BRYSTON OWNERS MANUAL



BRYSTON BP-19
ANALOG STEREO PREAMPLIFIER

MUSIC WITH EMOTION

IMPORTANT SAFETY INSTRUCTIONS



The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated "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. Unplug this apparatus during lightning storms or when unused for long periods of time.

13. 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.

COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS.

DISCONNECT THE POWER SUPPLY CORD FROM THE AC RECEPTACLE

IMPORTANT SAFETY INSTRUCTIONS



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.

WARNING:

There are four pairs of audio 'OUTPUTS' (MAIN and VAR/FIX) on the Bryston BP-19 Preamplifier. The default "factory" setting is VARIABLE on BOTH.

Two (2) sets of Single Ended (RCA) and Two (2) sets of Balanced XLR. The factory setting for both the VAR/FIX output and MAIN output is 'VARIABLE' so both are controlled by the volume control on the BP-19 front panel or the hand held Remote.

If you change in the MENU the set labelled 'VAR/FIX' to 'FIXED' It is important NOT to use these outputs unless you are feeding a unit that allows volume control independent of the Bryston BP-19 Preamplifier as this is a 'FULL LEVEL SIGNAL'.

To change the (VAR/FIX) outputs to fixed, push in the volume control, go into the menu, select ADVANCED, select VAR/FIX AUX, and then change VAR to FIX.



WARNING:

FULL LEVEL SIGNAL if you change the 'VAR/FIX' output to 'FIXED'

So it is important not to use the FIXED outputs unless you are feeding a unit that allows volume control independent of the Bryston BP-19 Preamplifier.

INTRODUCTION:

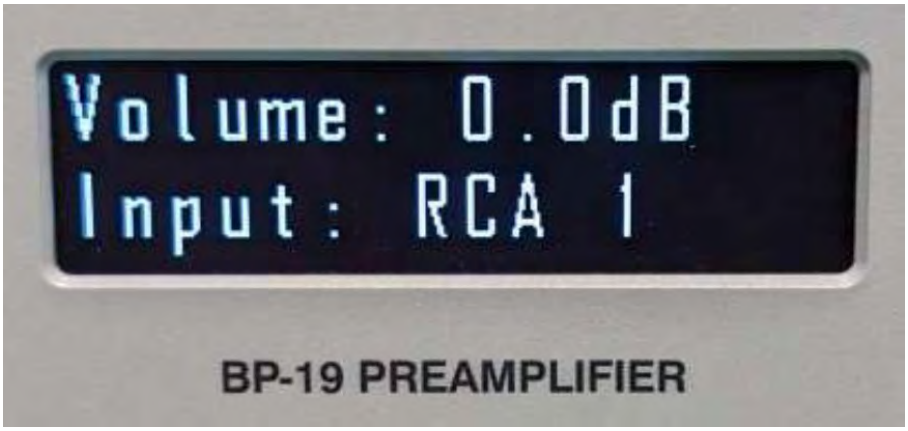
Thank you for choosing a Bryston Preamplifier. Bryston welcomes any suggestions you may have, or comments regarding the operation of your amplifier. We consider you, our customer, to be Bryston's most important resource, and your opinion is very much appreciated.

SETUP:

The Bryston BP-19 preamp, with remote-control, 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 BP-19P or BP-19MC, both of which include 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.

WHITE OLED DISPLAY:

- Currently selected source.
- Current volume level.
- Brightness level adjust.
- Auto Turn Off



FULLY DISCRETE FULLY BALANCED CLASS 'A' ANALOG CIRCUITS:

The BP-19 analog preamplifier is a byproduct of years of R&D that resulted in the development of an optimized fully discrete opamp buffer amplifier capable of delivering a staggeringly low THD+N measurement at or below 0.0006%. The analog signal path is a FULLY BALANCED DESIGN from input to output, using an array of very tightly matched components and a compact circuit design to achieve the lowest possible noise and superior common mode rejection.

