

SRM-80A

SIGNAL ROUTER / MONITOR



FURMAN
ROUTER /
MONITOR SERIES

SRM-80A / E – SIGNAL ROUTER/MONITOR

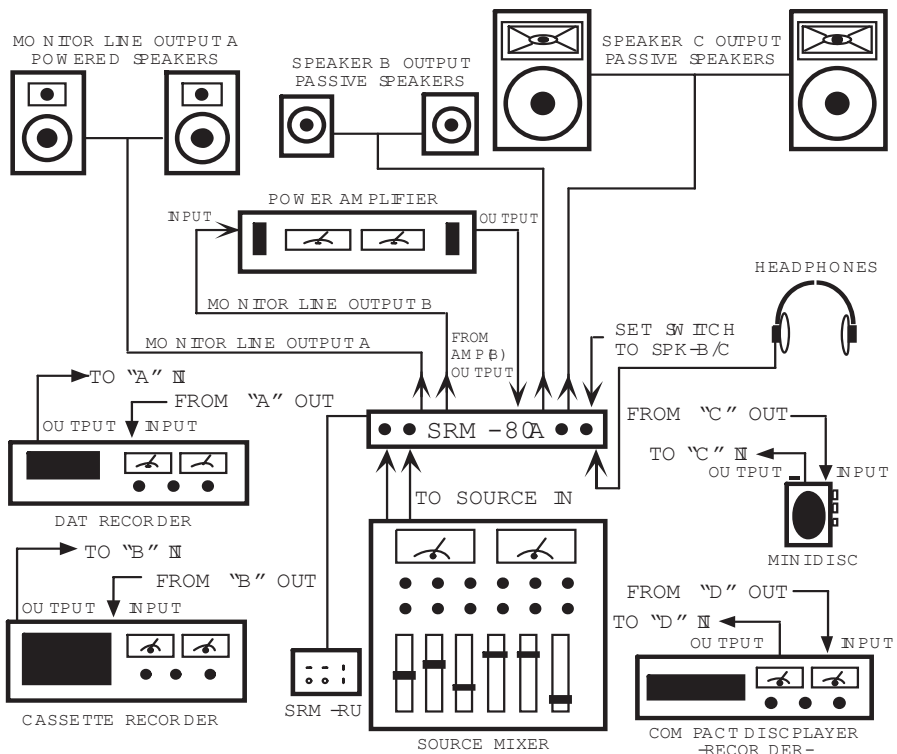
INTRODUCTION

Congratulations on your purchase of a Furman Model SRM-80A Signal Router/Monitor. Your SRM-80A will make monitoring, mixdown, and dubbing simpler and faster, thus helping you achieve professional results.

ABOUT THE SRM-80

The SRM-80A facilitates mixdown and dubbing between different media types without tying up additional console channels. By connecting the control room outputs of your mixer, inputs and of up to three power amplifiers or powered speakers, speaker outputs of one stereo power amplifier, and up to three pairs of speakers, you will have a highly useful and sophisticated audio playback monitor system. Multiple copies can be made simultaneously through use of the SRM-80's four rotary

