputs, plus a separate 9-band graphic equalizer for your monitor mix allow you to set the perfect tonal response for your mix! Connecting microphones and instruments is a snap with 12 mic/line inputs plus four additional stereo channels. Ultra clean and clear sound reproduction is achieved thanks to high quality, low noise microphone preamps, a super clean low impedance bus mix, and its high output/low distortion power amplifier.

Dedicated stereo effects returns are also included so you can utilize any of the TXM20's over 100 onboard digital effects! The effects include delays, chorus, flanging, and lush reverbs to make your vocals and instruments sound great. These effects are all driven by the onboard 24-bit multi-effects processors for awesome professional effects quality! Its easy to call up your favorite effects presets thanks to the large seven-segment LED display. "But I need MORE effects!" The TXM20 has you covered, because it has TWO 24-bit multi-effects processors! Combine these with extensive auxiliary buses and you've got the ability to use complex combinations of effects on all the channels, or two different effects on different groups of channels. The auxiliary buses are also extremely flexible where monitor mixes are concerned.

All this comes packed in a super-tough steel enclosure for reliable transport and performance. An oversized sure-grip handle means you won't have trouble lugging it around either! The TXM20 is optimized for live sound reinforcement, commercial installations, clubs, houses of worship, etc. The ideal mixer/amp combo solution when you need plenty of inputs, great effects, and power to spare, in a compact package! For a smaller yet full function mixer for road gigs, check out the MX series powered mixers below. Operates on 110VAC. 220VAC/50Hz available as a special order, subject to availability. For full specifications visit our pro audio website at www.ramseyaudio.com.

SATXM20 20 Channel Tabletop Powered Mixer

\$748.95

16-Channel Powered Mixer

- ✓ 8 High-quality mic preamps
- ✓ 500 Watts stereo/1000 watts bridged mono
- ✓ 3 Aux sends (2 pre, 1 effects)
- ✓ Internal 24-bit effects processor With 100 preset programs
- ✓ Mono sub output with variable low-pass filter
- ✓ 1/4" Phone and Speakon™ outputs



Samson's TXM series of tabletop powered mixers feature professional recording console specs, studio quality effects, and plenty of power! An all-in-one portable and powerful solution for live sound!

The TX16 is a 16-channel powered mixer with selectable modes for either 500 Watts per channel or 1000 Watts bridged Mono. A large metal grab handle plus a rack-mount kit are included, so the TXM16 is a great choice for fixed installations, while still being portable enough for mobile applications! Visit us at www.ramseyaudio.com for more info.

TXM16 16 Channel Tabletop Powered Mixer \$598.95

6-Channel Tabletop Mixer

- ✓ Full-featured compact mixer for live, on-air, and studio Use
- ✓ Six high-quality microphone pre-amps with channel inserts
- ✓ two stereo channels
- ✓ 3 band EQ on all channels
- ✓ Dual auxiliary sends
- ✓ 8 Segment LED bar VU meter



Samson's MDR6 is an affordable, high-quality mixer with professional features for the home studio. The MDR6 features an advanced circuit design with discrete components and low noise op-amps.

Each stage of the signal path is optimized to provide maximum dynamic range and a transparent audio signal for accurate representation! Operates on 110VAC. 220VAC/50Hz available as a special order, subject to availability. For full specifications visit our pro audio website at www.ramseyaudio.com.

SAMDR6 6 Channel Tabletop Powered Mixer \$148.95

Portable Multi Channel Powered Mixers

- ✓ 400/600/900 Watts total power!
- ✓ 6 to 10 channel Mic/Line inputs with 1/4" and XLR connections
- ✓ 24-bit Digital effects with 100 selectable presets
- ✓ Multiple channel, main and monitor EQ
- ✓ RCA Inputs & outputs for CD/tape
- ✓ High-Impact ABS plastic Kickback chassis design
- ✓ Dual CD inputs with trim and crossfader for DJ applications (SAXM910 only)
- ✓ Universal switching power supply, 110-240VAC!



The XM series from Samson are state of the art powered mixers with built-in 24-bit DSP (Digital Signal Processor) effects. Available in 400W, 600W, and 900W configurations, the XM series boasts clean, clear sound reproduction thanks to high quality, low noise microphone preamps, a super clean mix bus, two on board 10-band graphic equalizers, and a high output/low distortion power amplifier!

Studio quality processing is at your fingertips with one of 100 different digital effects including delays, chorus, and reverbs! The XM series also feature Samson's unique "Kickback" enclosures which let you tilt the unit back to see/operate the controls easily from any position! The XM series are also road-ready and built for portability with compact sizes and oversized sure-grip handles. Super-tough ABS construction means you can always count on the high quality sound of your XM series from venue-to-venue and performance-to-performance. On the road, in the club, the house of worship, or anywhere you need a great mixer and power amp solution, the XM Series here! 3 versions to meet your requirements:

- XM410: 6 Channels, 400 Watts., 7-band graphic equalizer for main mix, tape/CD input
- XM610: 6 Channels, 600 Watts, dual 7-band graphic equalizer, tape/CD input
- XM910: 10 Channels, 900 Watts, dual 10-band graphic equalizer, dual CD inputs with trim and crossfader for DJ applications

If you're looking for a great powered mixer for ultra-reliable performance for your adhoc gigs, studio, and portable applications, the XM series can't be beat. Personally, I keep a SAXM910 and a pair of Resound RS10 speakers handy for my music gigs and for trade shows. Gig wise, there are plenty of inputs for the mics, guitars, drum mics, etc. and more than enough output power for medium size venues. Plus, the universal power supply of 110-240VAC makes it ideal for overseas travel and use. No matter where you perform, the XM series mixers keep you on! For full specifications visit our pro audio website at www.ramseyaudio.com.

SAXM410 6 Channel 400 Watt Powered Mixer
SAXM610 6 Channel 600 Watt Powered Mixer
SAXM910 10 Channel 900 Watt Powered Mixer

\$298.95
\$398.95
\$498.95



PowerBrite Pro Power Conditioner

New For 2008

- ✓ The ultimate, yet affordable power conditioner!
- ✓ Great power distribution for both plugs and transformers!
- ✓ 3-point surge, spike clamping, and RFI/EMI filtering!
- ✓ Dual digital displays of input voltage and load current!
- ✓ Bright pull-out LED rack illuminators with dimmer!
- ✓ Rear plug-in USB gooseneck LED illuminator!
- ✓ 8 rear panel outlets and 1 front panel outlet
- ✓ Compact single rack mount design



**Don't Be Left In The Dark...
With Bad Power To Your Racks!**

Rack-mount power distribution just got an upgrade! The PowerBrite Pro is the perfect power protection and power distribution system for any standard 19" rack. However, where it really shines is with rack mount road cases! If there is electronic equipment in a rack case, there should be a PowerBrite in the top rack panel position. The reasons are endless!

To start, it provides power conditioning and protection to all the equipment in the rack, protecting against peak voltage surges, spikes, and RFI/EMI issues. There are 8 switched outlets on the rear panel giving you a spot to plug-in all the equipment in the rack. To make it even more convenient, 4 outlets are horizontally spaced vertical outlets giving you plenty of room for power transformers or "walwarts". There is a 9th unswitched outlet on the front panel, perfect for soldering irons and utility. All outlets are protected not only by the built-in power conditioning but with a front panel 15A circuit breaker. Let's not stop there! Separate 3 digit LED displays on the front panel show you the incoming voltage and the total load of your devices powered by the PowerBright Pro! At a glance you can see if house power is OK... or if there are problems.



Next up, the fact that most road rack cases are used in dark backstage areas. The PowerBright won't keep you in the dark with front panel pull-out illumination lamps. When pulled out, five super-bright LED's downward illuminate your entire rack, and can be rotated left or right for partial side illumination. What... you think 5 super-bright LED's would be too bright? No problem, there is smooth full range dimmer right on the front panel.

For those rear panel connections in the dark a rear panel USB connector is provided to power a gooseneck LED plug-in illuminator also included. With super-bright white LED's the light is cool running, and long lasting. How long lasting? The manufacturer offers a lifetime warranty on the LED lighting and dimmer! It really doesn't get any better than this! A 10' heavy duty AC cord is provided to be the main power cord for the rack. The entire unit is in a single black rack panel, and measures 19"W x 1.75"H x 8.2"D (10.8"D with light cylinders pulled out).

SAPBPRO15 Samson PowerBright Pro 15 Power Conditioner

\$128.95

Passive Resound PA Speaker

- ✓ Heavy-duty 10" low frequency driver
- ✓ 1" Throat horn, 44mm compression driver
- ✓ Dual-port tuned enclosure
- ✓ Dual 1/4" and Neutrik SpeakOn™ connections
- ✓ 125W @ 8 Ohms

**Great Speakers For Any Application...
At A Price That's Just Plain Right!**



The Resound RS10 Passive speaker takes the concept of PA systems to a new level! When using the RS10 as a front-firing speaker for main "front of house" PA, it provides clear sound with plenty of output! By combining high power handling, advanced crossover design, and quality speaker and cabinet components, Samson has created the perfect premium audio solution for any live application!

For deep low end that stays tight and punchy, the RS10 features heavy-duty custom ten-inch low frequency drivers. For highs, a 1.75-inch mylar diaphragm on a 1" throat wide dispersion horn provides crystal clear audio! The end result is an ultra-wide sound field and maximum quality! For simplicity in connections, the RS10 features BOTH 1/4" and Neutrik Speakon Input and Extension output connections.

To finish out the package, heavy-grade steel grills and durable carpet covering mean excellent protection against wear and tear, and the compact cabinets can be placed on the floor or stand-mounted using the integrated 1 3/8" pole mount receptacle (pole mount sold separately). Dimensions: WxHxD - 13.5" x 21.7" x 11.7" (343.2mm x 550mm x 298.4mm) Weight: 33.25lbs (15.1kg).

SARS10 Samson Passive Resound PA Speaker

\$148.95

Studio Monitor System

- ✓ Dual satellite speakers and a subwoofer
- ✓ 5W per channel to the Left/Right channels,
15W to the sub

Flat Response, Awesome Sound!