Connect the pre-amplifier's left and right outputs from either the RCA or Balanced XLR connectors to the appropriate left and right input jacks on your power amplifier. Balanced cables are an advantage if you are using long runs of cable, (greater than 10 feet), between your preamplifier and power amplifier. Connect your CD player, tuner, tape deck, video recorder, or laser disc, etc. to the specific left/right preamplifier inputs. With phono stage equipped models, (BP-19P & BP-19MC) 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 Bryston BP-19 preamp also features two pairs of balanced XLR input jacks. Many signal sources, including CD-players and separate D/A converters are now available with Balanced outputs for minimum noise pickup on the cables.

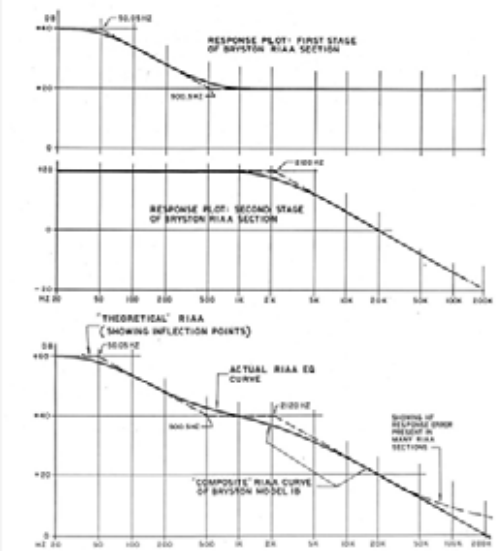
PHONO MM AND MC MODULES (OPTIONAL):

Bryston's optional phono equalizer circuitry 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.

Moving Magnet Phono Cartridge Input (MM): This is Bryston's standard RIAA phono equalization stage. It is found in both the "-P" and "-MC" versions of the BP-19 preamp. Input impedance is 47K ohms and sensitivity is 5mV.

Moving Coil Phono Cartridge Input (MC): Moving coil phono cartridges require much more gain than the more common moving magnet types. To accommodate moving coil cartridges Bryston offers the BP-19MC pre-amp which include specially designed, custom-made step-up transformers in addition to Bryston's standard RIAA phono equalization stage found in the "-P" versions of the BP-19 pre-amp.

Which phono equalization stages are engaged is determined by the front panel display menu "MC Phono / MM Phono". Please note that it is important that your phono cartridge is connected to the correct inputs (INPUT 1) in order to achieve proper performance. Input impedance is 180 ohms and sensitivity is 350uV



Most Moving-Magnet phono stages expect to receive a signal between 3-6 mV at their input from the cartridge.

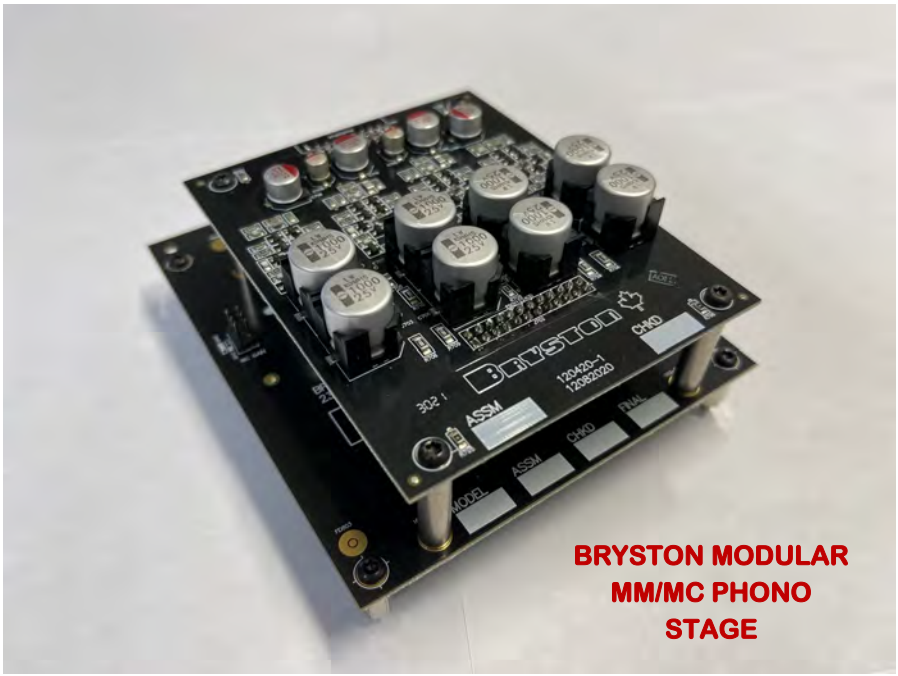
The Bryston Moving Magnet stage is a 41dB @1kHz gain preamp with a very unique RIAA playback equalization for moving magnet cartridges.