SYSTEM SETUP 1



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STEP-BY-STEP GUIDE TO SET-UP USING SINGLE POWER AMP

- Please also refer to the “System Set-Up #1” drawing on the facing page.
- Cables needed:
 - 2 Pair: Speaker to Binding Posts, the banana plug type (Speakers B, C)
 - 1 Pair: 1/4” TRS Balanced to Monitor Line output “A” (Powered Speakers)
 - 6 Pair: RCA I/O to Devices
 - 2 Pair: 1/4” TRS Balanced to Device “A” L/R I/O
 - 1 Pair: 1/4” TRS Balanced to “SOURCE” L/R Input
 - 1 Pair: 1/4” TRS Balanced to Power Amp L/R Inputs
 - 1 Pair: Power Amp Out to “FROM POWER AMP OUT” Binding Posts (banana plugs)
- Make sure SRM-80 and all other devices are switched “OFF” before making any cable connections.
- Decide which devices will be labeled “A”, “B”, “C”, and “D”. Device “A” should be any pro level balanced units, such as a DAT machine. Label the Output Select Switch and the speaker pairs on the front panel tabs. Use adhesive labels so you can relabel for different configurations.
- Mount the SRM-80 in your rack. Depending on your setup, it may be easier to cable all your gear before mounting the SRM-80 in your rack. Otherwise, go ahead and mount it now.
- Set AMP/SPK - B/C Switch to SPK - B/C.
- Connect passive speaker cables to “SPEAKER C” and “SPEAKER B” Binding Posts.
- Connect Power Amp L/R Output cables to “FROM AMP OUTPUT” Binding Posts.
- If you have the optional SRM-RU remote unit, which we highly recommend, connect its 5-Pin cable to “REMOTE.”
- Connect 1/4” TRS Balanced cables from your powered monitors to MONITOR LINE OUTPUT “A” L/R.
- Connect 1/4” TRS Balanced cables from MONITOR LINE OUTPUT “B” L/R to your power amp “IN” L/R.
- Connect RCA cables from “L/R In/Out” to devices “B”, “C”, and “D”, according to your setup plan.
- Connect 1/4” TRS Balanced cables from “A” L/R, I/O to device “A”
- Connect 1/4” TRS Balanced cables from “SOURCE” L/R to source device. (e.g. mixing console stereo out or soundcard out).
- Set the Ground Lift Switch to the position that reduces any hum or buzz.
- Set the “0db / +4db” switch to the appropriate meter scale for the equipment being used.
- Power up your equipment, being sure to turn on your power amp last.
- Set “SPEAKER TRIM” controls at about 75%. After powering up the system, adjust levels as needed. To dial in your speaker levels use broadband pink noise and sound level meter. The Alan Parsons/Stephen Court alignment CD is very good, and a decent meter can be had for about \$40 at Radio Shack.

For using more than 1 pair of power speakers or multiple power amps see System Set-up #2 on the next page.

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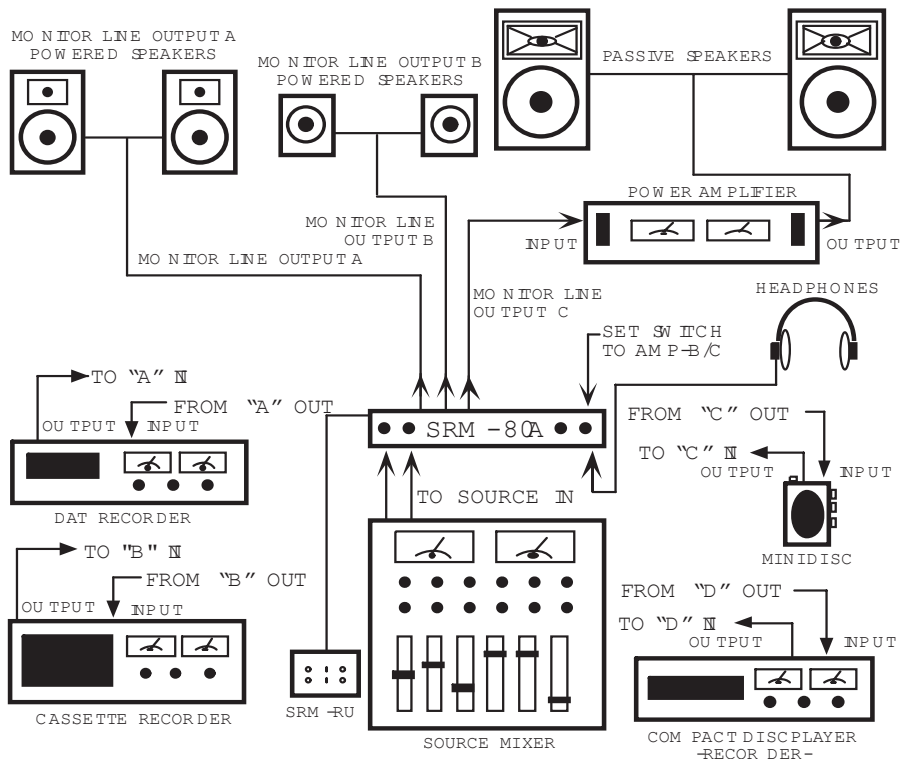
source select knobs labeled OUTPUT SELECT A through OUTPUT SELECT D.

