

**BRYSTON**

**BP6**  
OWNER'S MANUAL

## IMPORTANT SAFETY INSTRUCTIONS



The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of un-insulated “dangerous voltage “ within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



**WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.**

**DO NOT EXPOSE THIS EQUIPMENT TO DRIPPING OR SPLASHING AND ENSURE THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, ARE PLACED ON THE EQUIPMENT.**

**TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE.**

**THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE.**

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## BRYSTON LIMITED WARRANTY

Bryston analog audio products are warranted to be free from manufacturing defects for twenty (20) years from the original date of manufacture. The warranty includes parts and labour.

Bryston Digital products and cables are warranted for five years from the original date of manufacture. The warranty includes parts and labour.

Bryston products having motorized moving parts, excluding motorized volume controls, are warranted for three years from the original date of manufacture. The warranty includes parts and labour.

Bryston will remedy the problem by repair or replacement, as we deem necessary, to restore the product to full performance. Bryston will pay return shipping costs for the full length of the specific product’s warranty.

In the event of a defect or malfunction, contact Bryston’s repair centers for return authorization. Products must be returned using original packaging material only. Packing material may be purchased from Bryston if necessary. 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.

As of 2006-02-22 Bryston will only warranty Bryston products purchased through authorized Bryston dealers. Bryston products with a date code of 0608 or higher (date code format is “yyww”, where “yy” is the two least significant digits of the year and “ww” is the week of the year) must be accompanied by a copy of the bill-of-sale from a Bryston authorized dealer to qualify for warranty service. The warranty is transferable from the original owner to a subsequent owner as long as a copy of the bill-of-sale from the original authorized Bryston dealer accompanies the re-sale. The copy of the bill of sale to any subsequent owner need ONLY include the Name of the Bryston Authorized Dealer and the Model and Serial number of the Bryston product. The warranty will only be honored in the country of the original purchase unless otherwise pre-authorized by Bryston.

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### BRYSTON SERVICE in CANADA:

Postal address: **P.O. BOX 2170, Stn. Main  
PETERBOROUGH, ONTARIO  
CANADA K9J 7Y4**

Courier address: **677 NEAL DRIVE  
PETERBOROUGH, ONTARIO  
CANADA K9J 6X7**

PHONE: 705-742-5325  
FAX: 705-742-0882  
E-mail: [cdnser@bryston.com](mailto:cdnser@bryston.com)

### BRYSTON SERVICE in the USA:

**79 COVENTRY ST., Suite 5  
NEWPORT, VERMONT  
U.S.A. 05855-2100**

PHONE: 802-334-1201  
FAX: 802-334-6658  
E-mail: [usaser@bryston.com](mailto:usaser@bryston.com)

### BRYSTON SERVICE outside Canada and the USA:

contact your local distributor or

CHECK OUR WEB SITE: [www.bryston.com](http://www.bryston.com)  
E-MAIL BRYSTON DIRECTLY: [cdnser@bryston.com](mailto:cdnser@bryston.com)  
FAX BRYSTON DIRECTLY: 01-705-742-0882  
PHONE BRYSTON DIRECTLY: 01-705-742-5325

# BRYSTON BP6 Pre-Amplifier

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## INTRODUCTION

Thank you for purchasing a Bryston B60 integrated  
INTRODUCTION

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

There are three different variations of the BP6 preamp:

- BP6 this is the base model
- BP6DA includes a D/A converter with an SPDIF input
- BP6P includes Bryston's discrete moving-magnet phono equalization stage.

**N.B.** We recommend that you keep all original packing materials in the event that your Bryston preamp may need to be returned for servicing. Any of the original packaging materials that Bryston needs to supply in order to safely return serviced equipment may be chargeable.

## SETUP

Bryston BP6 pre-amps with the remote control option should be placed where there is a direct line-of-sight between the hand-held remote and the remote infra-red sensor eye located on the left side of the pre-amplifier's front panel.

If you purchased the BP6P, which includes a Phono section, avoid placing the preamplifier directly on top of your power amplifier. Power amplifiers usually employ large power supplies and the transformers) in the power supplies can cause interference (hum) with the sensitive phono section inside the pre-amp.

## ANALOG AUDIO CONNECTIONS

### GENERAL

All inputs and outputs employ fully discrete active circuitry and all input and output connectors have gold plated contact surfaces. Only cables with high quality gold plated connectors should be used with your pre-amp to avoid noise and distortion from the corrosion that will eventually appear on poorly plated cable connectors.

Connect the pre-amplifier's left and right outputs to the appropriate left and right input jacks on your power amplifier. Connect your CD player, tuner, tape deck, video recorder, or laser disc, etc. to the specific left/right preamplifier inputs. With the phono stage equipped model (BP6P) connect your phono cables. to the phono input jacks. If your turntable leads have a separate ground wire, it may be connected to the ground post adjacent to the phono inputs on the rear panel.