The RIAA Curve or equalization is a form of pre-emphasis on recording and de-emphasis on playback. A recording is made with the low frequencies reduced and the high frequencies boosted, and on playback, the opposite occurs.

Bryston's version of the RIAA curve is a one of a kind and has been proven to be one of the most accurate available.



PHONO INFORMATION FOR BP-19 MM/MC STAGES



Most Moving-Magnet phono stages expect to receive a signal between 3-6 mV at their input from the cartridge.

The Bryston Moving Magnet stage is a 41dB @1kHz gain preamp with a very unique RIAA playback equalization for moving magnet cartridges.

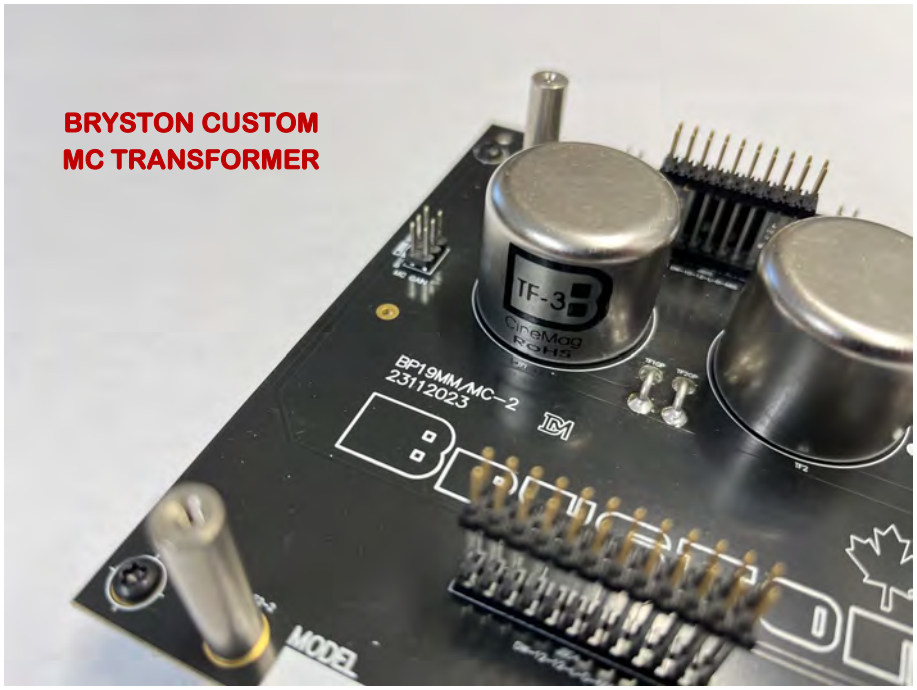
The RIAA Curve or equalization is a form of pre-emphasis on recording and de-emphasis on playback. A recording is made with the low frequencies reduced and the high frequencies boosted, and on playback, the opposite occurs.

Bryston's version of the RIAA curve is a one of a kind and has been proven to be one of the most accurate available.

A step-up Moving-Coil transformer is designed to accept the lower voltage output from the MC cartridge and increase the voltage to a point which is acceptable to the input stage of the standard MM phono section.



The internal Bryston Moving-Coil step-up transformer in the BP-19 preamplifier is available in two versions...with a 20dB or a 26dB gain option. Your choice on which unit is most appropriate will be determined by the voltage output of your chosen cartridge.