The TASCAM VLS21 is an affordable monitoring system for home recording and practicing. This self-powered satellite system provides 5W per channel to the desktop speakers and 15W to the ported sub. The desktop speakers are also remarkably thin, allowing these stylish speakers to be used at home or in the studio!

The left and right speakers use NXT technology drivers for full-range sound in a thin driver package. This approach improves on the traditional woofer and tweeter design by eliminating the phase cancellation that occurs when using multiple drivers and crossovers. NXT technology drivers provide wider dispersion, more uniform loudness and reduced room interaction than competing technologies. A single NXT driver covers a wider range than traditional drivers, reducing the phase distortion caused by using multiple drivers and crossovers.

Unlike multimedia speakers designed for listening to MP3s and video games, the VL-S21 was designed with a flat frequency response for critical listening and mixing. They're ideal for home recording studios, practicing with our CD Trainers, or monitoring desktop and laptop computer recording systems. Created for musicians looking for an affordable speaker system that doesn't take up a lot of desk space, the VL-S21 is an excellent entry-level monitoring solution!

VLS21 Tascam Studio Monitor System

\$98.95

Just Not Enough Space In A Catalog!

- ✓ Broadcast, Production, & DJ Mixers
- ✓ CD-R & MP3 Players & Recorders
- ✓ DVD & HDD Master Recorders
- ✓ Digital Multi-Track Editors
- ✓ Computer Audio Interfaces
- ✓ Portable SD Recorders
- ✓ Studio Equipment
- ✓ Microphones & Accessories
- ✓ Music Accessories
- ✓ And A Whole Lot More!

Visit
www.ramseyaudio.com



G Track USB Studio Condenser Microphone

- ✓ Large diaphragm studio condenser microphone
- ✓ Mic and Instrument/Line gain control with clip LED
- ✓ Stereo input jacks for instruments or line level signal
- ✓ Stereo headphone jack for no latency monitoring with level control
- ✓ 3-position headphone switch for stereo, mono, computer monitoring
- ✓ Includes Cakewalk's Sonar LE digital workstation software!
- ✓ Audio I/O and USB cables included
- ✓ Desktop microphone stand included
- ✓ Optional shockmount available

The new G-Track from Samson is a new paradigm in recording technology! A total solution that will help take your ideas from musical inspiration to finished tracks in a package the size of a microphone! The world's first USB condenser microphone with a BUILT-IN audio interface and mixer, allowing for simultaneous input of vocals and guitar, bass or keyboard while also providing monitoring through an onboard headphone output!

Not only can you record vocals directly into your PC with the USB mic, you can also record two mono instruments through the line/instrument input or a mix of one mono instrument and one vocal. Singer/songwriters can directly record vocals and instruments quickly and easily with just one device which makes the G-Track a must have for any home studio! The ease of use and portability also mean you can take it anywhere!

The G-track comes included with everything you need to get started including a desktop mic stand, swivel stand mount, USB cable, and all the cables you need to connect any musical instrument with a standard 1/4" or RCA output. It also includes the powerful Cakewalk Sonar LE recording software and works seamlessly with many other software packages such as Apple's GarageBand!

SAGM1U Samson G Track USB Studio Condenser Microphone
SP04 Samson Spider Style Shock Mount for SAGM1U Microphone

\$128.95
\$29.95

New For 2008

*Line In,
Headphone Out...
Like Having A
Built-In Mixer In
Your Microphone!*



USB Cardioid Studio Condenser Microphone

- ✓ The original USB studio condenser mic!
- ✓ Plug directly into any computer with a USB input!
- ✓ Cardioid pickup pattern
- ✓ Large 19mm diaphragm
- ✓ Includes Cakewalk's Sonar LE digital workstation software!
- ✓ Smooth, flat frequency response
- ✓ Includes USB cable
- ✓ Perfect for podcasters and musicians!
- ✓ 16-bit sample resolution
- ✓ Supports 8kHz, 11.025kHz, 22.05kHz, 44.1kHz, and 48kHz sampling rates
- ✓ USB low-power device - draws 26mA, suspend mode .3mA
- ✓ Frequency response: 40 Hz to 18kHz!

The Samson C01U is the world's first affordable studio condenser mic with a USB interface! Now, for the first time ever, musicians can affordably record music directly to their computers! No in/out boxes, pre-amps, or expensive Digital Audio Workstation hardware is required to use this mic - just plug and play! Based on Samson's proven C01, the C01U features a 19mm internal shock mounted diaphragm with a cardioid pick up pattern - giving pristine studio quality recordings every time! The C01U works on Macs and PCs alike, and makes a great choice for recording to a laptop since there is no need for any additional hardware. Although it's great for musicians on the road and home production studios, the C01U is also the perfect choice for anyone recording digital audio - podcasters, journalists, students, and businesspeople can all benefit from its ease-of-use and versatility! The C01U will have you recording directly to your computer at a fraction of the cost of other solutions!

The SAC01UCW now includes Sonar LE, the full-feature digital workstation software from Cakewalk in addition to SoftPre which gives you added functionality and control over your mic, including an Input Level Meter, Volume Control, High-pass filter, and Phase Switch. Of course, if you choose not to utilize this software, the mic will still work just fine with your computer's built-in drivers! It really doesn't get any easier than this! Just plug it in!

SAC01UCW Samson USB Condenser Microphone

\$88.95

**TOP
SELLER!**

*Attention, Attention...
No Audio Interfaces Required!*



Samson USB Condenser Recording/Podcasting Pak

- ✓ Includes Cakewalk's Sonar LE Digital Audio Workstation software
- ✓ Featuring the groundbreaking C01U USB condenser microphone!
- ✓ Includes mic clip, MD5 desktop mic stand, SP01 shockmount, and USB cable
- ✓ Durable, lightweight aluminum carrying case

With the C01U and C03U USB Studio Condenser Microphones, Samson blew the competition away when it came to personal computer recording - now we are proud to offer these special bundles to kick start your digital recording!

The package includes everything the aspiring podcaster needs: the groundbreaking C01U USB microphone that plugs directly into any USB capable PC or Mac plus handy accessories including a high quality mic stand and shockmount... did we mention the full-featured Sonar LE software from Cakewalk? With the C01UPK you're ready to podcast with the best of them!

SAC01UPK Samson Recording/Podcasting Pak

\$168.95

*Get On-The-Air...
Get On-Line...
Plug It In And Make It Happen!*



Samson USB Dynamic Microphone

- ✓ Includes Cakewalk's Music Creator DAW software!
- ✓ Plugs directly into any computer with USB!
- ✓ Includes tripod desk stand and carrying pouch
- ✓ Super cardioid pickup pattern

The Q1U features a smooth sounding neodymium element, capable of handling high SPL, cleverly interfaced to an onboard high quality microphone pre-amp, Analog-to-Digital converter and USB output. Just plug in the supplied USB cable, launch your DAW and start recording. The extended frequency and fast transient response insures an accurate reproduction with linear characteristics from bottom to top. The Q1U faithfully reproduces a variety of sound sources including vocals, acoustic instruments and overhead cymbals, and can handle high SPL perfect for use on drums or in front of a loud guitar amp. The Q1U is perfect for recording your music, Podcast or any acoustic audio source on your favorite computer based DAW (Digital Audio Workstation).

SAQ1UCW Samson USB Dynamic Microphone

\$58.95

*A Hand Held Dynamic...
That Plugs Into Your USB Port!*





Multi-Pattern USB Studio Condenser Microphone

- ✓ Plug directly into any computer with a USB input!
- ✓ Switchable cardioid, Omni, and figure-8 pickup patterns
- ✓ Dual large 19mm diaphragm elements
- ✓ Includes Cakewalk's Sonar LE digital workstation software!
- ✓ Smooth, flat frequency response
- ✓ Includes USB cable and carry pouch
- ✓ High quality A/D converter with 16-bit, 48kHz sampling rate
- ✓ Switchable high-pass filter and 20dB pad
- ✓ Perfect for podcasters and musicians!

**Large Diaphragm Condenser...
With Multiple Patterns!**

Samson is taking USB mics to the next level! All the benefits of direct-to-USB recording - No in/out boxes, pre-amps, or expensive Digital Audio Workstation hardware is required to use this mic - with an even beefier multi-pattern mic! Based on Samson's C03, the C03U features dual 19mm internal shock mounted diaphragms with switchable omni, cardioid, and figure-8 pick up patterns - giving it unmatched versatility!



Great for a variety of specialized recording situations - use it for multiple vocalists, ambient room micing, or recording a group of people!

The SAC03UCW now includes Sonar LE, the full-feature digital workstation software from Cakewalk in addition to SoftPre which gives you added functionality and control over your mic, including an Input Level Meter, Volume Control, High-pass filter, and Phase Switch. Of course, if you choose not to utilize this software, the mic will still work just fine with your computer's built-in drivers!

SAC03UCW Samson Large Diaphragm Multi-Pattern Condenser Microphone

\$138.95

Lavalier Condenser Microphone

- ✓ Great for presentations and video applications
- ✓ Fixed charge condenser element
- ✓ Enhanced cardioid pickup pattern
- ✓ Sturdy tie clip securely attaches microphone out of sight
- ✓ Includes carry pouch, windscreen, and XLR adapter!

**The Perfect Close Body Mic...
At A Price You Can Afford!**

The QL5 lavalier microphone from Samson is the idea choice for close body micing for presentation and video applications. The cardioid pickup pattern of the charged condenser element captures speech and vocals perfectly! A sturdy tie/shirt clip allows easy and secure attachment to clothes, keeping the microphone unobtrusive! The mic terminates with a P3 mini XLR connector, which plugs into the PM5 phantom power adapter. The PM5 supplies phantom power to the mic while transforming impedance from high to low, compensating for long cable runs. The QL5 also includes internal RF suppression, allowing use in high-RF urban areas! If you're looking for a great deal on a broadcast quality lav, this is it!