The tape loop may be used to insert a surround sound processor, cassette tape deck or video tape recorder into your system. Plug your tape deck or external processor's input cables into the "To Tape" jacks, and the processor

or deck's output cables into the "From Tape" jacks at the rear of the pre-amp. The tape or processor loop may be operated via the "Tape/normal" toggle switch located on the front panel of the preamplifier.

### ANALOG AUDIO INPUTS

BP6 preamplifiers are equipped with 4 pairs of RCA input connectors and one pair of RCA tape input jacks. All RCA jacks are gold plated. Input sensitivity is 500mV and input impedance is 50K ohms. See also PHONO EQUALIZATION MODULES for Phono input details.

### ANALOG AUDIO OUTPUTS

BP6 preamplifiers are equipped with 2 pairs of parallel RCA output connectors and one pair of RCA tape output jacks; see *Tape Loop* section below. All RCA jacks are gold plated. Input sensitivity is 500mV and input impedance is approx. 50K ohms. See also PHONO EQUALIZATION MODULES for Phono input details.

### TAPE LOOP

**Tape Outputs:** The "TO TAPE" outputs are selected by the rotary "SELECTOR" knob and are provided as a recording output. This feed is unaffected by the operation of other front panel controls.

**Tape Inputs:** The "FROM TAPE" (unbalanced RCA) inputs are useful for monitoring tape playback or processed signals. Moving the "Tape/Normal" toggle to 'Tape' (up) position monitors the recorded signal on recorders equipped with a separate playback head, or the processed signal when using a signal processor. Input sensitivity is 500mv, input impedance is 10K ohms.

### HEADPHONE JACK

A quarter inch stereo (3 conductor) headphone jack is located on the front panel of all BP6 pre-amps. We recommend the use of headphones with input impedances between 50 ohms and 600 ohms. Headphones with an impedance above 600 ohms may experience some problems attaining sufficient volume levels. The main outputs will be muted when a phone plug is inserted into the headphone jack. TAPE outputs are not muted. You can adjust the volume setting of the headphones by using the volume control on the front of the BP6 or by utilizing the remote control if your unit is so equipped. The headphones cannot be muted with the remote control unit. Use caution when disconnecting the headphones as the loudspeakers will be immediately re-connected at the volume level indicated by the front panel volume control. connected at the volume level indicated by the front panel volume control.

**OPTIONS**

**PHONO EQUALIZATION MODULE**

The BP6P contains Bryston’s fully discrete phono equalizer circuitry. It features highly accurate equalization, extremely low noise and distortion and provides headroom margins sufficient to prevent overload from any known phono source. If your turntable provides a separate ground lead, system noise may be minimized by connecting it to the ground post adjacent to the phono inputs on the rear panel. Input impedance is 50K ohms and sensitivity is 5mV.

**DIGITAL-to-ANALOG CONVERTER MODULE**

The Bp6DA model contains optional DAC module that accepts an SPDIF compatible digital audio input (RCA jack) and D/A (digital to analog) and outputs an analog audio signal to the BP6. To select this input set the rotary “SELECTOR” switch to the “DAC” position. Once this input is selected operation of the digital-to-analog converter is fully automatic. The digital-to-analog converter can handle input sample rates from 16KHz to 108KHz, and word lengths of 16, 18, 20 or 24 bits.

**INFRA-RED REMOTE CONTROL**

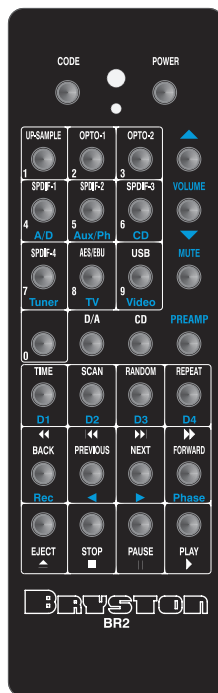
The optional Bryston BR2 hand held remote control unit provides for remote volume control and full signal mute of the B60R integrated amplifier. The Volume control is a motor driven design. This approach ensures lower distortion and other noise artifacts than VCA’s and DAC’s.

Pressing the MUTE button on the remote control will fully mute the output from the preamplifier section. The power LED on the front panel will turn from green to red. To un-mute the amplifier simply push the MUTE button again or press the volume UP button.

The mute function on the remote control will not function if using headphones.

The hand held remote unit is battery operated. To change the battery remove the bottom cover plate by unscrewing the Philip’s head screws and replace the 9 volt battery carefully observing the polarity of both the battery and battery clip.

We recommend maintaining a direct line-of-sight between the hand held remote and the front of the B60R to ensure the most efficient operation of the remote features.