- From .1 to .2 mV we recommend the 26dB version.
- At .3 mV either version would work fine.
- From .4 to .5 mV we would recommend the 20dB version

An important point to consider when choosing which Step-up to use is you do not want to over-power or under-power the MM phono stage. Under-powering results in not having enough GAIN in the system and over-powering can result in voltage overload and the resultant distortion.

For example, a cartridge with a 5 ohm source impedance sees a 5 ohm load at the transformer's input.

This approach takes the cartridge's impedance as the most important factor when in reality it should be the cartridge's output voltage.



Features:

2 pair balanced female XLR inputs

2 pair balanced male XLR outputs

2 pair single ended outputs

4 pair RCA inputs (Input 1 Option Phono BP-19P & BP-19MC only)

Options:

Standard Silver or Black Faceplates 18 Inch

Pro 19 Inch Rackmount

Custom Color Faceplates Available

Moving magnet unique RIAA phono equalization module

Moving Coil Transformer phono module 20/26dB



BP-19 ANALOG PREAMPLIFIER PHONO INFORMATION

- BP-19 MOVING MAGNET STAGE
- MOVING COIL STAGE

If the MM phono option is installed:
RCA 1 will show as MM PHONO in the display.

If both the MM/MC phono option is installed:
The default from the factory will be MM PHONO.

To change to MC, go into the menu:

- **Select PHONO,**
- **Select MM/MC**
- **Change to MC.**

RCA 1 will now show as MC PHONO in the display.

Moving Coil gain is set to 20dB by default but can be change to 26dB utilizing internal jumpers.

Cap loading is also available with MM using internal jumpers.

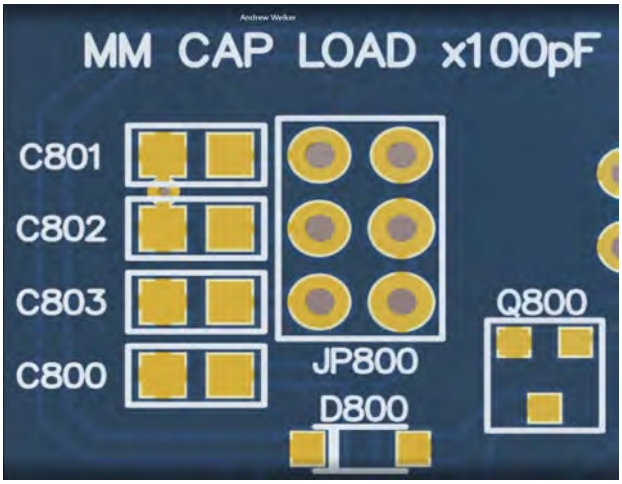


CARTRIDGE LOADING

Moving magnet cartridges perform best when presented with a capacitive load. The BP-19 MM/ MC offers four settings for capacitive loading which can be set internally with jumpers. The desired loading for your cartridge may be found in the documentation included with the cartridge. Note that the attached interconnects also present some capacitive load. Consult the documentation included with your interconnect for specifics of your model.

To set additional loading, disconnect the BP-19 from the power supply. Remove the top by unscrewing each of screws using a T-8 Torx screwdriver. Lift the top straight off. And locate the jumpers for each channel as seen below.

The minimum value is 100pF and maximum is 400pF. No jumpers should be connected for 100pF value. Adding jumpers will increase capacitance in 100pF increments. Capacitance is set per channel. Each channel should be set identically to ensure no difference in tonal balance between left and right channels. No loading options are available or necessary for moving coil cartridges.



The MM cap load headers are JP800 and JP803. and labeled JC1 and JC2 respectively.