Monitoring any of these sources can be done using the MONITOR SELECT knob, high-power headphone amp and uniquely thought-out speaker selection system that consists of three balanced line level speaker outputs A, B, and C. All of these outputs are compatible with powered monitors or passive speakers using a power amp. The unique feature is that the B and C outputs can be combined into one output for use with 2 pairs of passive speakers and only one power amp. See description of

B/C AMP/SPK Switch. Each monitor speaker output has its own front panel trim control, so equal listening levels can be maintained despite differences in speaker efficiencies.

The SRM-80A has balanced inputs for the SOURCE and A inputs, and balanced outputs for channel A output and A, B, and C monitor line outputs. INPUTS B through D utilize unbalanced RCA jacks. The SRM-80A allows easy signal routing between these dissimilar jacks.

SYSTEM SETUP 2



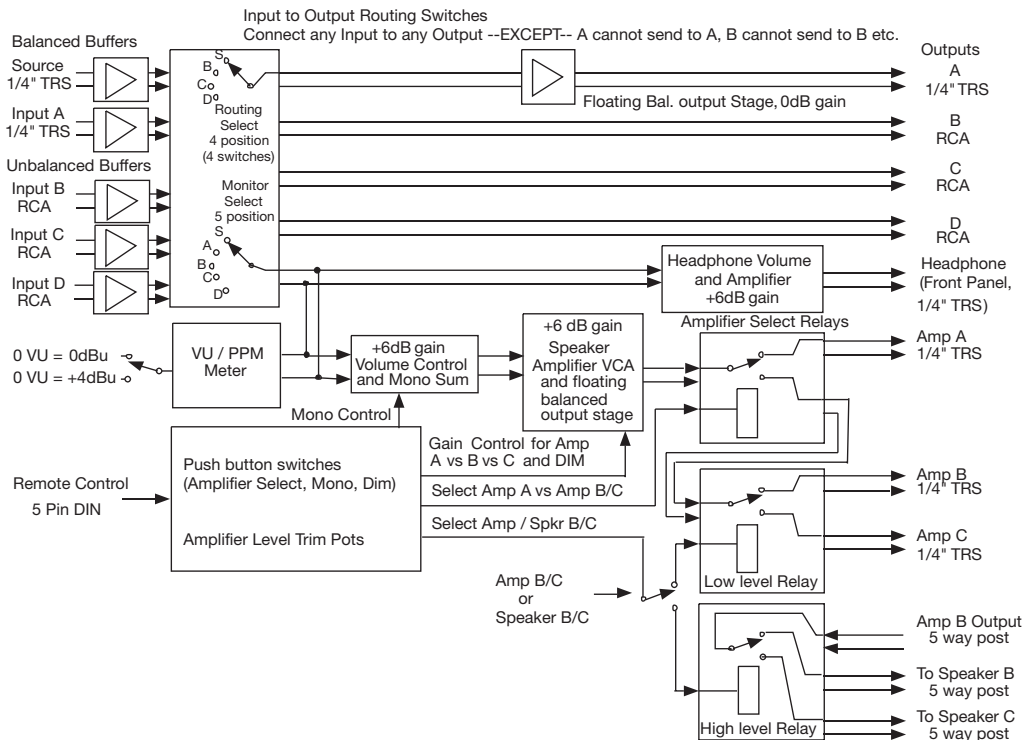
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The SRM-80A provides a high-resolution 40 LED x 2 bar graph meter to display the signal selected for listening. The meter displays a pre-fader signal for accurate monitoring of the signal going to tape or disc. This meter has true VU ballistics, or can be switched to Peak Program Mode via the front panel toggle switch. The meter also features a slow release-time Peak Hold function to allow easy verification of critical levels.

The SRM-80A's MONO SUM feature provides the ability to check for radio compatibility, and is a good spot check to see how you've

messed up the stereo image! (Only the sends to the speakers are affected.) While radio air-play is nearly always stereo these days, phasing problems and odd panning arrangements can show up in less than ideal listening environments, such as cars, and many locations in nightclubs.