SAQL5CL Samson Lavalier Condenser Microphone

\$68.95

Large Diaphragm Condenser Microphone

- ✓ Cardioid pickup pattern
- ✓ Large 19mm diaphragm
- ✓ Heavy gauge mesh grill
- ✓ Gold-plated XLR connector
- ✓ LED Indicates presence of 48V phantom power
- ✓ Smooth, flat frequency response
- ✓ Swivel stand mount
- ✓ Optional SP01 shock mount



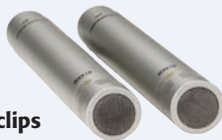
The perfect choice for micing up vocals, acoustic instruments, and for use as an overhead drum mic, the Samson C01 will get you a great sound - guaranteed! The C01 is accurate, detailed, and smooth, with warm bass and extended top end. The large 19mm diaphragm ensures a smooth flat frequency response. Sturdy construction will keep it working hard for years to come! A swivel stand mount is included with every C01, and for greater versatility, the optional SP01 shock mount is available.

SAC01 Samson Large Diaphragm Condenser Microphone

\$68.95

Pencil Condenser Microphones

- ✓ Super-cardioid pickup pattern
- ✓ Gold-plated XLR connectors
- ✓ Includes carrying case and shock-mounted mic clips
- ✓ Sold as stereo pair



This pair of condenser microphones is the perfect choice for micing up acoustic instruments, cymbals, percussion, piano, and for overhead micing situations.

The sleek and unobtrusive design of these mics gives audio engineers a great deal of flexibility and freedom when it comes to placement. Add them to your arsenal and find out why audio pros consider the pencil-style mic an invaluable tool!

SAC02 Samson Pencil Condenser Microphones (pair)

\$118.95

Recording Condenser Microphone

- ✓ Ideal for vocal or acoustic instrument micing
- ✓ Fixed charge condenser element
- ✓ Enhanced super-cardioid pickup pattern
- ✓ Flat frequency response
- ✓ 48V Phantom power operation
- ✓ Gold-plated XLR connection
- ✓ Mic stand adapter included



Part of Samson's ConcertLine series of microphones, the C15 CL is an extremely affordable large format condenser mic that doesn't compromise on quality! Featuring a shock-mounted element with an enhanced super-cardioid pickup pattern and a super-flat frequency response, the C15 is an ideal choice for pro-quality recording!

SAC15 Samson Recording Condenser Mic

\$48.95

5-Piece Drum Mic Set

- ✓ 1 Q Kick drum mic with mic stand swivel mount
- ✓ 1 Q Snare mic with rim clip
- ✓ 3 Q Tom mics with rim clips
- ✓ Gold-Plated XLR connectors
- ✓ Sturdy road Case



A great choice for live performance or studio work, this 5-piece set features Samson's Q-Series of affordable, high-quality drum mics, packed in a road-ready case for easy transportation.

The Q-Kick kick drum mic features a huge diaphragm element, a cardioid polar pattern to reduce feedback, and is designed with an extended bass end and a high peak to highlight the kick. The Q Snare flatters the high frequency components of the snare, and the Q Toms capture the deep lows and crisp attacks with a super-tight cardioid pattern. The performance of this kit by-far exceeds its modest price!

SADK5 Samson 5-Piece Drum Mic Set

\$148.95

8-Piece Drum Microphone Set

- ✓ 2 C01 overhead condenser mics
- ✓ 3 Q Tom mics with rim clips
- ✓ 1 Q Snare mic with rim clip
- ✓ 1 Q Kick bass drum mic with mount
- ✓ 1 C02H pencil condenser for hi-hat or ride cymbals

**When It's Time To Mic Your Kit...
This 8-Piece Set Can't Be Beat!**

The Samson DK8 includes everything you need to completely mic today's popular drum kit set-up in a professional live or studio application. All of the microphones in the kit feature a cardioid pickup pattern voiced specifically for the drum they are capturing and Gold-plated XLR connections to insure a low noise signal path. The complete eight-piece kit comes packaged in a rugged road case for easy travel and secure storage. Includes all the microphones in the 5-piece DK5 set plus two overhead condensers and a mini-pencil condenser for your hi-hat or ride cymbals.



SADK8 Samson 8-Piece Drum Mic Set

\$298.95



Dynamic Hand Held Microphone

- ✓ Cardioid pickup pattern!
- ✓ Dual-stage windscreens!
- ✓ 18' XLR Cable
- ✓ Includes hard-shell case

A handheld dynamic mic that excels in both live and recording applications, the R21S is equipped with a linear frequency response for superior reproduction! It's high-quality design withstands high SPL, making it excellent for micing loud guitar amps and drums. A tight cardioid pattern reduces feedback and a shock-mounted element minimizes handling noise and gives additional protection. Rugged, road-ready construction includes an anti-dent ring around the windscreens for extra protection

against accidents! Includes a custom hard shell case, mic clip with Euro adapter, and an 18' pro grade XLR microphone cable! That's right, for less than 30 bucks, you get it all! You can't go wrong with the 21S!

SAR21S Samson Dynamic Microphone

\$28.95



Mini-Direct Boxes

- ✓ Switchable input level handles instrument and speaker levels
- ✓ 48V Phantom power or 9V operation with auto battery shut-off
- ✓ Switchable ground lift
- ✓ 1/4" Link output

The only direct box you will ever need! The S-Direct provides the facility for direct audio insertion to a mixer or recorder. You can connect all kinds of signals with the S-Direct, including guitars, keyboards, signal processors, even high-powered speaker output from an amplifier! You can also tap off the signal from a guitar or bass and pass it to the onstage amp without affecting the original sound, eliminating the need to mic guitar amps. The S-Direct is also very useful for connecting unbalanced signals from sources like signal DJ and sub-mixers, effects processors, and keyboards to a main PA or recording mixer. The S-Direct has a power supply so you can rely on an even frequency response on any audio you connect, regardless of output impedance! (*I learned a long time ago... have a few of these in your gig bag, guitar case, or trunk!*)

Also Available: The S-Direct Plus!

The S-Direct Plus offers all the features of the original S-Direct but in stereo! It's like having two direct boxes in one and is the perfect solution for instruments with multiple outputs such as keyboards. (*OK, actually I keep these in my trunk!*)

SASDIR Samson Mini Direct Box
SASDIRPLUS Samson Mini-Direct Box Plus

\$28.95

\$38.95

SASDIR



SASDIRPLUS



Mini Headphone Amp

- ✓ Four 1/4" stereo headphone outputs
- ✓ Individual volume control for each output
- ✓ Stereo 1/4" input
- ✓ Includes 18V AC adapter

Once again, the Mini series has the solution to another common problem! One headphone or monitor jack, more than one person. Enough said! The S-Amp delivers high quality headphone amplification to 4 separate headphone jacks, complete with independent gain controls. Providing high power levels and superb fidelity, the S-Amp is also ruggedly built with large rubber bumper feet for shock protection. Includes 18V AC adapter. You need to keep one of these in your gig bag!

SASAMP Samson Mini-Headphone Amp **\$48.95**



Mini RCA/XLR Bump Box

- ✓ +4dBu to -10dBV audio level converters
- ✓ Stereo RCA unbalanced and XLR balanced inputs with level controls
- ✓ RCA -10dBV stereo outputs
- ✓ XLR +4dBu stereo outputs
- ✓ Rugged aluminum extruded chassis

This bump-box is a great problem solver for interfacing and level matching between consumer and pro-level audio equipment! Murphy's Law, if you have a balanced XLR plug, it will need to go into an unbalanced RCA input... or vice versa. Always a problem until now! This mini bump box quickly and easily converts RCA (-10dBV) unbalanced to XLR balanced (+4dBu) in either direction! Level controls for both are included to properly match the audio levels. The S-Convert is small enough to fit anywhere, but built tough for portability! Includes 18V AC Adapter. (*I keep these in my trunk too!*)

SASCONV Samson Mini S-Convert Bump Box **\$48.95**



Mini Audio Mixer

- ✓ 5 channel audio mixer
- ✓ XLR Balanced mic input with level control with phantom power
- ✓ RCA stereo inputs with level control
- ✓ 1/4" instrument line inputs with level control
- ✓ RCA plus 1/4" TRS outputs
- ✓ Includes 18V AC adapter

The S-Mix is a compact 5-channel mixer packed with high-end features! Its design includes high quality, low noise op-amps for added headroom and cleaner signals. Features XLR mic input with phantom power, two RCA unbalanced inputs, two 1/4" TRS line inputs, and both 1/4" TRS and RCA outputs. The S-Mix also comes in a rugged aluminum chassis with large rubber shock feet. When you have to put a gig together fast, there is no better solution!

SASMIX Samson Mini-Mixer **\$48.95**



Mini Phantom Power

- ✓ 2-channels
- ✓ 2 Balanced XLR mic inputs
- ✓ 2 Balanced XLR and 1/4" mic outputs
- ✓ Includes AC adapter

An awesome ultra-compact portable phantom power supply! One often forgets that condenser mics need phantom power and that not all mixers provide it! No problem with S-Phantom! Just put it in line with your mics and you're all set. Includes 18V AC adapter.

SASPHANT Samson Mini-Phantom Power Supply **\$48.95**



Airline UHF Wireless For Guitars

- ✓ Pedal mounted receivers make setup and use a breeze!
- ✓ Uses Airline mini plug-in transmitters, no belt packs!
- ✓ True-diversity UHF wireless system with PLL frequency control!
- ✓ Six channels available for simultaneous use

**The Incredible Receiver...
Next To Your Pedals!**

If you're a guitar/bass player without the room for the CR77 receiver in your setup, these packages are for you! These Airline guitar and bass systems use the same ultra-miniaturized transmitters that plug directly into your instrument, but instead of the large half-rack CR77 receiver, they interface with a super convenient compact pedal! You can integrate it easily into your current effects pedal setup and control your wireless connection on the fly, quickly and easily. The pedal receiver can be powered by either a 9V battery or the option AC adapter and features a 1/4" output jack, power switch, peak LED, and volume control.

The Airline guitar plugs are available in models to fit both Fender and Gibson style guitars, and will get 14 hours of battery life from a single AAA cell! Onboard controls include power on/off with green/red LED indicator, mute, peak LED, and input level control. The bass version will fit on any bass and includes all the same features but its receiver is specially designed with a shape circuit that gives you the thickest bottom end you've ever heard from a wireless unit! See Airline77 detailed specs on the following page.

