BRYSTON
OWNER'S MANUAL

Instructions For Bryston

ST Series Amplifiers

Model 14B ST

GENERAL INSTRUCTIONS

Warranty Information:

Thank you for choosing a Bryston product. We welcome any suggestions you may have, or comments regarding the operation of your amplifier. We consider you, our customer, to be Brystons' most important resource, and your opinion is very much appreciated.

Bryston products are warranted to be free from manufacturing defects for a minimum of 20, (twenty), years from the original date of manufacture. This includes all parts, labor and one-way return shipping. This warranty covers the original owner and any subsequent owners. The warranty is retroactive for any Bryston product purchased within the last twenty years.

Tampering by anyone other than factory authorized personnel voids the warranty. Warranty service may be obtained by returning the unit to any authorized Bryston dealer or distributor. You may also contact the Bryston factory or national service offices directly at the location listed on the rear page of this manual.

Please keep the original box and all packing material. This will ensure the amplifier is protected in the unlikely event you have a problem and must return it for service. No warranty card is necessary to initiate your coverage. Please refer to the back page for more detailed warranty information.

Bryston 14B-ST Amplifier Description:

The Bryston 14B-ST is a Stereo 2-channel power amplifier consisting of two totally independent amplifier modules, each with its own power transformer and +/-60V power supply.

Each audio channel provides connections for balanced or single ended input and will supply a minimum of 500 watts of power into 8 ohms or 800 watts into 4 ohms.

Installation Setup And Recommendations:

CAUTION: Your 14B ST is a Stereo Amplifier only and the outputs should never be connected in Series/Bridged or Parallel modes.

Make Sure The Circuit Breaker Switch Is OFF Until All Connections Are Made.

Power Switch(s): There are two power switches on the 14B. The front panel **'ST'** Power Switch and the rear panel On/Off Circuit Breaker.

The 14B has two, 2-position slide-switches labeled **Power Up** and **Ext Trig** and **1-Circuit Breaker** Factory Settings are:

POWER UP – LOCAL,
EXTERNAL TRIGGER – LOCAL,
CIRCUIT BREAKER SWITCH – OFF

After confirming that all switches are in the proper positions and all input and output connections are correctly made, plug the amplifier into the proper wall outlet and activate the circuit breaker switch. The power amplified may now be turn on or off using the front panel **'ST'** power switch.
If the rear panel **power-up** switch is in the **'Local'** position and the amplifier is connected to the A/C power source the amplifier will turn on/off using the front panel **'ST'** power switch. If for any reason the power is removed from the A/C line (ex: power failure) the amplifier will turn off and ***will not*** turn on again after A/C is restored until the front panel **'ST'** power switch is manually reactivated.
When the rear panel **power-up** switch is in the **'Auto'** position then any time A/C power is supplied (Power Bar, Switched power outlet etc.) the 14B will automatically power-up without having to activate the **'ST'** power switch.

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14B ST Rear Panel Connections:

Input:

The **14B ST** has two inputs per channel, one for a balanced source, and one for single ended or unbalanced source. The BAL input connector will accept either a 3 pin 'XLR' type or a 1/4" Tip/Ring/Sleeve type. The positive (**+**) terminal is pin **2** on the 'XLR' and tip on the TRS. The input impedance is 15K ohms. The input pins are gold plated. Input sensitivity is selectable using the '**INPUT'** slide switch. In the '**BAL REG**' position 2 Volts in = 100 Watts at 8 ohms output. This is the *recommended setting* when using **Bryston** preamplifiers or any preamplifier having active balanced outputs. This setting also produces the lowest amplifier noise floor. The '**BAL+6dB**' setting adds 6 dB of gain to provide an input sensitivity of 1 Volt in = 100 Watts at 8 ohms output. This setting is primarily for balanced outputs that are transformer coupled, or other low level sources.

The '**UNBAL**' setting selects the gold plated 'RCA' type tip/sleeve connector. The input impedance is 50K ohms. The output is in phase with the input and the sensitivity is 1 Volt in for 100 Watts into 8 ohms output.