**FRONT PANEL CONTROLS:**

**VOLUME CONTROL:** Rotary control varies the output level to the ‘MAIN OUTPUTS’, (does not effect ‘TO TAPE’ outputs). **BALANCE:** Rotary control adjusts the left-versus-right channel levels.

**BALANCE CONTROL:** is a tailored-inflection type which has very gradual action near the center of rotation allowing fine adjustments to the stereo image. For convenience the electrical center of the control is detented.

**SOURCE SELECTOR SWITCH:** Rotary switch determines which input will appear at the “TO TAPE” outputs for recording or processing, as well as determining which program is available at the Main outputs. (When the “TAPE/NORMAL” switch is in “Tape” position, “FROM TAPE” inputs appear at Main Outputs).

**TAPE/NORMAL SWITCH:** “Normal” position monitors whichever input is selected at the rotary SELECTOR switch. “Tape” position provides monitoring of the “FROM TAPE” input for A/B comparison with the source. Should an external processor or equalizer be connected in the tape loop, the ‘TAPE / NORMAL” switch will act as an in/out switch for the external equipment.

**LED STATUS INDICATOR:** This bi-colour LED is normally green but turns red when the outputs are muted either by pressing MUTE on the optional BR2 remote control or by inserting a 1/4” phone plug into the headphone jack.

**Note:** In some markets the LED indicator is red/blue instead of red/green.

**FUSES**

**REPLACING FUSES:**

All fuses are 5mm x 20mm, time lag type and are accessible only by removing the top cover.



**CAUTION!** *When replacing fuses, disconnect the power cord and all other cables from the B60 before opening the unit!*

Recommended replacement fuses:

- for 100/120VAC models: Littlefuse 218.315  
Bussmann GMC-315mA
- for 220-240VAC models: Littlefuse 218.160  
Bussmann GMC 160mA

**POWER CONDITIONERS**

Bryston urges caution in choosing a power conditioner for your audio/video system. Large power amplifiers can draw very substantial current from the wall plug, and many so-called power conditioners can in fact hinder the supply of current by inserting resistances in series with the line cord. However, there are now power conditioners that can reduce or eliminate RF and 'hash' from the AC supply and may actually improve current delivery to your system. This type of power conditioner (exemplified by Bryston **B-I-T** Power Conditioners) uses the energy storage in a large toroidal transformer to provide high instantaneous power and reduce the substantial AC output resistance of the wall socket and house wiring. This resistance can be in the range of 0.5 to 1 Ohm and is typically reduced to only a few milliOhms by the Power Conditioner. That in turn considerably reduces Voltage drop in the power line on high current surges and quite substantially increases the stability of the power line improving audio (and video) focus, precision and clarity

**SPECIFICATIONS:**

**PHYSICAL DIMENSIONS:**

**with 17" long C-series dress panel:**

Maximum external dimensions including feet & knobs:  
17.0" x 2.75" x 11.44" (43.2 x 7.0 x 29.1 cm)

external dimensions ~ chassis & dress panel only:  
17.0" 2.25" x 10.69" (43.2 x 5.7 x 27.2 cm)

**with 19" long C-series dress panel:**

Maximum external dimensions including feet & knobs:  
19.0" x 2.75" x 11.44" (48.3 x 7.0 x 29.1 cm)

external dimensions ~ chassis & dress panel only:  
17.0" 1.75" x 10.69" (43.2 x 4.4 x 27.2 cm)

**Rack mount version:**

Maximum external dimensions including feet & knobs:  
18.81" x 2.50" x 11.44" (43.2 x 7.0 x 29.1 cm)

external dimensions ~ chassis & dress panel only:  
16.81" 1.75" x 10.69" (42.7 x 4.4 x 27.2 cm)

**WEIGHT:** 17 lbs (7.5 kg)

**PREAMPLIFIER Section:**

- FREQ. RESPONSE:** 20Hz~20kHz +/- .05dB
- MAXIMUM OUTPUT:** 15 volts
- IMD/THD:** <0.005% at 3 volts out
- SENSITIVITY:** 500mV (High level inputs)
- NOISE:** -100dB (Ref. 500mV<sub>in</sub>, 20~20K Hz)

**ADDITIONAL SPECIFICATIONS for BP6DA DIGITAL INPUTS:**

- INPUT SAMPLE RATE:** 16kHz to 108kHz.
- WORD LENGTH:** 16, 18, 20, 24 Bit
- DATA FORMAT:** SPDIF standard
- THD+N:** < 0.002%, 20Hz~20kHz

**ADDITIONAL SPECIFICATIONS for BP6P PHONO INPUTS:**

- THD+N:** <0.005%, IM or THD, any frequency or combination of frequencies from 20-20kHz, at rated output or below.
- NOISE:** Phono: -80dBA referred to an input of 5 mV
- RIAA ACCURACY:** Within less than +/- 0.05dB from 20~20kHz
- SENSITIVITY:** 5mV