SWQSGF Samson Airline Guitar System - Fender Style
SWQSGG Samson Airline Guitar System - Gibson Style
SWQSBG Samson Airline Bass System

\$298.95

\$298.95

\$298.95





Concert77 UHF Wireless Microphone Systems

- ✓ Available in hand-held mic, headset mic, or guitar versions
- ✓ True diversity UHF wireless system with PLL frequency control
- ✓ Six different available channels designed for simultaneous use
- ✓ Multi-segment audio level, RF level, and A/B antenna operation LED meters
- ✓ Squelch control eliminates carrier signal noise and RF interference
- ✓ Diversity technology for maximum range -- up to 300 feet!
- ✓ Tuned molded antennas for accurate reception
- ✓ XLR and unbalanced 1/4" outputs with mic/line level output switch

**Join The Same League As The Pro's...
At A Price You Won't Believe!**

TRUE-DIVERSITY ROCK STABLE UHF!

The new Concert77 system from Samson Wireless is a great UHF wireless solution ideal for any professional application. As you know, UHF means Ultra High Frequency, which in the case of these wireless microphone systems translates to crystal clear operation with no interference! Traditionally available on only the most expensive systems, the Concert77 system makes UHF performance and reliability affordable for everyone!

MICROPHONES OR INSTRUMENTS-YOUR CHOICE!

For handheld microphones, the Concert77 system uses the HT7 handheld transmitter with your choice of Samson's popular Q7 dynamic microphone or the C05 condenser microphone. Plug the included compact and lightweight HT7 directly into the base of either microphone and you're ready to go! The HT7 features a three-segment battery indicator, separate power and audio on/off switches, adjustable AF level (audio gain), and 12-hours of battery life on a single 9-volt battery.

For use with headset, lavalier microphones or musical instruments, the CT7 belt-pack transmitter has the same features but plugs into its audio source via the built-in P3 locking connection. Concert77 packages below include guitar, lavalier mic, aerobics headset mic, and wind instrument mic. Each package comes complete with the belt pack transmitter, microphone or instrument cable and the CR77 receiver, all in a durable molded carrying case.

THE ULTIMATE RECEIVER

The core of the Concert77 system is the CR77 true-diversity half-rack UHF receiver. Thanks to its specially designed synthesized PLL frequency control circuitry, it keeps the signal locked and true! Dual tuned molded antennas with LEDs monitor the true-diversity operation to ensure ultimate reliability! The CR77 also features a front panel display with large multi-segment audio level and RF level LED meters, and a large rotary volume knob that allows easy adjustment of audio output.

The rear panel features balanced XLR and un-balanced 1/4" outputs for plenty of connection options. In addition, two CR77 receivers can be rack mounted side-by-side in a single space rack adapter available as an added accessory. Experience the freedom of wireless, affordably and easily, with the Concert77 System from Samson Wireless!



CT7
Belt Pack
Transmitter

SW77SHQ7	Samson Concert 77 Wireless Handheld Microphone System with Q7 Microphone	\$208.95
SW77SH05	Samson Concert 77 Wireless Handheld Microphone System with C05 Microphone	\$228.95
SW77SQL5	Samson Concert 77 Wireless Lavalier Microphone System with Belt Pack Transmitter & QL5 Microphone	\$258.95
SW77SCE	Samson Concert 77 Wireless Aerobics System with Belt Pack Transmitter & QE Aerobics Microphone	\$278.95
SW77SW4	Samson Concert 77 Wireless Wind Instrument System with Belt Pack Transmitter & HM40 Microphone	\$228.95
SW77SGT	Samson Concert 77 Wireless Guitar System with Belt Pack Transmitter & Guitar Cable	\$198.95

Airline77 UHF Micro Wireless Microphone Systems

- ✓ Same performance packed Concert77 CR77 true-diversity UHF receiver as above!
- ✓ Latest micro technology transmitters eliminate most belt-packs!
- ✓ Guitar-plug integrated transmitters!
- ✓ Headset & aerobics mic integrated transmitters
- ✓ Aerobics without the belt-packs!
- ✓ Handheld mic plug-in transmitters
- ✓ Complete package, ready to go!

**Micro Technology Brings You Micro-Transmitters...
And Suddenly All Belt Packs Disappear!**

LOOK MA, NO BELT PACK!

Airline77 is Samson's newest version of the UHF Airline series that features the first micro-technology transmitters in the industry. Traditional wireless systems consist of a belt-packs and wires that hinder the performer. With Airline, there are NO belt-packs and NO cables! You get truly wireless operation for complete freedom!

The Airline headset transmitters feature the Samson Qe Fitness and Qv Vocal microphone elements. The Qe and Qv headset are designed to go around the back of the head rather than over the top, allowing the transmitter to be attached directly to a headband, out of the way and completely unobtrusive, while remaining comfortable and secure during performances or exercise routines! It's the perfect system for aerobics instructors because of its lightweight and ultra-compact design! Just imagine, no more cumbersome belt-packs!

THE PLUG IS THE TRANSMITTER!

For guitar players, the AG1 and AF1 Airline Guitar transmitters plug directly into the jack of the guitar with no cables running to a pack! The AG1 is a 90-degree plug suitable for most popular straight angle jacks like those found on Gibson guitars while the AF1 plugs in at a 45-degree angle for body mounted recessed jacks like those found on Fender guitars. Both offer complete wireless freedom with no belt-packs and solid UHF performance! Say goodbye to "Spinal Tap" moments thanks to awesome UHF rock-solid performance!

For professional presentation applications where a clip-on microphone is desired, the AL1 presentation transmitter is the perfect choice. The AL1 is only about the size of a book of matches and has a built in condenser lavalier element so it can be clipped on and worn without any additional equipment! Included with the AL1 is a QL5 lavalier, so if you want to hide the transmitter you can plug the QL5 into the mini jack, using the AL1 as the world's smallest belt-pack!

COMPLETE PACKAGES!

Each package utilizes the CR77 UHF true-diversity receiver described in the Concert77 series and the specific micro-transmitter or transmitter/microphone set. All of the Airline transmitters operate on inexpensive and lightweight AAA batteries that offer 14-hours of operation on a single battery. If you are ready for the ultimate in wireless freedom, you need the Airline77 system!

SW7ASHX	Samson Airline77 Wireless Handheld Microphone System with Q7 Microphone	\$258.95
SW7ASLQL5	Samson Airline77 Wireless Lavalier Microphone System with QL5 Microphone	\$318.95
SW7ASCE	Samson Airline77 Wireless Vocal/Aerobics Headset System with QE Aerobics Microphone	\$328.95
SW7ASGF	Samson Airline77 Wireless Guitar System - Fender Style Plug	\$258.95
SW7ASGG	Samson Airline77 Wireless Guitar System - Gibson Style Plug	\$258.95
SW7ASW4	Samson Airline77 Wireless Wind Instrument System with HM40 Microphone	\$398.95





Lightweight Speaker Stands

- ✓ Adjustable up to 6 feet in height!
- ✓ Universal 1 3/8" diameter adapter fits virtually all PA speakers!
- ✓ Road-ready steel construction!
- ✓ 55 pound capacity per stand!



Don't leave your speakers sitting on the floor! This set of two telescoping tripod stands is the perfect choice for setting up your PA system anywhere you go. Lightweight enough to be truly portable but sturdy enough to hold up to 55lb per stand!

SALS2 **Samson Lightweight Speaker Stands** **\$48.95**

Boom Stand Kit

- ✓ Heavy duty boom mic stand
- ✓ 18' XLR mic cable
- ✓ Mic clip and windscreens



The perfect boom mic stand kit for the road! Includes a heavy duty boom mic stand, 18' XLR cable, standard mic clip and windscreens...all in one easy box!

SAMK5 **Samson Boom Mic Stand Kit** **\$34.95**

18' Microphone Cables

- ✓ 18' Low noise cable
- ✓ Heavy-duty black XLR connectors
- ✓ Lifetime manufacturers warranty



Standard XLR mic cables are the things that you can never have enough of! When shopping around you will find a lot of them out there with all the cute adjectives attached meaning they are very special. Well, these are professional quality 18' mic cables, with high quality black anodized compression strain-relieved connectors. They are great, of the highest quality, and bundled in packages of three. You can't go wrong!

SAMC18 **Samson 18' Microphone Cable, 3 Pack** **\$26.95**

Microphone Shock Mount

- ✓ Fits condenser microphones
- ✓ Standard boom or mic stand thread mount
- ✓ Eliminates noise from floor, stand bumps and more!



A good shockmount is an invaluable tool that will save you lots of time redoing botched takes or trying to edit out microphone bumps in post-production, while adding extra professionalism to your live productions! When a microphone picks up an audio signal, it's also picking up mechanical noise and vibrations through the mic stand. Even tiny vibrations can cause issues, but these high-quality Spider-Mounts will eliminate these vibrations for the most natural sound possible!

Great for broadcast talent as well as studio mastering. Order SASP1 for the C01, C01U, C03, C03U, CL7, and CL8 mics. Order the SASP04 exclusively for the highly popular G track GM1U USB microphone. Standard thread.

SASP01 **Samson Microphone Shock Mount** **\$29.95**
SASP04 **Samson Microphone Shock Mount** **\$29.95**

Desktop Microphone Stand

- ✓ Holds any standard mic or mic clip
- ✓ Fixed 5" stand height
- ✓ Heavy weighted metal base
- ✓ Attractive and durable flat black color



One would think there isn't much to say about a standard desk stand. Well, one would be wrong! This desk stand is extremely heavy duty for the largest desk mics. No more worrying about it tipping over, it's heavy! The standard 5" height terminates in a standard thread to accept any microphone base or mic clip. The entire finish is an attractive matte black, not only great to match your equipment but being non-reflective it's great on camera!

SAMD5 **Samson Desktop Microphone Stand** **\$16.95**

Boom Mic Value Pack

- ✓ Everything you need for boom setup!
- ✓ Mic, boom, mic, cable, and case!
- ✓ Professional Q7 dynamic mic

If you're starting from scratch or just need to add a mic setup to your existing equipment, the Q7 Value Pack just can't be beat! First off, you get the professional Q7 hand held dynamic mic. Then all the goodies are added, including the pro boom mic stand, matching mic clip, a 25' pro grade XLR mic cable, and a matching gig bag to carry it all. Makes it easy to have your entire stage or studio boom ready to setup at a moments notice. And yes, you get all this at a price that simply can't be beat!