Balanced Vs Unbalanced:

Balanced cable interconnects should be used whenever possible, as they provide common mode noise protection from external electrical interference, and with active balanced outputs a 6 dB higher signal level flows in the cable.

The unbalanced cable interconnect is provided for preamplifiers without balanced output. Unbalanced cables should be kept to 10 feet or less. Never use longer cables than necessary, never coil excess cable length, and run signal wires away from and never parallel to A/C power or speaker cables.

Output:

Gold plated output binding posts provide different interconnect options. Stripped bare wire up to 3 Ga. can be passed through the hole in the binding post and held in place by tightening the post knob. Additional tightening pressure can be achieved using a coin in the slots of the knob. Wire terminated with banana plugs, spade lugs, or pins are also accommodated by the binding posts. Please observe correct polarity (Red/Black) when making these connections. We recommend gold plated connectors to prevent corrosion and signal distortion. (Bryston has gold plated 5/16 inch spade lugs available). Speaker wire should be kept as short as practical and should never be terminated with connectors that may become confused with A/C power connectors. Speaker cables should be dressed away from input and power cables, and even each other when runs are long.

Remote Power Control:

You can turn the power amplifier on/off using a 4 -12 volt A/C or D/C voltage using the 4 position screw terminal connector (see rear panel diagram page 4). Insert the 4 -12 volt wire into the input labeled **'IN'** (polarity is not important) and then place the **'Ext Trig'** (external trigger) switch into the **'Rem'** (remote) position. The power amplifier will now power on and off when the control voltage is applied or removed.

The connector positions labeled **'OUT'** can be used to power another amplifier in sequence. The 4/12 volt control voltage does not appear at the **'OUT'** terminals until after the 14B has completely powered up so this allows sequencing of your power amps without large turn-on surges.

WHEN THE 'EXT TRIG' IS IN THE 'LOCAL' POSITION THE 14B WILL IGNORE THE 4/12 CONTROL VOLTAGE AND WILL POWER-UP ONLY WITH THE MANUALLY ACTIVATED FRONT PANEL 'ST' POWER SWITCH.

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Clipping Indicators:

The 14B uses tricolor LEDs with green indicating power on, flashing red indicating actual overload or distortion and yellow/orange indicating thermal shutdown. Upon power-up the 14B's LED's will remain "red" until all voltages stabilize and the unit comes out of mute and the LED turns green.

If the LED indicator contains a substantial red content, when program is present, it should be considered as a sign that the level is too high and may cause speaker damage if it continues. It should be remembered that the Bryston ST series are powerful amplifiers, and that it is possible to damage almost any speaker if an amplifier is used in a thoughtless or abusive manner. Bryston will not be responsible for speaker damage caused in this manner.

The clip-sensing circuit uses an AC comparator to detect any source of signal distortion including clipping, short circuits in cabling, excessive DC or supersonic signals, whether at the input or output. Most conditions which could cause the red LED to light for more than a moment or two can be dangerous to your loudspeakers and should be corrected immediately.

If a specific LED remains 'yellow/orange' without signal present, it may indicate a thermal shutdown condition and the channel will remain inoperative until safe operating temperatures return.

Bryston 14B ST Back Panel:

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SPECIAL INSTRUCTIONS FEATURES AND SPECIFICATIONS:

Maximum continuous output power with both channels driven can only be realized on a 120 Volt 20 Amp or 230 Volt 10 Amp version of the 14B ST

Music is a "Dynamic and Transient" condition and the power requirements fluctuate up and down over time with the audio signal. Therefore, under most listening conditions the 15Amp/120 Volt version will be all that is required for the majority of domestic audio/video systems.

If more power is required, then a 14B - 20 Amp version is also available. You must have a minimum of 12 Gauge household electrical wire and a dedicated 20 Amp wall plug in order to utilize this feature. The other option available is to wire for a 240 Volt 10 Amp service and use the 230 Volt 10 Amp European model.