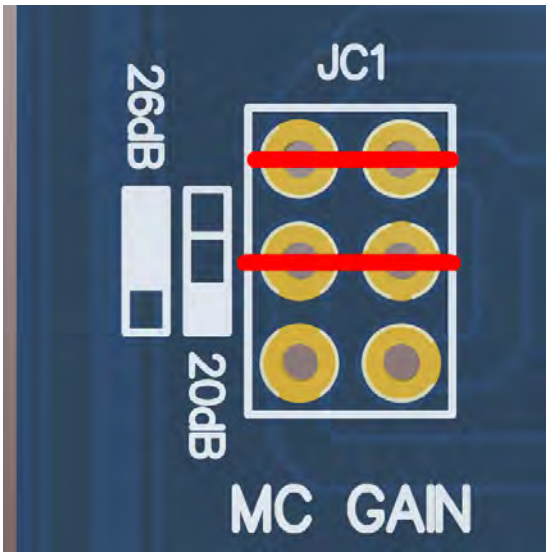


CARTRIDGE LOADING MOVING-COIL

No loading options are available or necessary for moving coil cartridges.



20 DB GAIN



26 DB GAIN







HEADPHONE OUTPUT:

The main outputs, both balanced and single-ended, will be muted when a phone plug is inserted into the headphone jack. The front panel indicator LED will not turn red, however, as is does when the outputs are muted via the MUTE toggle switch or the hand held remote control. The output is a 1/4" (6.35mm) TRS connector where the Tip=Left, Ring=Right, and Sleeve=Ground. Output impedance is <5Ω.

ANALOG AUDIO OUTPUTS:

There are two pairs of Single Ended (RCA) outputs and two pairs of Balanced outputs, using 3 pin male XLR jacks.

ANALOG AUDIO INPUTS:

BP-19 preamplifiers are equipped with four pairs of RCA input connectors: two pairs of balanced XLR input connectors. Balanced inputs use 3 pin XLR female connectors with pin 1 being ground, pin 2 as positive signal, and pin 3 as negative signal. Input sensitivity is 1 volt and input impedance is 15K ohms. Single-ended (or unbalanced) inputs employ gold plated RCA (Phono) jacks. Line input sensitivity is 500mV and input impedance is 50K ohms. See also PHONO EQUALIZATION MODULES for Phono input details.

BALANCED OUTPUTS:

Pin 1 is ground, pin 2 is positive and pin 3 is negative. These outputs are capable of driving 12 volts into any load of 1K ohms or greater.

Do not use traditional XLR to RCA adapters that short pins 1 and 3!

SINGLE ENDED OUTPUTS (RCA):

As with unbalanced inputs, these connectors are gold plated RCA (phono) jacks. They are capable of driving 12 volts into any load of 1K ohms or greater.

VISUAL INDICATORS:

The LED on the front panel of the BP-19 lights GREEN when power is on. RED in standby. Display is white.

BRYSTON BR-5 REMOTE:

You may control many functions of the BP-19 with Bryston's included BR5 Remote by pushing the MODEL button until the small display on the BR5 reads " BP19/Bi200" . The six analog inputs have six corresponding buttons and Volume, Mute, and Power ON/OFF functions are also available.

The Remote is charged using a standard USB C cable and if you want to see the advanced funtions of the BR5 - please refer to its full instruction manual: support.bryston.com/downloads/Remotes/BR5/



FRONT PANEL CONTROLS: MUTE/NORMAL BUTTON:

Mutes or releases mute at the main outputs, without changing the volume control setting, each time pushed.

VOLUME CONTROL:

Rotary control varies the output level to the 'MAIN OUTPUTS'. The volume control is a digitally controlled attenuated analog step-ladder design, ensuring long-lasting quiet linear performance. Resolution is 1/2dB and left/right channel accuracy of .1dB.

BALANCE CONTROL:

Adjust the left / right balance of audio output by pressing the corresponding buttons on the front panel. Each button press will attenuate that channel by 0.5dB and increase the opposite channel by 0.5dB (creating a 1dB differential. When either channel is attenuated, the LED above the affected channel will illuminate green. When balance is adjusted fully to one side, the opposite channel will fully mute and the LED above that channel will illuminate red.