**BP6**

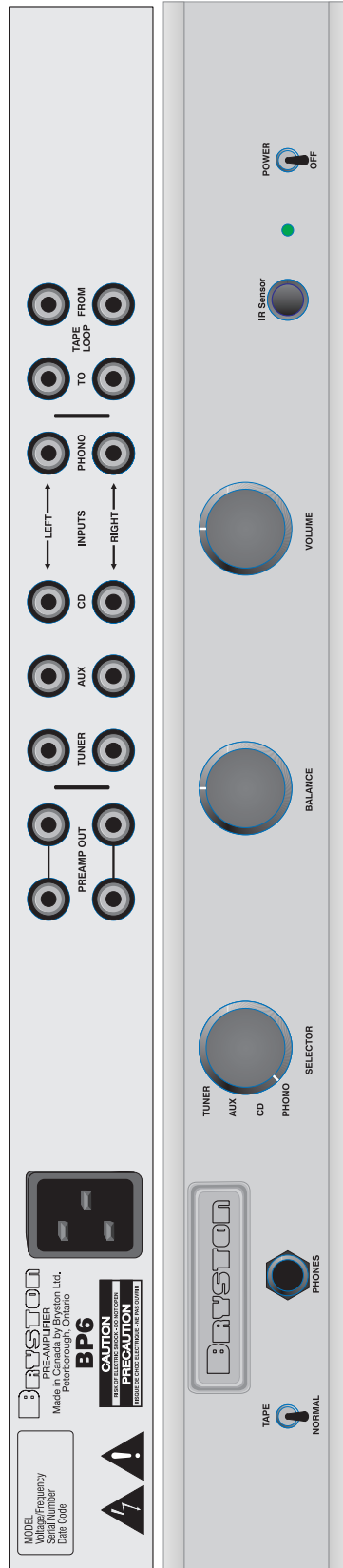
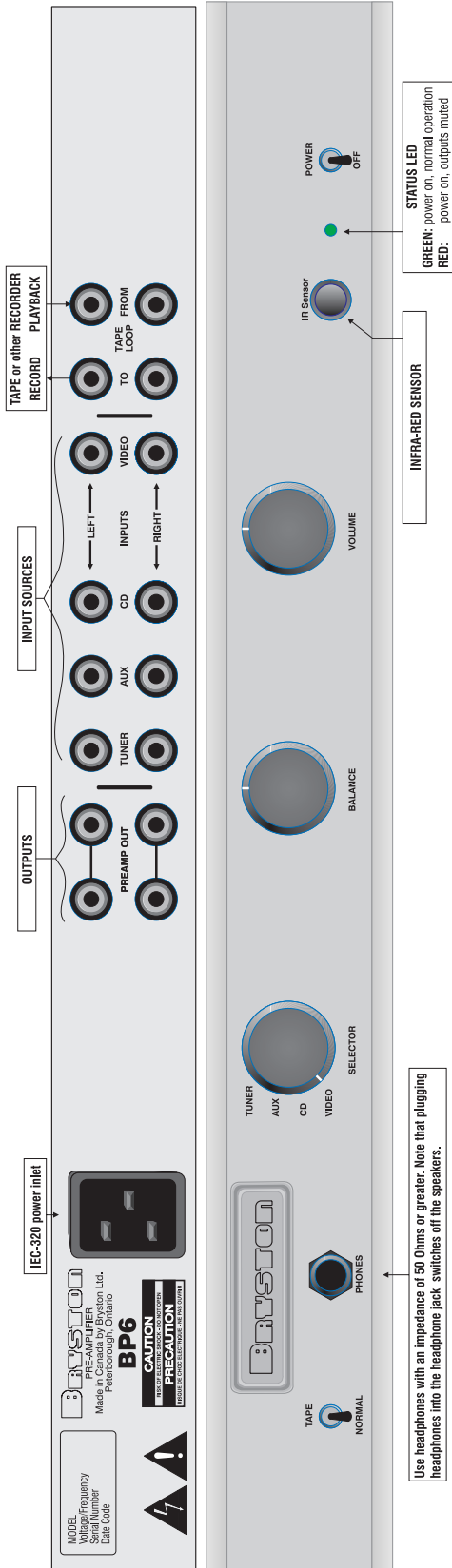
Stereo pre-amplifier with 4 stereo analog inputs, tape loop and stereo headphone jack.

**BP6P**

Stereo pre-amplifier with a phono input for moving magnet cartridges and 3 other stereo analog inputs, tape loop and stereo headphone jack.

**BP6DA**

Stereo pre-amplifier with a digital audio SPDIF input (16KHz to 108KHz sample rate and a 16 to 24 bit word length) & 3 stereo analog inputs, tape loop and stereo headphone jack.



**BP6 EXTERIOR DIMENSIONS**