14B-120-Volt 15 Amp Version:

Power rating:	500 Watts into 8 Ω
	800 Watts into 4 Ω
Input impedance:	
balanced	15 k Ω
unbalanced	50 k Ω
Sensitivity:	
bal input reg	2 Volt in = 100 Watts / 8 Ω
bal input +6	1 Volt in = 100 Watts / 8 Ω
unbal	1 volt in = 100 Watts / 8 Ω

Distortion:
Thd + N .005% 20Hz to 20kHz at 500 watts /8 ohms
IMD .005% 60 Hz + 7kHz mixed 4 to 1
Noise – 115db 20Hz to 22kHz bandpass

Current consumption:
Both channels at full power with 8 ohm loads = 19.1A.
Both channels at full power with 4 ohm loads = 30.7A.
Both channels idle = 1.3 Amps

14B-120-Volt 20 Amp Version:

Power rating:	500 Watts into 8 Ω
	800 Watts into 4 Ω
Input impedance:	
balanced	15 k Ω
unbalanced	50 k Ω
Sensitivity:	
bal input reg	2 Volt in = 100 Watts / 8 Ω
bal input +6	1 Volt in = 100 Watts / 8 Ω
unbal	1 volt in = 100 Watts / 8 Ω

Distortion:
Thd + N .005% 20Hz to 20kHz at 500 watts /8 ohms
IMD .005% 60 Hz + 7kHz mixed 4 to 1
Noise – 115db 20Hz to 22kHz bandpass

Current consumption:
Both channels at full power with 8 ohm loads = 19.1A.
Both channels at full power with 4 ohm loads = 30.7A.
Both channels idle = 1.3 Amps

14B-230-Volt 10 Amp Version

Power rating:	500 Watts into 8 Ω
	800 Watts into 4 Ω
Input impedance:	
balanced	15 k Ω
unbalanced	50 k Ω
Sensitivity:	
bal input reg	2 Volt in = 100 Watts / 8 Ω
bal input +6	1 Volt in = 100 Watts / 8 Ω
unbal	1 volt in = 100 Watts / 8 Ω

Distortion:
Thd + N .005% 20Hz to 20kHz at 500 watts /8 ohms
IMD .005% 60 Hz + 7kHz mixed 4 to 1
Noise – 115db 20Hz to 22kHz bandpass

Current consumption:
Both channels at full power with 8 ohm loads = 9.5A.
Both channels at full power with 4 ohm loads = 15.3A.
Both channels idle = 1.3 Amps.

Note: Continuous 2 channel power is limited by specific circuit breaker limitations.

BRYSTON 20 -YEAR WARRANTY

Bryston products are warranted to be free from manufacturing defects for a minimum of twenty years from the original date of manufacture. This includes parts, labour and return shipping to the first owner and all subsequent owners. Warranty coverage is automatic and commences with the original date of manufacture which is kept on file at Bryston.

In the event of a defect or malfunction, Bryston will remedy the problem by repair or replacement, as we deem necessary, to restore the product to full performance.

This warranty is considered void if the defect, malfunction or failure of the product or any component part was caused by damage (not resulting from a defect or malfunction) or abuse while
in the possession of the customer. Tampering by persons other than factory authorized service personnel, or failure to fully comply with Bryston operating instructions, voids the warranty.

This warranty gives you specific legal rights and you may also have other rights which may vary from province to province and country to country.

BRYSTON SERVICE CANADA:
24 STEINWAY BLVD., UNIT 48
ETOBICOKE, ONTARIO
CANADA M9W 6T8
PHONE: 416-675-2585
FAX: 416-675-3103

BRYSTON LTD.
P.O. BOX 2170, 677 NEALDRIVE
PETERBOROUGH, ONTARIO
CANADA K9J 7Y4
PHONE: 705-742-5325
FAX: 705-742-0882

BRYSTON SERVICE U.S.A.:
30 COVENTRY ST.
NEWPORT, VERMONT.
U.S.A. 05855
PHONE: 802- 334-1201
FAX: 802-334-6658

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CONTACT YOUR LOCAL DISTRIBUTOR
OR
CONTACT BRYSTON DIRECTLY
OR
www.bryston.ca