SAQ7VP **Samson Boom Value Pack** **\$118.95**



30' Pro Speaker Cables

- ✓ Heavy-duty 14 gauge wire oxygen free
- ✓ Speakon™ and 1/4" connectors
- ✓ 30 feet of cable
- ✓ Lifetime warranty



Highest quality professional quality speaker cables for easy and simple connection to your equipment. Perfect for studio connections and on the road gig setups. The cables feature oxygen free 14 gauge copper wire and are factory terminated in your choice of Speakon™ connectors, 1/4" connectors, or one of each. All cables are 30'.

SATSS30 Speaker cable, Speakon™ to Speakon™ Connectors **\$48.95**
SATSQ30 Speaker cable, 1/4" to 1/4" Connectors **\$24.95**
SATST30 Speaker cable, 1/4" to Speakon™ Connectors **\$43.95**

Condenser Mic Windscreens

- ✓ Durable black foam construction
- ✓ Greatly reduces wind and p-popping noise
- ✓ Fits C01, C01U, C03, C03U, CL7 and other similar styled mics



Get rid of excess and unwanted noise by protecting your mics with these affordable windscreens! Especially useful for outdoor situations to eliminate wind noise. Also helps to reduce p-popping. Fits the condenser mics listed, as well as other microphones of equivalent size and shape.

SAWS03 **Samson Condenser Mic Windscreen** **\$7.95**

Dynamic Mic Windscreens

- ✓ Greatly reduce wind and p-popping noise
- ✓ Fits most dynamic style handheld mics
- ✓ Durable black foam construction



Great general replacement (or new if you never had any!) windscreens for the typical dynamic hand held microphones. Fits most models.

Great for wind noise reduction and to reduce p-popping. Black durable foam matches any mic. Comes in a handy pack of 5.

SAWS1 **Samson Handheld Mic Windscreens, 5 Pack** **\$10.95**

Headset Mic Windscreens

- ✓ Greatly reduce wind and p-popping noise
- ✓ Fits most headset attached boom boom
- ✓ Durable foam construction



A great thing to have extras of! This general purpose windscreen fits most headset worn boom mics. Great for wind noise reduction and to reduce p-popping from such close-worn headset mics. Black durable foam matches any mic. Comes in a handy pack of 5.

SAWS5E **Samson Headset Mic Windscreens, 5 Pack** **\$10.95**

Microphone Value Pack

- ✓ Mic stand, dynamic mic, and cable!
- ✓ The complete package, ready to setup!
- ✓ Professional R21 dynamic mic



The VP1 makes it easy to get started and saves you the trouble of getting separate components! It includes the professional R21 dynamic handheld microphone, mic clip with Euro adapter, a telescoping tripod based microphone stand, and a 25' pro grade XLR microphone cable. Everything you need to get set up! This combination really puts the value in value pack! If you're looking for a boom mic stand, check out the Q7VP value pack. It includes the famous Q7 dynamic microphone plus a boom mic stand and case. Either way, if you're looking for value in microphones, these packs are the way to go!

SAVP1 **Samson Microphone Value Pack** **\$58.95**

Microphone Pop Filter

- ✓ Nylon mesh screen prevents vocal popping and sibilance
- ✓ Universal mic stand mounting bracket
- ✓ Flexible metal gooseneck



This high-quality pop filter will help you sound your best! Controlling popping P's and sizzling S's before the sound hits the mic maximizes vocal quality in musical recordings and talk radio/podcasting broadcasts. When pops and hisses in speech occur, they can cause some serious clipping issues. The high quality nylon mesh screen of the PS01 blocks out these sounds, and the result is cleaner and better sounding vocals! Clamps to your mic stand, and the gooseneck Pop Filter easily swivels up in front of your mic. You've see the pro's use them in the studio, why don't you?!

SAPS01 **Samson Pop Filter** **\$23.95**



Combination Guitar Amp/CD Trainers

- ✓ Built-in DSP effects!
- ✓ Neo Tube solid state amp for true tube sound!
- ✓ CD trainer, change tempo without pitch!
- ✓ Seamless loop and guitar cancel!
- ✓ RCA line level in's and out's!
- ✓ All-in-one complete package!

100 WATT GA100CD

- ✓ 100 watt guitar amplifier!
- ✓ 20 watt per channel CD amplifier!
- ✓ 12" RockReady guitar amp speaker!
- ✓ Dual 5" stereo CD player speakers!

30 WATT GA30CD

- ✓ 30 watt guitar amplifier!
- ✓ 7.5 watt per channel CD amplifier!
- ✓ 6.5" guitar amp speaker!
- ✓ Dual 3" stereo CD player speakers!

THE SOUND OF TUBES...WITHOUT THE TUBES!

As everyone knows, tube amps sound great... but their price usually clocks in at many times that of equivalent solid-state amps. Tascam, an innovator in pro audio guitar gear for over 30 years, has come up with some new units that are not only two of the most amazing-sounding solid-state amps on the market but also CD trainer units with built-in speed-controlled CD playback! These brand new amps are the latest and greatest in solid state, featuring Tascam's newly created Neo Tube™ technology! Tascam's Neo Tube system is not the typical "modeling" of older sold state amps -- Instead, it is a brand-new, painstakingly researched and designed set of patented Tascam circuitry that combines the fast, natural response of tubes with the tried and true durability of solid state!

INCREDIBLE FEATURES!

Tons of built in effects including delay, chorus, phase, flanger, tremolo & vibrato, reverb, and more can be applied to get your tone exactly the way you want without a bunch of extra pedals and processors! But wait, there's more! An amazing-sounding and feature-packed amplifier is just the beginning for these amps because they are also a full-featured CD players and trainers! You can pop in your favorite CDs and play along to learn the songs -- if you need to slow the music down, no problem, the GA30CD and GA100CD let you change the tempo without screwing up the pitch! You can also change the pitch of the CD without changing the speed and tune the CD to your guitar instead of the other way around! You can also create seamless looping of a section of any CD. As a bonus, the trainer also lets you cancel out existing guitar noise from almost any CD so you can play along. With the RCA line outputs you can record directly from the amp or mix the amp and CD audio. The included CD player also makes these great amps for singer/songwriters and solo performers who play along with backing tracks from CDs as they eliminate the need to carry around extra CD playback equipment. Runs on 110VAC. (I gave one of these to my kid to use in his band. There was a waiting line to plug into it!)



100 WATT
GA100CD



30 WATT
GA30CD



Are They Amps, Trainers, Or CD Players?
...YES!

GA100CD 100 Watt Guitar Amplifier CD Trainer Combo
GA30CD 30 Watt Guitar Amplifier CD Trainer Combo

\$698.95
\$328.95

MP3 Guitar, Bass, and Voice Trainers

- ✓ 240-song memory capacity (based on average 4-minute MP3 encoded at 128kbps)
- ✓ 1GB built-in flash memory, recognizes 550 files or folders
- ✓ Variable Speed Audition changes the speed of the MP3 playback without changing the pitch
- ✓ Pitch control in 1% steps so you don't have to re-tune
- ✓ Seamless looping for practicing tricky passages
- ✓ 1/4" guitar, bass, or microphone input
- ✓ Built-in guitar-cancel, bass cancel, & voice cancel from MP3 music sources allowing you to practice along to the music only
- ✓ Built-in metronome and guitar/bass tuners
- ✓ Built-in multi-effects for guitar and bass units, reverb and echo for voice units
- ✓ Seamless in-out loop
- ✓ 1/8" Headphone output
- ✓ Built-in rechargeable battery with 9-hour reserve
- ✓ 128x64 graphic LCD display
- ✓ USB jack
- ✓ Auto Power Off and Hold function



MPGT1-GUITAR TRAINER



MPGT1-BASS TRAINER



MPGT1-VOICE TRAINER

Practice Amps, Trainers, And 1GB MP3 Players... All In One!

THE NEXT GENERATION PORTABLE TRAINER

The MP series trainer by Tascam is the first MP3 player designed specifically for guitar and bass players as well as singers! Following in the footsteps of the popular portable CD trainers, these MP3 trainers have 1GB of built-in flash memory, enough to store up to 240 songs! Guitar and vocal parts can be slowed down, looped, and even eliminated to help you train. Play back your MP3s using Likewise, songs can even be pitched up or down to match the tuning of your instrument or your

Variable Speed Audition, which slows down the speed without changing the pitch. vocal range depending on which unit you are using.

Plug your guitar, bass, or microphone into the trainer's input and you can play or sing along with your favorite music. Use your headphones and you won't disturb those pesky neighbors, so crank it up to your hearts content! Of course, you can also plug the output into your DI and amplifier and REALLY crank it up! The guitar and bass units feature a host of guitar effects plus an instrument canceller so you can drop out the guitar or bass and play along with the music only. The voice unit features built-in reverb and echo, plus a voice canceller, giving you karaoke-style voice-free music to sing to. All units feature a built-in metronome and tuner to help keep you on-pitch and on-beat!

HOLDS OVER 240 SONGS!

All units use a high-speed USB connection to charge and load up your MP3's. At 128kbps, that's over 240 typical 4 minute songs! The built-in Li-Ion battery lasts approximately 9 hours between charges. An optional AC power supply is available for continuous use. A large data wheel and intuitive interface zips you through your MP3 library with ease and is displayed on the large graphical LCD display screen.

The entire trainer is smaller than that average stomp box, so stuff it in your gig bag and hit the road! You will wonder how you got along without it! Measures 3.1"W x 4.3"W x 1"D and weighs only 7.8 ounces including the battery! Whether you're looking for a small portable practice amp, an MP3 player with 1GB of internal storage, or an interactive trainer, the new MP series will make the cut, hands down!

MPGT1 Tascam Guitar MP3 Trainer
MPBT1 Tascam Bass Guitar MP3 Trainer
MBVT1 Tascam Voice MP3 Trainer
PSP520 110VAC Power Supply for MB Series MP3 Trainers

\$198.95
\$198.95
\$198.95
\$22.95



Zoom Digital Effects Pedals: 1 Series

- ✓ Zoom ZFX-3 24-bit/96kHz digital multi-effects processor
- ✓ 6 Effects Modules
- ✓ 40kHz frequency response
- ✓ Built in drum machine
- ✓ Slap reverb & feedback control
- ✓ 80 patches (40 user defined and 40 preset patches)
- ✓ Operates on 4 AA batteries or included AC power supply

Amazing Range of Features, Awesome Sound, Affordable Price!



