BRYSTON OWNERS MANUAL



NEW BRYSTON BP3

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

NEW BRYSTON BP3 PHONO PRE-AMP

WELCOME

Thank you for your purchase of a Bryston BP3 Phono Preamplifier. Available for Moving Magnet or Moving Coil cartridges. Powered by a Bryston PS3 Power Supply, the BP3 is an extremely high performance, yet compact and practical active gain stage for your vinyl playback system.



Bryston BP3 Phono Pre-amp Improvements:

- **New, ultra low-noise analog power supplies.**
- **Front panel MONO control to allow for reduced playback noise of monophonic LPs.**

Improvements over BP2 MM:

- **New, precision film capacitors for MM loading.**
- **Option for no capacitive loading to account for MM cartridge/cable combinations that do not require added capacitance. (Units ship with 100pF default loading and can be re-configured for 0pF, 200pF, or 300pF)**

Improvements over BP2 MM/MC:

- **New, Bryston custom-made shielded MC transformers.**
- **MC gain of 20dB or 26dB can be configured using internal jumpers, no need to order a specific fixed gain. (Units ship with 20dB default gain)**
- **MM/MC selector moved to the front panel for easy access.**

BRYSTON BP3 PHONO PREAMPLIFIER

Shipping Box and Packing Material

Please keep the original shipping box and all packing material. This will ensure the BP3 is protected in future transport. In the unlikely event you have a problem and must return it for service, you must use the proper packing material. Ship the unit only in the original packing material, as the unit is not insurable by carriers otherwise. Replacement packing materials consisting of a shipping carton with plastic foam inserts is available from Bryston for a small fee.

Placement

The BP3 is a cool-running gain stage and can be placed in the position most convenient to your circumstance. The nature of the product is to amplify very low level signals, so some care in placement is worthwhile to maximize performance. Do not place the unit next to electronics known to radiate a high amount of noise. Do not stack upon the PS3 Bryston power supply.

Connecting to Power Supply

The BP3 must be used with a Bryston power supply model PS3. Only the XLR-6 terminated interconnect included with the BP3 should be used to connect the to the power supply. Insert the female end of the cable into the BP3 and the male end to the approved power supply. A secure connection is established when you hear a click.

BRYSTON PS3 POWER SUPPLY



BRYSTON PHONO PREAMPLIFIER

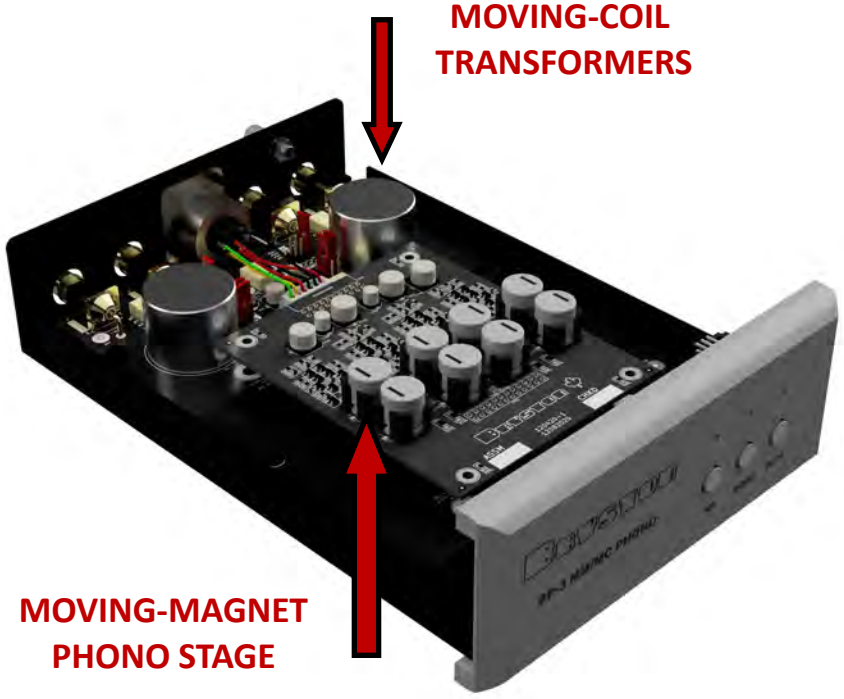
Bryston's optional phono equalizer circuitry features highly accurate equalization, extremely low noise and distortion and provides headroom margins sufficient to prevent overload from any known phono source. If your turntable provides a separate ground lead system noise may be minimized by connecting 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 BP3 Phono 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 BP3 phono pre-amp option which includes specially designed, custom-made step-up transformers in addition to Bryston's standard RIAA phono equalization stage found in the "-P" versions of the BP3 phono preamp.