The SRM-80A also features a DIM switch to allow an easy way to lower the level to the speakers (but not the headphones) temporarily without disturbing any level controls.



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OPTIONAL SRM-RU REMOTE CONTROL

The optional five-button SRM-RU allows remote control of Speaker Selection, MONO and DIM. An LED indicator is provided for each button and a 10 foot cable is included.

ABOUT THIS MANUAL

We want to make it easy for you to set up your SRM-80A. Page Two of this manual tells you how to do just that, step-by-step. Page four gives you detailed information on all of the features, controls and connectors. You can set up your SRM-80A first, and read about the controls afterwards or even better, just resume recording and mixing!

INSTALLATION

The SRM-80A is intended for mounting in standard 19" equipment racks. To avoid mar-

ring the panel when tightening the screws, use nylon washers under the screw heads.

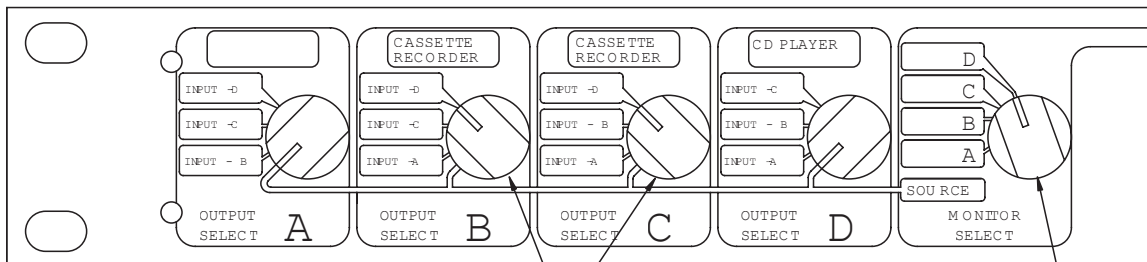
SAFETY INFORMATION

WARNING (For domestic units only): Do not remove the third prong on the SRM-80A's AC plug. Never use a 3-prong to 2-prong AC plug adapter to plug your SRM-80A into your wall socket. The unit requires that a safety ground be present for proper operation. Any attempt to operate it without a safety ground is considered improper operation and could invalidate the warranty.

FRONT PANEL CONTROLS

OUTPUT SELECT A: Use this input/output for balanced, pro level devices. This four-position knob determines which signal is routed to the device plugged into the 1/4" "A" OUTPUTS on the SRM-80A's rear panel. For example, if the "A" OUTPUTS are used for a DAT machine, the

SWITCH SETTINGS FOR MULTICASSETTE DUBBING



SET OUTPUT SELECT SWITCHES B AND C TO INPUT - D. THIS WILL ROUTE THE CD PLAYER TO BOTH CASSETTE DECKS CONNECTED TO THE BAND C OUTPUTS

SET MONITOR SELECT SWITCH TO D TO LISTEN TO WHAT IS BEING RECORDED THROUGH THE SPEAKERS AND HEADPHONES

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DAT can receive signals from device “Source”, “B”, “C”, or “D” INPUTS depending on where you position this knob.

OUTPUT SELECT B: This four-position knob works like the output select “A” knob described above. For example, if the “B” RCA OUTPUTS on the back panel are used for a cassette recorder, the recorder can receive signals from stereo device Source, “A”, “C”, or “D” INPUTS.

OUTPUT SELECT C: The SRM-80A’s “C” OUTPUTS can receive signals from device “Source”, “A”, “B”, or “D” INPUTS depending on where you position this knob. For example, if the “C” RCA OUTPUTS on the back panel are used for a MiniDisc recorder, the recorder can receive signals from stereo device “Source”, “A”, “B”, or “D” INPUTS.

OUTPUT SELECT D: The SRM-80A’s “D” OUTPUTS can receive signals from device “Source” “A”, “B”, or “C” INPUTS. For example, if the “D” RCA OUTPUTS on the back panel are used for a CD player/recorder, the recorder can receive signals from stereo device “Source”, “A”, “B”, or “C” INPUTS.

MONITOR SELECT: This five-position knob allows you to select which device you will hear through your speakers and headphones, the main console or soundcard mix (Source), or the output of any devices “A” through “D”.