96 kHz SAMPLING RECREATES TRUE TUBE AMP SOUND

The tone of tube amplification lies in the mix of rich harmonics that extend far beyond the range of human hearing (20 kHz). Because the ZOOM 1 series uses 96 kHz sampling, they provide a flat frequency response from 20 Hz up to an amazing 40 kHz. This allows for an accurate model of the delicate harmonic structure of the distortion produced by a tube amp. The dynamic range is also excellent thanks to its 24-bit A/D/A conversion. Every detail of your playing technique, whether picked or fingered, emerges with full clarity.

THE NEW ZOOM ZFX-3 32-BIT DSP CHIP

The heart of any multi-effect device is its processor and decoder section. ZOOM has attained a new level with the ZFX-3 chip. 32-bit architecture ensures outstanding performance and allows smooth and detailed signal processing. Fine nuances of fingering and touch come through without any deterioration thanks to this incredibly powerful DSP.

21 AMP/STOMP BOX MODELING CHOICES

Covering a range of popular models by digitally simulating the clipping action of analog devices such as tubes and diodes, these pedals faithfully duplicate the distortion of tube amps and vintage effects. The choices range from models that made guitar history such as Fender, Marshall and Vox to popular modern amps including Mesa/Boogie, Peavey, and Diezel. An acoustic simulator is also included, so your electric instrument can sound like an acoustic guitar when the fancy strikes.

47 HIGH-QUALITY EFFECTS TO FIRE YOUR IMAGINATION

A total of eight modules provide 47 effect types ranging from standard to advanced. Duplicate the historic sounds of the MXR Dynacomp, Vox Wah, or Crybaby Wah. Apply equalization in three bands. Add spaciousness and depth with two types of chorus. Simulate the acoustics of a room or a concert hall with five types of reverb. All effects are designed for real-life musical applications. Have the Harmonized Pitch Shifter play along in key. Use long delay and echo settings of up to 5 seconds. A multitude of high-performance choices opens up totally new territory in this class.

40 PRESETS GIVE YOU THE SOUND OF THE PROS

Utilize settings for duplicating the tone of well-known amps and stomp boxes, settings that are modeled on the signature sound of famous guitarists as well as completely original ZOOM effect sound creations. Right out of the box, you can enjoy professional-quality guitar sound. When creativity strikes, a separate area capable of storing another 40 user patches is also provided.

SPECIFICATIONS

Effect Types	47
Effect Modules	8
Max. Simultaneous Effects	8
Patch Memory	User 40+Preset 40, Total 80
Sampling Frequency	96kHz
A/D Conversion	24 bit, 64 times over-sampling
D/A Conversion	24 bit, 128 times over-sampling
Input	1/4" phone jack (Rated input level: -20dBm, Output (Line/headphones combined) 1/4" stereo phone jack (Maximum output level: +5dBm, Output load impedance: 10kohm or higher)
Control Input	Expression pedal, Foot switch
Balanced Output	XLR jack (Input/output gain: 0dB, Output impedance: 200ohm/HOT-COLD)
Display	2 digit 7 segment LED display, Parameter LED, Pedal assign LED
Power Requirements	AA size (LR6) battery x 4 (Optional), or AC adaptor DC9V/300mA/Center minus type
Battery Life	6 hours (with alkaline batteries)
Dimensions	255(W) x 165(D) x 79(H)mm
Weight	1200g (without batteries)

feels great when you pick it up, and equally stable when you use the foot controls. This is the kind of product design that you can get only from an industry leader like ZOOM.

AC/DC ALLOWS USE JUST ABOUT ANYWHERE

Thanks to its circuit design optimized for low voltage operation, the unit will run for 6+ hours continuously on a set of four AA batteries. The AC adaptor can be plugged in for extended studio work, but when on-stage you never need to worry about stage-front AC power. We can't fit all the awesome features of these pedals in this catalog, so be sure to check out www.ramseyaudio.com for full specifications and effects lists for each pedal!

B1 Zoom Bass Effects Pedal
G1 Zoom Guitar Effects Pedal

\$58.95
\$58.95

Zoom Digital X-Series Effects Pedals

Take the awesome features of the 1 series, and add a kickass pedal to control effect parameters in real time! Set the mood with vintage wah, play a pitch shift, or adjust the volume. Go beyond conventional pedal effects and adjust the mixing ratio of direct sound and synth/drive sound, or control the modulation rate!

The dedicated PEDAL ASSIGN key and status LED indicators make it a cinch to select the effect to control. Effect on/off switching is also possible by pushing the pedal fully down! For full information visit us at www.ramseyaudio.com.

G1X Zoom Guitar Effects Pedal w/Expression Pedal
B1X Zoom Bass Effects Pedal w/Expression Pedal



\$78.95
\$78.95

EFFECT LIST	
MODEL Module	Martin Dreadnought, Gibson Super Jumbo, Martin Auditorium, Gibson Round Shoulder, Tacoma, Ovation, Nylon, Maccaferri, Dobro, National, Resophonic, Tube Preamp Mic
MIC Module	Compressor, Limiter
COMP / LIMIT Module	Low EQ, Low Parametric EQ
LOW EQ Module	High EQ, High Parametric EQ
HIGH EQ Module	Znr
ZNR Module	Chorus, Stereo Chorus, Chorus Ensemble, Air, Flanger, Resonator, Delay, Tape Echo, Reverse Delay, Detune, Phaser, Auto Wah, Tremolo, Step
MOD / SFX Module	Hall, Room, Spring, Arena, Tiled Room, Modern Spring, Bright Slap Reverb, Dark Slap Reverb, Early Reflection, Multi Tap Delay, Delay, Echo, Ping Pong Delay
DELAY / REVERB Module	

SIMPLE AND FRIENDLY USER INTERFACE

Editing an effect is as simple as choosing the target with the selector knob and adjusting the parameter with the value knob. Let your imagination roam free and put your ideas into practice without being hampered by cumbersome controls.

DRUM MACHINE WITH PCM SOUND SOURCES

Realistic drum sounds derived from PCM sources are arranged in a variety of rhythm patterns for different musical genres. The 40 rhythm variations include the steady 8-beat of Rock and Pop, funky 16-beat, a "Jazzy" 4-beat, some great shuffle for Blues sessions, and many more choices. Rhythm training is a cinch and tap input allows you to specify the tempo easily.

AUTO-CHROMATIC TUNER FOR GUITAR

The guitar tuner can be called up instantly by pushing the two foot switches together. High-brightness LED indicators make the note readout easy to see on a dark stage. Plus, mute tuning so the audience can't hear you!

ULTRA LOW NOISE DESIGN ON A PAR WITH STUDIO EQUIPMENT

Specifications such as a signal-to-noise ratio of 110 dB and noise floor of -98 dBm demonstrate a level of performance that's not usually seen in units of this class. Background noise is a thing of the past, resulting in superbly transparent sound. ZOOM's original noise reduction (ZNR) removes noise in playing pauses while maintaining a natural release even on the tail of sustained notes.

FITS IN THE POCKET OF A GIG BAG

The compact size and light weight of these pedals make them ideal for those who want plenty of effects and great performance without having to carry a lot of gear. The reinforced plastic body can withstand the rigors of use on stage and on the road. The stylish looks are also highly functional with the flush surface able to distribute pressure evenly. The unit



Zoom Digital Effects Pedals: 2 Series

- ✓ Zoom ZFX-3 24-bit/96kHz digital multi-effects processor
- ✓ 8 Effects Modules
- ✓ Ultra-Wide frequency response, 20Hz-40KHz
- ✓ Built in drum machine
- ✓ Slap reverb & feedback control
- ✓ 80 patches (40 user defined and 40 preset patches)
- ✓ Operates on 4 AA batteries or included AC power supply



The Next Generation of Awesome All-In-One Pedals! All The Features of the 1 Series Plus Lots More!

THE G2 PEDAL: A GUITAR PLAYERS DREAM!

By digitally simulating the clipping action of analog devices such as tubes and diodes, the G Series faithfully duplicates the distortion of tube amps and vintage effects. This includes not only the superficial sound character but also elements such as depth and dynamics. As you start using the G Series, you will be amazed by the realistic balance between fundamental notes and harmonics that is essential to a great analog tone!

The G2 Features These 16 Classic Amp and Stomp Box Models

- Fender Twin Reverb' 65:** This is the tube combo amp often called the "Black Panel". Its clean sound is characterized by flamboyant highs.
- VOX AC30 / 6TB:** This Class A tube combo amp is representative of the 1960s Liverpool sound created by such bands as The Beatles and The Shadows. Its major appeal is unclouded straightforward sound.
- ROLAND Jazz Chorus:** Famous combo amp made in Japan. The uncolored clean sound shows what's possible with solid state designs, with the spacious built-in chorus being another highlight.
- Marshall JCM800:** A tube stack amp favored by many hard rock guitarists. Great treble plus a solid low end guarantee powerful sound.
- Fender Tweed Deluxe '53:** A compact tube combo amp that's representative of the Fender Tweed series. Its dry distortion and characteristic cabinet sound made it a favorite with many blues legends.
- MESA/BOOGIE Mark III:** Combo amp noted for its extended midrange and long sustain. A mainstay of fusion guitarists, from Santana to Larry Carlton.
- Marshall JCM2000:** Flexible stack amp that covers a wide range of genres. Traditional Marshall sound combines power with rich harmonics, but sharp metallic distortion is also possible.
- MESA/BOOGIE Dual Rectifier:** High-gain stack amp with two rectifier circuits (silicone diode and vacuum tube) gives punchy metallic drive sound, great for hard modern rock.
- PEAVEY 5150 STACK:** The high-gain tube stack made famous by Eddie Van Halen. Produces tight bass and detailed distortion.
- BOSS OD-1 Overdrive Pedal:** Overdrive with mild, richly nuanced distortion in the manner of a fully driven tube amp. Popular as a booster for giving backbone to a stack amp.
- Marshall Guv'nor Overdrive Pedal:** Control box that recreates the distortion of a Marshall amp. Popular among hard rock guitarists as an easy way to get Marshall sound.
- MATCHLESS Hot Box:** Tube preamp for creating that MATCHLESS amp quality. Fat and punchy drive sound brings out the picking nuances.
- Dallas-Arbitrator FUZZ FACE Pedal:** Gutsy low bass and long sustain are the hallmarks of this fuzz effect. Made famous by the legendary Jimi Hendrix. The panel design resembling a face also was a unique touch.
- BOSS MT-2 Distortion Pedal:** A distortion pedal with real wild metal character and fat midrange. Go for the ultra long sustain.
- Zoom Extreme Distortion:** Stressing the digital edge, this ZOOM original pulls out all the stops when it comes to distortion. Get the strongest high-gain sound in the world.
- Zoom Digital Fuzz:** Another ZOOM original, this digital fuzz effect will go places where analog simply can't follow. Its "broken" quality ushers in a new fuzz generation.