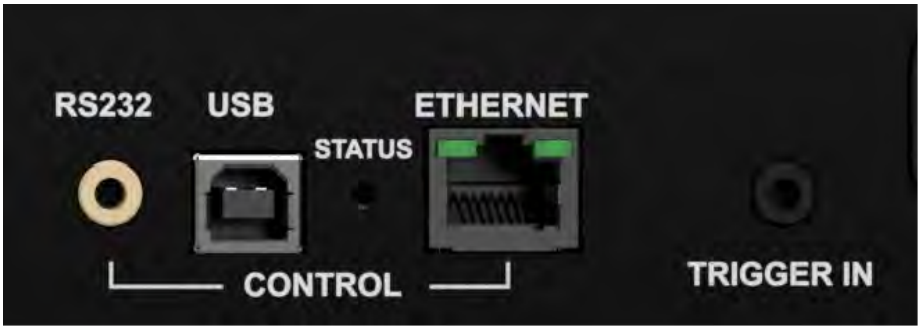


LINEAR POWER SUPPLY:

The BP-19 preamplifier utilizes a toroidal power transformer and substantial storage capacitance to provide a rock solid power supply rather than the traditional switching power supply utilized in many Class D amplifiers. This provides the capability for huge dynamic swings in your music.

CONTROL SECTION:

The BP-19 preamplifier can be controlled by remotely using RS232 or IP when connected through the RS232 or SVC Ethernet ports.



TRIGGER INPUT:

The BP-19 can be remotely turned on or placed into standby when receiving DC voltage into this port.



FRONT PANEL CONTROLS: ADDITIONAL MENUS

You can access additional controls by 'Pushing In' the front panel Volume Control knob and releasing.



Turn the volume knob slowly to view the different menu options.

Push the Volume knob a second time and the menu will open.



Please note: the > symbol is the item you are selecting when pushing in the knob.

These menus will allow you to set the:

- **'Display Timeout'**
- **'Brightness of the LED's**
- **Color of LED's**
- **'IP Address' for software updates.**



There are Menus for 'Settings', 'Front Panel' and 'Advanced'



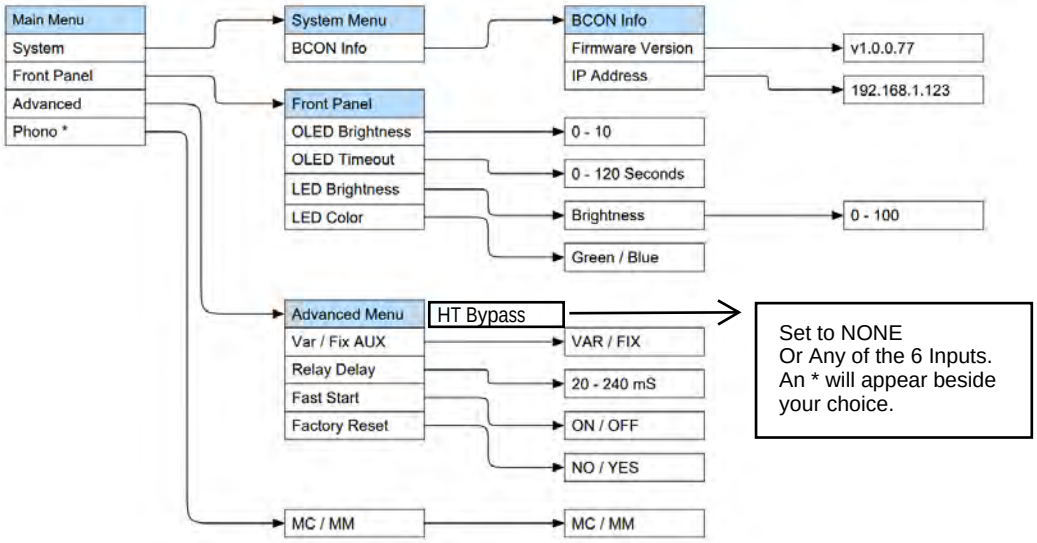
You can exit the menus quickly by pushing the MUTE button.