LISTENING LEVEL: Controls the loudness level you hear through your speakers. It does not affect the signal going to any of the stereo devices connected to the SRM-80A.

MONO: Changes the sound you hear through your speakers (not in the Headphones) from

stereo to monaural.

DIM: Attenuates the loudness of your speakers by about 15 dB, without affecting the level of the signals going to any of the stereo devices or headphones connected to the SRM-80A. This is a very useful feature if you are interrupted while monitoring, mixing, or dubbing.

MONITOR LEVEL: This high-resolution, 40 x 2 LED bar graph meter allows precise pre-fade level calibration for all stereo devices connected to the SRM-80A.

METER MODE: Located to the right of Monitor Level Meter, this switch can be set for the meter to display AVG (VU) or Peak Mode.

SPEAKERS A, B, and C: Selects between amplifier / speaker outputs A, B, or C.

TRIM LEVELS: Adjusting these “Set Once” controls allows you to set all three pairs of amplifiers/speakers to the same listening level.

HEADPHONES: Plug your headphones in here. The high-power headphone amp provides excellent audio quality and can drive low-impedance phones with ease. It may be wise to disconnect your headphones to avoid damage when not in use.

HEADPHONE LEVEL: Adjusts the listening level of the headphones.

REAR PANEL CONTROLS AND CONNECTIONS

GROUND LIFT: Allows separation of chassis ground from audio ground and can be used to reduce hum or buzz. Remember, never remove the third prong on the SRM-80A’s AC

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plug. Never use a three-prong to two-prong AC plug adapter to plug your SRM-80A into your wall socket.

ON/OFF: Controls power to unit.

AMP-B/C & SPK-B/C SWITCH: When the B/C switch is in the AMP-B/C position: The input selected by the Monitor Select switch is routed through the Monitor level control and sent to the “A”, “B” or “C” monitor line outputs (as selected with the “A”, “B” or “C” pushbuttons). B and C speaker outputs are separate for use as individual outputs with either powered speakers or passive speakers with a power amp. See Figure A.

When the AMP/SPK B/C switch is in the SPK-

B/C position: Only the “A” and “B” monitor line outputs are used and the “B” amplifier’s speaker outputs are connected to the “FROM AMP (B) OUTPUT” binding posts. The B and C speaker outputs are combined to the SPEAKER B output jacks. This is to be used with a single power amp and 2 pairs of passive speakers via the binding posts on rear panel. Connect the SPEAKER B/POWER AMP IN jacks to the input of your power amp. Connect the output of your power amp to the FROM AMP OUTPUT Binding posts. Connect 1 pair of passive speakers to the SPEAKER B binding posts and the other pair of passive speakers to the SPEAKER C binding posts. To select the associated amplifier / speaker press the “A”, “B”, or “C” speaker select buttons on the front panel. See Figure B.

FIGURE A

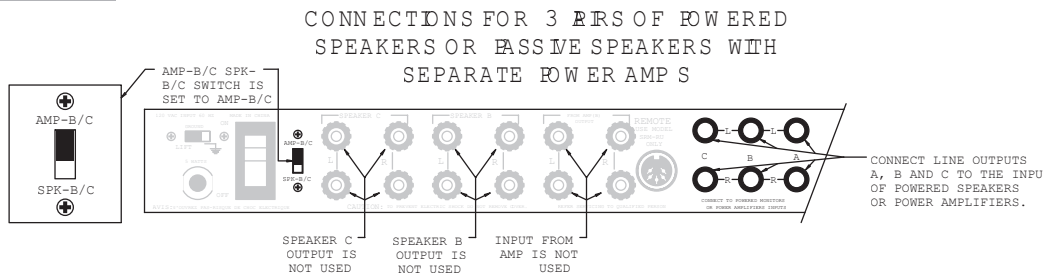
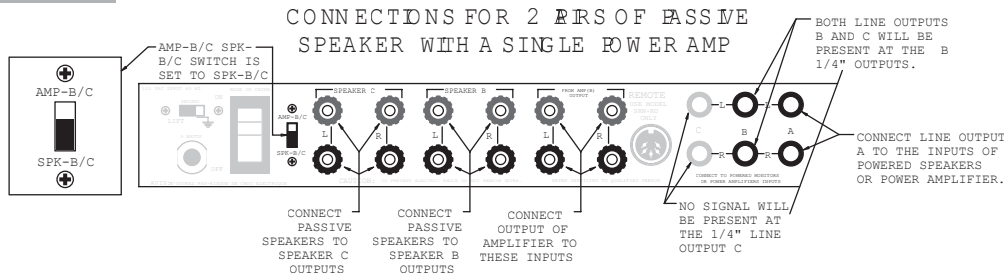