THE B2 PEDAL: LOW END WITH STYLE!

Sophisticated bass amp modeling allows you to adjust parameters such as speaker cabinet characteristics and low-range response in three levels. Get the dynamic, high-impact bass sound of a large cabinet even with flat-response systems. This is handy when using headphones or studio monitors, or when playing through a small combo amp or other bass amp with low output power!

The B2 Features These 13 Classic Amp and Stomp Box Models

- AMPEG SVT + 810E:** All-tube bass amplifier incorporating original Super Valve Technology. Thanks to its gutsy drive sound, it has remained one of the most popular bass amps ever.
- Marshall 1992 Super Bass + 1935A:** A vintage tube amp featuring the characteristic warm and mild Marshall overdrive sound. Great for the active bass player leading a band.
- SWR SM-900 + Goliath:** By mounting a tweeter in the speaker cabinet, this bass amp succeeds in combining a rich low end with clear highs. Very popular among slap bassists.
- Acoustic 360 + 301:** Solid-state amp embraced by many top bassists of the seventies and eighties. Boomy midrange and warm low end are its major features.
- Hartke HA3500 + 4.5XL:** With its aluminum-cone speaker, this bass amp achieves clear reproduction over the entire range. Famous for its great response and transparent sound that preserves the original character of the instrument.
- Fender Bassman 100 + 4 x 12" cabinet:** Tube amplifier with silver faceplate from the early days of the electric bass. Creates a vintage bass sound that is a perfect match for melodious phrases.
- Trace Elliot AH-500 + 1048H / 1518:** 500W high-power bass amp with a firm core and distinct contours. Makes those phrases flow easily and smoothly for Rock and Pop.
- Tube Preamp (ZOOM original):** Simulates a high-class tube preamp such as used in recording studios. Creates fat and supple sound.
- SANSAMP BASS DRIVER DI:** This amp simulator recreates the characteristic drive feeling of a tube device. A favorite for live performance and for recording.
- Ibanez TS9 Tube Screamer:** Stomp box often used as booster for tube amps. Produces natural overdrive sound that clearly brings out those picking nuances.
- BOSS ODB-3:** The ODB-3 is designed specifically for bass and belongs to the famous Boss OD series of distortion stomp boxes. It produces aggressive distortion characterized by flashy highs.
- MXR BASS D.I.+:** Preamp incorporating a pedal type DI function for the clean channel and distortion channel. The B2 series simulates the sound of the distortion channel with its solid body.
- Dallas-Arbitrator FUZZ FACE:** Fuzz pedal famous for its unique round "face" design. Vintage fuzz sound fueled by the destructive energy of germanium diodes.

THE A2 PEDAL: GREAT ACOUSTIC SOUND!

The A2 series incorporates 24-bit / 96 kHz sampling and sophisticated sound modeling technology to process the line signal from the pickup, adding a lush body tone and the spatial ambience that is created by mic recording. Even when playing through an amplifier or PA speaker, the resonance of the guitar body is restored, allowing the natural acoustic sound to shine through!

The A2 Features These 12 Acoustic Guitar/Preamp Simulations

- MARTIN D-28:** Martin, the leading manufacturer of acoustic guitars, introduced this model in 1931. With its Dreadnought body, it has become the "gold standard" of acoustic guitars. The sound is well balanced and rich, great for chord play.
- GIBSON SJ-200:** This is the top-ranked model from Gibson, known as the "king of flat-tops". Its extra large body produces sound on a grand scale with a rich low-end.
- MARTIN 000-18:** Slightly smaller than a Dreadnought, this is the definitive Auditorium body guitar. The detailed, bright sound is typically Martin, which is why the guitar is often used for recording.
- GIBSON J-45:** A Dreadnought model with a smooth round shoulder design. Much loved by blues and rock guitarists for its warm tone and unique attack dynamics.
- TACOMA C3C:** Concentrating on the top plate sound, the soundhole of the C3C is located in the low-vibration shoulder area. A characteristic midrange tone is the hallmark of this guitar.
- OVATION ADAMAS:** This celebrated electroacoustic guitar is famous for its unique and original design with a molded round back body and epaulette type soundhole consisting of many tiny holes.
- NYLON (ZOOM original):** Simulates the soft and delicate sound of a nylon-string guitar. Great for classical music, Jazz, Bossa Nova, Flamenco and other finger-picking styles.
- SELMER MACCAFERRI:** Simulation of the Selmer-Maccaferri guitar used by Gypsy Jazz great Django Reinhardt in France from 1930 into the fifties. The Maccaferri model is characterized by its distinctive mid/high-range sound.
- DOBRO MODEL 27:** This is a resonator guitar from Dobro with wooden body and metal resonator. Suitable for country blues and slide/bottleneck playing styles.
- NATIONAL RESO-PHONIC STYLE O:** This is a resonator guitar from National with brass body and metal resonator. It produces a more metallic sound than a Dobro.
- RESOPHONIC (ZOOM original):** ZOOM original resonator guitar sound with treble emphasis producing a dry, resonant tone.
- TUBE PREAMP (ZOOM original):** Simulation modeled on an acoustic guitar preamp. Mixing balance between solid-state circuitry and tube circuitry can be adjusted.

Whether you are a bass player, or acoustic./electric guitarist, these pedals will help take your playing to the next level with their unprecedented features and options! We can't fit the full specifications of these pedals in this catalog (there are just too many features) so visit www.ramseyaudio.com if you are interested in seeing all of what these pedals have to offer!

Specifications

Maximum Simultaneous Effects:	9
Patch Memory:	User 40+Preset 40, Total 80
Sampling Frequency:	96kHz
A/D Conversion:	24-bit, 64 times over-sampling
D/A Conversion:	24-bit, 128 times over-sampling
Display:	2digit 7 segment LED display, Parameter LED
Power Requirements:	AA size(LR6)battery x 4(Optional), or AC adaptor DC9V/300mA/Center minus type(Optional, AD-0006 recommended)
Battery Life:	7.5 hours (with alkaline batteries)
Dimensions:	156(W) x 162(D) x 65(H)mm
Weight:	700g (without batteries)

A2	Zoom Acoustic Effects Pedal	\$98.95
B2	Zoom Bass Effects Pedal	\$98.95
G2	Zoom Guitar Effects Pedal	\$98.95



Zoom Digital Effects Pedals: 21U Series

Combine All The Features... Then Add USB!

The USB port allows the unit to function as an audio interface for a computer. Simply connect a USB cable to utilize the high-quality sound of the B2.1U in a computer-based recording system.

The superb "Cubase LE" DAW software comes bundled with the unit so you can start creating sophisticated music straight away. Because playback from the DAW application can be monitored at the B2.1U itself, there are no latency problems during recording. Powering the unit from the computer via the USB bus is also supported. Supported OS: Windows XP or later, Mac OS X 10.2 or later. Visit www.ramseyaudio.com for detailed specifications.

A21U	Zoom Acoustic Effects Pedal With Expression Pedal and USB Interface	\$188.95
G21U	Zoom Guitar Effects Pedal With Expression Pedal and USB Interface	\$188.95
B21U	Zoom Bass Effects Pedal With Expression Pedal and USB Interface	\$188.95

Zoom Tube Guitar Consoles

- ✓ The ultimate performance pedal consoles!
- ✓ Zoom ZFX-3 32-Bit DSP!
- ✓ Energizer with 12AX7 tubes for an incredible sound!
- ✓ Amp-Select feature
- ✓ Guitar amp and stomp box modeling
- ✓ Intuitive interface making it great for on-stage use!
- ✓ 6-band graphic equalizer
- ✓ Sturdy metal chassis and rubber damping for extra toughness and durability!
- ✓ 2-Channel pre-amp section
- ✓ MIDI input and output plus Aux input

**The Ultimate Guitar Consoles For Stage And Studio...
With The True Tube Sound That Can't Be Beat!**

ENERGIZER USING 12AX7 TUBES

Giving body to the guitar sound and adding supple power and intensity - that is the task of the Energizer. Turning up the TUBE control to drive the 12AX7 produces warm crunch with rich harmonics. The BOOST control spruces up highs and lows, resulting in more transparency!

DSP SOUND MODELING PLUS TUBE CIRCUITRY CREATE THE ULTIMATE IN DISTORTION!

96 kHz sampling and 24-bit A/D/A conversion assure super high resolution sound. An abundance of signal processing power allows accurate recreation of the complex upper-range harmonics that are the hallmark of tube amplifiers. Analog circuitry using a 12AX7 tube then adds that classic warmth and sonic impact to the DSP sound. The result combines the best of the digital and analog worlds: distortion so advanced and sophisticated it elevates your guitar playing to the next level!

PREAMP SECTION WITH TWO CHANNELS

The preamp section, comprised of the amp/drive-modeling, and EQ modules offers two channels per patch. You can easily select a channel by simple foot switch operation. Toggle between a Fender clean sound for rhythm and a Marshall drive sound for leads while keeping modulation and spatial effect settings the same. The user interface with analog knobs lets you shape the sound with the same facility as on a guitar amp!



G92TT



G71UT

GREAT FOR STAGE WORK OR DIRECT RECORDING

The amp/drive-modeling blocks have two dedicated algorithms for each amp/drive type, designed for live playing and direct recording. The CABINET effect simulates amp and mic recording characteristics as well, and the algorithm is automatically switched according to the CABINET on/off setting. This lets you bring the same guitar sound that you used during practice or recording right on to the stage. Alternatively, sound settings that were determined during a session with the band can be used seamlessly in the studio as well.