GENERAL SPECIFICATIONS BP-19

FREQUENCY RESPONSE	20HZ – 20KHZ	+/- 0.05DB
SIGNAL T0 NOISE	BALANCED OUT SINGLE ENDED OUT	-110dBr -110dBr
IMD	LESS THAN	0.0003%
THD + NOISE	20Hz-20kHz	0.0006%
WEIGHT	KG / LBS	5.5 / 12
DIMENSIONS	INCHES Cm	17 OR 19W X 4.6H X 13D 43 OR 48.3W X 11.6H X 33D
POWER CONSUMPTION @120V/60Hz	STANDBY IDLE PLAYING	0.5W 12W 12W

BP19 Series Preamplifier Menu Tree



* Phono setting only available if MC (Moving Coil) option is installed.

Control Section

The BP19 preamplifier can be controlled by remotely using RS232 or IP when connected through the RS232 or SVC Ethernet ports.

Connection & Command Rules	
Item	**Installer setting / rule**
Product prefix	**BP19:** #10 **BI200:** #80
Command format	<prefix><command>; include spaces exactly where shown.
Line ending	Send each command with **CR/LF**. Replies also end in CR/LF.
Success / error	Set commands reply OK; invalid parameters reply ERROR.
Queries	Commands ending in QS return the current value.
Bare commands	GETIP, ParameterEcho, and CHSRC use **no prefix**.

Implemented Commands — enter your product prefix in place of P		
Function	**Command to program**	**Purpose / returned value**
Help	PHELP	Display command help.
Power off / on / toggle	PMPWR00 PMPWR01 PMPWR02	Standby / on / toggle.
Power status	PMPWRQS	Returns PMPWR 00 or PMPWR 01.
Unmute / mute / toggle	PMMUT00 PMMUT01 PMMUT02	Unmute / mute / toggle mute.
Mute status	PMMUTQS	Returns PMMUT 00 or PMMUT 01.
Set volume	PMVOL n	Absolute volume index; BP19 range **0–113**.
Volume up / down	PMVOLUP PMVOLDN	Change by one index.
Volume status	PMVOLQS	Returns PMVOL n.
Balance right / left	PMBALUP PMBALDN	Shift balance one step right / left.
Balance status	PMBALQS	Returns PMBAL left right; each value −12 to 12.
Select source	PMSRC00 BAL1 PMSRC01 BAL2 PMSRC02 RCA1 PMSRC03 RCA2	Select the named input.
	PMSRC04 RCA3 PMSRC05 RCA4	
Source status	PMSRCQS	Returns PMSRC 00..05.
Trigger outputs	PTRIG00 both off PTRIG01 T1 off, T2 on PTRIG10 T1 on, T2 off PTRIG11 both on	Set trigger 1 and 2 states.
Trigger status	PTRIGQS	Returns PTRIG t1t2.
Set trigger delays	PTRDL d1 d2	Set each delay from **0–20 seconds**.
Trigger delay status	PTRDLQS	Returns PTRDL d1 d2.
System information	PINFOQS	Returns product, serial, firmware, network, and hardware details; multi-line reply.
IP address	PIPADQS	Returns PIPAD x.x.x.x.
Named source	CHSRC input	No prefix. Example: CHSRC BAL1.
Network check	GETIP	No prefix. Returns IP and link state.
Parameter echo	ParameterEcho args	No prefix. Diagnostic echo.

Personalized Faceplates

Bryston is pleased to introduce the availability of personalized faceplate colours, available now for Bryston amplifiers, preamplifiers, CD players, digital players, phono stages and DAC's.

Our new colour choices, plus the option to create custom colours, enable Bryston electronics to blend seamlessly or contrast elegantly within any décor or equipment rack.

Enjoy bespoke colour choices as an added touch to any entertainment space.

ADDITIONAL CUSTOM COLOURS AVAILABLE UPON REQUEST

Source buttons only available in Black or Silver



Bryston Ltd

MUSIC WITH EMOTION

2885 Highway 60
Dwight, Ontario
Canada
P0A 1H0

WWW.BRYSTON.COM