FIGURE B



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SPEAKERS B AND C Binding posts: For use with a single power amp. These left-right binding posts are provided for speaker pairs “B” and “C”. You may connect only passive speakers here. See figure B.

NOTE: If you’d like to use a pair of powered speakers with your SRM-80A, do not connect them to the “B” or “C” binding posts. Set the AMP/SPK-B/C switch to the AMP- B/C position. Now you may use “A”, “B”, or “C” amplifier / speaker line outputs for powered speakers.

FROM AMP OUTPUT: These Left-Right binding posts are provided to connect the Left and Right speaker cables from the output of your power amplifier when the AMP/SPK-B/C switch is set to SPK-B/C. The SRM-80A routes these amplified output signals to either Speaker pair “B” or “C”, depending on which Speaker select button you press on the front panel or the SRM-RU remote unit. Be careful to connect the output of your power amp to these binding posts only. The relay that does the switching is rated at 8A/240 volts. See figure B.

REMOTE: Accepts the cable for the optional SRM-RU remote control unit. You will need to use a 5 pin din type cable a midi cable will not work properly.

MONITOR LINE OUTPUTS TO SPEAKER “C” /POWER AMP IN: Use these Left and Right 1/4” phone jacks to connect a pair of powered speakers or passive speakers with a power amp when the AMP/SPK-B/C switch is in the AMP-B/C position. If the switch is set to SPK-B/C there will be no signal present. See figure B.

MONITOR LINE OUTPUTS TO SPEAKER “B” /POWER AMP IN: When the AMP/SPK-B/C switch is in the AMP-B/C position use these Left and Right 1/4” phone jacks to connect a pair of powered speakers or a power amp / passive speakers. See figure A. When the AMP/SPK-B/C switch is set to SPK-B/C both B and C output signals will be present at these jacks. The SRM-80A uses these jacks to send either B or C output signals to your power amp, and the power amp’s speaker output is returned to the SRM-80A via the FROM AMP OUTPUT binding posts mentioned above. From there, the SRM-80A sends the amplified signal to the passive speakers connected to the SRM-80A’s “B” and “C” speaker binding posts. See figure B.

MONITOR LINE OUTPUTS TO SPEAKER “A” /POWER AMP IN: Use these Left and Right 1/4” phone jacks to connect a pair of powered speakers or a power amp / passive speakers.

INPUTS/OUTPUTS “B,” “C,” AND “D”: RCA jacks for the inputs and outputs of an unbalanced device such as a cassette, CD player/recorder or MiniDisk.

INPUTS/OUTPUTS “A”: Left-Right 1/4” TRS jacks for the inputs and outputs of a balanced, pro level device.

SOURCE INPUTS: These 1/4” TRS jacks are provided to connect your studio’s main mixer, soundcard or multi-track recorder output to the SRM-80A.

LEVEL SELECT SWITCH: Selects +4dBu or 0dBu = 0 indication.

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THREE YEAR LIMITED WARRANTY

Furman Sound, Inc., having its principal place of business at 1997 South McDowell Blvd., Petaluma, CA 94954 (“Manufacturer”) warrants its SRM-80A (the “Product”) as follows:

Manufacturer warrants to the original Purchaser of the Product that the Product sold hereunder will be free from defects in material and workmanship for a period of three years from the date of purchase. The Purchaser of the product is allowed fifteen days from the date of purchase to complete warranty registration by mail or on-line at the Furman website. If the Product does not conform to this Limited Warranty during the warranty period (as herein above specified), Purchaser shall notify Manufacturer in writing of the claimed defects. If the defects are of such type and nature as to be covered by this warranty, Manufacturer shall authorize Purchaser to return the Product to the Furman factory or to an authorized Furman repair location. Warranty claims should be accompanied by a copy of the original purchase invoice showing the purchase date; this is not necessary if the Warranty Registration was completed either via the mailed in warranty card or on-line website registration. Shipping charges to the Furman factory or to an authorized repair location must be prepaid by the Purchaser of the product. Manufacturer shall, at its own expense, furnish a replacement Product or, at Manufacturer’s option, repair the defective Product. Return shipping charges back to Purchaser will be paid by Manufacturer.