A clear leader in pedals for onstage use, the intuitive interface of these consoles ensures that you can directly edit parameters on the fly - four analog style rotary knobs can simultaneously change your sound! The large LCD panel shows patch and parameter names while direct access keys are provided for each module. Foot switches allow easy effect bank selection, module and hold delay switching, or tap tempo input!

These consoles also feature the world's fastest patch change speed, a lightning fast .007 seconds! You'll never miss a beat when switching between presets mid-song, and there's no need to hit the switch in advance! Another boon to live players is the built-in tuner. It features not only standard auto-chromatic tuning but a wide variety of extra tuning methods, including open tunings. It also gives you extra-bright LED indicators for easy visibility on dark stages, and the requisite muted-tuning function so the audience doesn't need to hear you tuning up! There's just too much to describe here, so visit our pro-audio web site at www.ramseyaudio.com for complete information and specifications!

	SPECIFICATIONS
Effect Types	120
Effect Modules	10
Max. Simultaneous Effects	10
Patch Memory	User 100+Preset 100, Total 200
Sampling Frequency	96kHz
A/D Conversion	24 bit, 64 times over-sampling
D/A Conversion	24 bit, 128 times over-sampling
Signal Processing	32 bit
Frequency Response	20Hz-40kHz+1.0dB, -3.0dB (10kohm load)
Tube Circuitry	2 x 12AX7 (G92TT) 1 x 12AX7 (G71UT)
MIDI	IN/OUT
USB Interface	16 bit, 32kHz / 44.1kHz/48kHz
Display	2 digit 7 segment LED, backlit LCD
Power Requirements	15V AC, 1.5A
Dimensions	595(W)x 235(D)x 85(H)mm
Weight	5.5kg
Supplied Accessories	AC adaptor (AD-0012)

G71UT	Zoom Guitar Console with Tube, USB, Expression Pedal	\$298.95
G92TT	Zoom Guitar Console with 2 Tubes, USB, Dual Expression Pedals	\$398.95

120 Watt "KickBack" Bass Combo Amplifier

- ✓ Custom Hartke 15" aluminum-cone driver
- ✓ 120 Watts
- ✓ Unique "Shape" control for accurate tone-shaping
- ✓ 3-Band EQ
- ✓ Passive/active input jack
- ✓ Balanced XLR output

**The Classic Hartke Bass Sound...
In The Perfect Enclosure!**



Flexible enough to be played upright or "kicked back" as a monitor, our Kickback quickly became one of the most imitated (but never duplicated) designs in bass. Now it's available in three different versions for all kinds of applications from home practice and rehearsal to club dates and small theater venues. The "big bottom" Kickback combo. Versatile "two-way" design with all the bass you'll ever need. Massive Hartke 15" aluminum-cone driver. 120 watts. Fully adjustable Shape control. 3-band EQ and a whole lot more! Check our pro-audio site at www.ramseyaudio.com for details!

HM1215	120 Watt KickBack Bass Combo Amplifier	\$498.95
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100 Watt 2-Channel Guitar Combo Amp

- ✓ Two 12" speakers
- ✓ 12AX7 tube pre-amp section with independent channel gain
- ✓ Bass, mid (channel 2 only) and treble controls for each channel
- ✓ Built-in spring reverb
- ✓ Send/return jacks for effects loop
- ✓ 1/4" headphone jack
- ✓ Includes channel selection/crunch footswitch

Killer Sound at a Killer Price!



The Hartke GT100C is designed for modern guitar players looking for a new sound that still respects the tone of a classic amp. The GT100C features a tube-pre, 100-watt, 2-channel amplifier section, plus the channel 1 CRUNCH control can be engaged with the included 2-button foot switch, making it an effective 3-channel amp! The 2-channel pre-amp design w/foot switch control lets you quickly and easily switch from rhythm to lead, and the unique Channel 1 circuitry has VOLUME, BASS, TREBLE, and switchable CRUNCH letting you dial-in great clean sounds, or add overdrive for a roots-rock rhythm tone. Channel 2 has VOLUME, BASS TREBLE, plus MID and high GAIN for distortion ranging from smooth to shredding! Apart from its awesome electronics, the GT100C features a steel amplifier chassis, a rugged plywood enclosure with durable vinyl covering, and sits on four heavy-duty casters for easy transport!

HMG100C 100 Watt 2-Channel Guitar Amp

\$298.95

RhythmTrak Drum Machine

- ✓ Incredibly comprehensive drum and bass rhythm machine
- ✓ 70 total built-in drum kits and 12 different bass sounds
- ✓ 13 Touch-sensitive pads with 3 banks, 39 sounds per kit
- ✓ 440 Preset patterns cover all musical styles and time signatures
- ✓ Create and store up to 550 rhythm patterns
- ✓ FAST (Formula Assisted Song Translator) programming
- ✓ Groove play mode for DJ-style pattern triggering



The range of drum kits built into the RT223 is amazing! A total of 70 drum kits are built-in, with acoustic drum sounds for rock, R&B, funk, and jazz, plus an analog rhythm machine great for Techno and Hip Hop! Ethnic percussion sounds are available, along with five human voice "Beat Box" style percussion kits to create rhythm tracks where instrument sounds are expressed as human voices! A large number of phrase variations including intro, fill-in, and ending patterns are also provided, and by combining these, its easy to create a huge variety of backing rhythms!

RT223 Zoom RhythmTrak Drum Machine \$198.95

Zoom Micro RhythmTrak Drum Machine

- ✓ 7 Velocity-sensitive drum pads
- ✓ 50 preset, 20 user-programmable drum kits
- ✓ 200 preset, 99 user-programmable patterns
- ✓ 99 songs
- ✓ 10,000 max notes/events
- ✓ 21-Sound polyphony
- ✓ 1/4" mono output
- ✓ 1/4" line/headphone stereo output
- ✓ MIDI input
- ✓ Footswitch control input



The Micro RhythmTrak from Zoom is an ultra-portable standalone drum machine, and the perfect add-on to any digital audio recorder without rhythm programming! With an intuitive and simple design that lets you master the unit right away – you'll be taking full advantage of its massive potential in no time!

The Micro RhythmTrak also features internally lit pads that let you follow the rhythm pattern visually during playback, or when using a pattern! Never before have so many rhythm features been packed into such a small package!

MRT3B Micro RhythmTrak Drum Machine \$98.95

8-channel Unbalanced to Balanced/Balanced to Unbalanced Line Amplifiers

- ✓ Fine gain adjustments in front panel
- ✓ Individual & global ground lift switches
- ✓ Utility ancillary power outlet on back
- ✓ Converts between balanced and unbalanced line levels
- ✓ Distribution amp function with channel uplink (LA80 Only)
- ✓ ±6dB fine tuning trim pots on each output
- ✓ Ground lift switches per output or global
- ✓ Cascade 500W power outlet
- ✓ Selectable +4/-20dBm balanced nominal level
- ✓ Single space rack mount design



8 Channels Of Incredible Problem Solving... In One Single Rack Unit!

TASCAM's LA80 and LA81 line level converter boxes were built for studio quality conversion between balanced and unbalanced line levels, offering the best integration of all types of equipment. Fine tuning trim pots are accessed on the front panel, offering ±6dB adjustment on individual outputs. Ground lift controls are available on each channel or globally for eliminating ground loops. On the bottom of the LA80 is a channel link matrix that allows channels to be linked, utilizing the Line Amp as a distribution amplifier. This is great for splitting signals for distribution to multiple recorders, or for multizone sound routing applications! With the LA80 and LA81 you can properly convert between the two levels, while always maintaining the highest possible quality. Dimensions: 19" x 1-7/8" x 7-11/16" (482 x 48 x 196 mm), Weight 6.171 lbs (2.8 kg)

LA80 8 Channel Unbalanced to Balanced Line Amplifier
LA81 8 Channel Balanced to Unbalanced Line Amplifier

\$389.95
\$389.95

What? Computer Audio Mixing And Mastering... Without A Mixer?

That's right! The latest technology brings you computer mastering without the need for expensive mic mixers, in/out boxes, pre-amps, or digital work stations! Just plug in the new USB studio condenser microphones into your PC, Mac, or laptop and you're on the way to direct digital creation!

Check out the latest Samson USB microphones starting on page 100, you'll be amazed!





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Super-Pro FM Stereo Radio Station



Build yourself an FM radio station complete with automatic mic mixing and multi-channel inputs! Our #1 kit for years throughout the world! (See page 4)

from **\$269.95**

3-In-1 Multifunction Lab

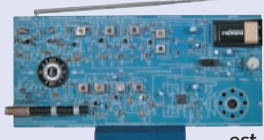


and regulated lab power supply! The all in one unit that will fit YOUR bench! (see page 69)

3 lab quality units in 1 compact unit! RoHS compatible soldering station, digital multimeter, and regulated lab power supply! The all in one unit that will fit YOUR bench! (see page 69)

only **\$129.95**

AM/FM IC Radio Training Course



Learn all about AM/FM radio design and theory with this learning kit! Uses (and teaches!) the latest IC technology with step by step instructions! (See page 53)

only **\$34.95**

USB Microphones



Join the world of digital audio creation and podcasting without even needing a mic mixer! The latest USB Studio Condenser microphones plug directly into your computer and even include great software to get you started! (See page 100)

from **\$58.95**

H2 Handy Recorder



The amazing professional recorder that fits in the palm of your hand! Records stereo and surround with 4 microphones to WAV and MP3 formats. SD card media for up to 4GB of storage (thats over 68 hours of MP3 audio)! (See page 94)

only **\$198.95**

Passive Aircraft Monitor Receiver



Our patented passive aircraft receiver monitors the entire aircraft band without any tuning! Plus, the passive design makes it OK for use onboard aircraft! Great for airshows, listen to all the activity without knowing the frequencies! The ultimate personal aircraft receiver! (See page 39)

from **\$89.95**

Your One-Stop Electronics Shop For Over Three Decades!

- ✓ Electronic Hobby Kits
- ✓ Electronic Mini Kits
- ✓ AM/FM Broadcasters
- ✓ Transmitters & Receivers
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