THE FOREGOING IS IN LIEU OF ALL

OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Manufacturer does not warrant against damages or defects arising out of improper or abnormal use of handling of the Product; against defects or damages arising from improper installation, against defects in products or components not manufactured by Manufacturer, or against damages resulting from such non-Manufacturer made products or components. This warranty shall be cancelable by Manufacturer at its sole discretion if the product is modified in any way without written authorization from Furman Sound. This warranty also does not apply to Products upon which repairs have been affected or attempted by persons other than pursuant to written authorization by Manufacturer.

THIS WARRANTY IS EXCLUSIVE. The sole and exclusive obligation of Manufacturer shall be to repair or replace the defective Product in the manner and for the period provided above. Manufacturer shall not have any other obligation with respect to the Products or any part thereof, whether based on contract, tort, strict liability or otherwise. Under no circumstances, whether based on this Limited Warranty or otherwise, shall Manufacturer be liable for incidental, special, or consequential damages. Manufacturer’s employees or representatives’ ORAL OR OTHER WRITTEN STATEMENTS DO NOT CONSTITUTE WARRANTIES, shall not be relied upon by Purchaser, and are not a part of the contract for sale or this limited warranty. This Limited Warranty states the entire obligation of Manu-

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facturer with respect to the Product. If any part of this Limited Warranty is determined to be void or illegal, the remainder shall remain in full force and effect.

SERVICE

Before returning any equipment for repair, please be sure that it is adequately packed and cushioned against damage in shipment, and that it is insured. We suggest that you save the original packaging and use it to ship the product for servicing. Please enclose a note giving your name, address, phone number and a description of the problem. NOTE: All equipment being returned for repair must have a Return Authorization (R/A) Number. To get an R/A Number, please call the Furman Service Department, (707) 763-1010 ext. 120 or 121, between 8 a.m. and 5 p.m., U.S. Pacific Time. Please display your R/A Number on the front of all packages.

SRM-80A SPECIFICATIONS

OPERATING VOLTAGE

90 to 140 VAC ("E" version 180 to 280 VAC)

LINE IN/OUT

Input Impedances:

Source	24 Kohms
A Input	24 Kohms
B Input	40 Kohms
C Input	40 Kohms
D Input	40 Kohms

Output Impedances:

A Output	50 ohms
To Power Amp	50 ohms
B,C,D Output:	<50 ohms

Sensitivity for 0 VU: 0 dBu (.775 Vrms)
or +4 dBu (1.23 Vrms)

Max. Through Input Level: +21 dBu (8.7 Vrms)

Max. Output Level: +27dBu (17.34Vrms)

MONITOR OUTPUTS

Noise: <-95dBu, 20Hz to 20kHz.

THD + N: 0.003% maximum

Crosstalk: -83dB minimum @ 10kHz

Connectors: Balanced TRS input and output jacks sends. RCA jacks for "B", "C", and "D" inputs and outputs.

HEADPHONE OUTPUT

Output Impedance: 56 ohms

THD + N: 0.001% with 750mW driving a 150 ohm load.

POWER AMP

Output Impedance: 50 ohms

Connectors: 1/4" TRS balanced

SPEAKER OUTPUT SWITCHING 8A/240V

Connectors: Power amp and speaker connectors: 5-way binding posts

METERS

Accuracy: ±0.5 dB

MECHANICAL

Dimensions: 1.75" H x 19" W x 6.625"
D. Weight: 6 lbs (2.7 kg)

NOTES

0 dBu equals .775 Vrms

Specifications subject to change without notice

FURMAN

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