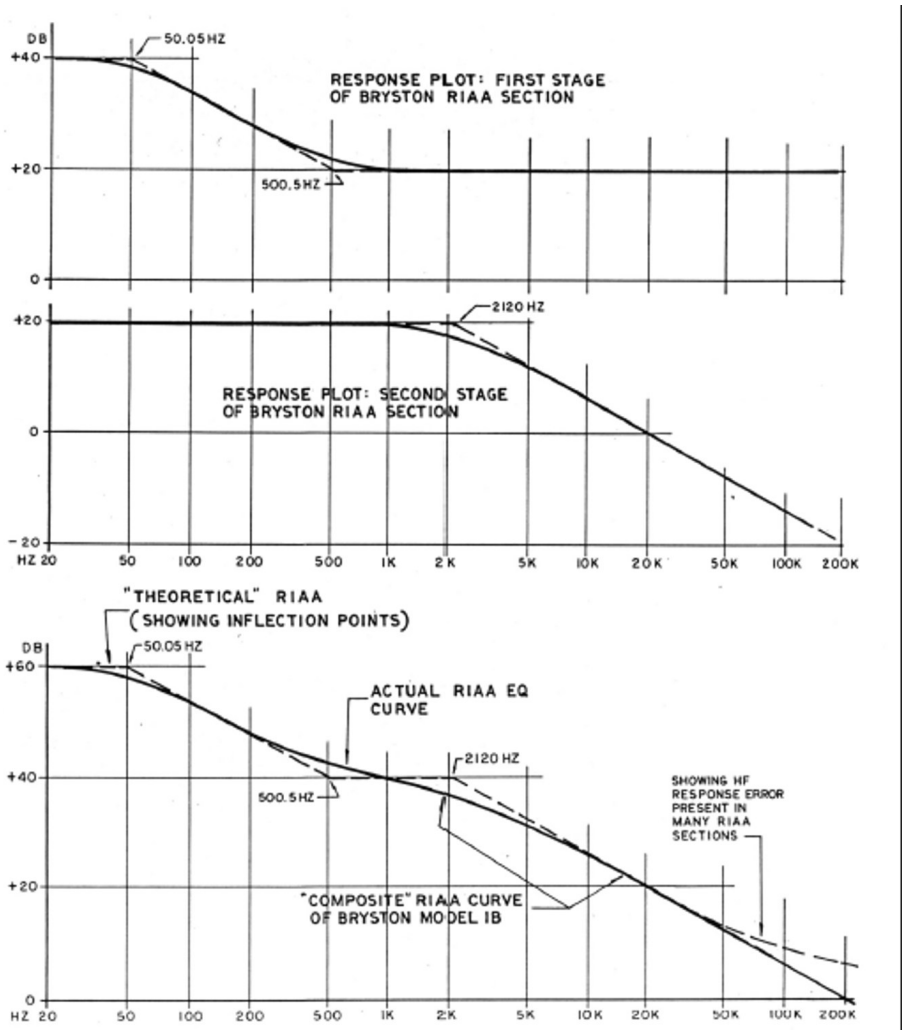


BRYSTON PHONO RIAA CURVE

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 BP3 MM/MC STAGES

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 BP3 phono 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.

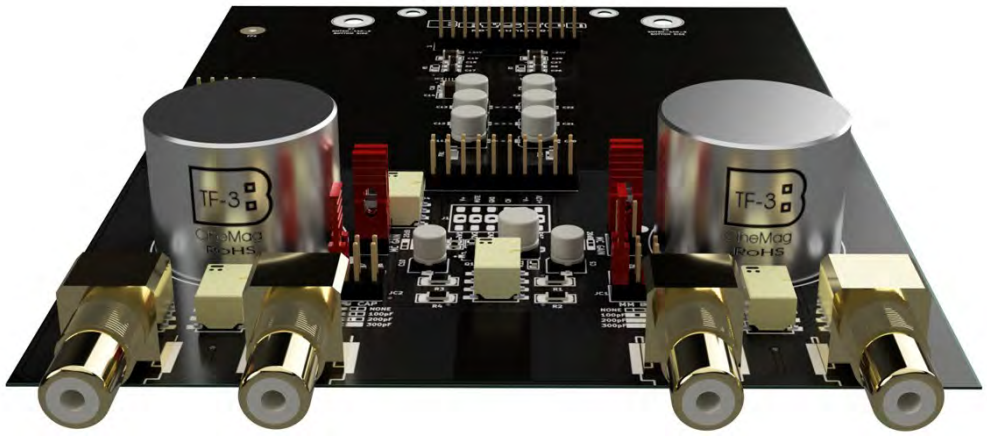
Taking the cartridge's impedance as the most important factor is incorrect. It should be the cartridge's output voltage.

For example, a cartridge with a 5 ohm source impedance sees a 5 ohm load at the transformer's input - not a good idea.





BRYSTON CUSTOM MOVING-COIL TRANSFORMER



BP3 MOVING-COIL:

- **New, custom-made shielded MC transformers.**
- **MC gain of 20dB or 26dB can be configured using internal jumpers, no need to order a specific fixed gain. (Units ship with 20dB default gain)**
- **MM/MC selector moved to the front panel for easy access.**



CARTRIDGE LOADING MOVING-MAGNET

Moving magnet cartridges perform best when presented with a capacitive load. The BP3 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 so our phono stage allows for ZERO CAPACITANCE as well.

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.



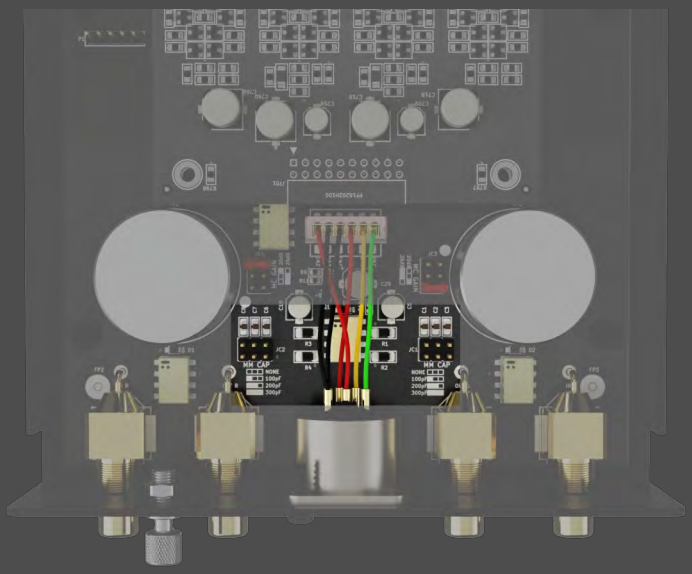
CARTRIDGE LOADING MOVING-COIL

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

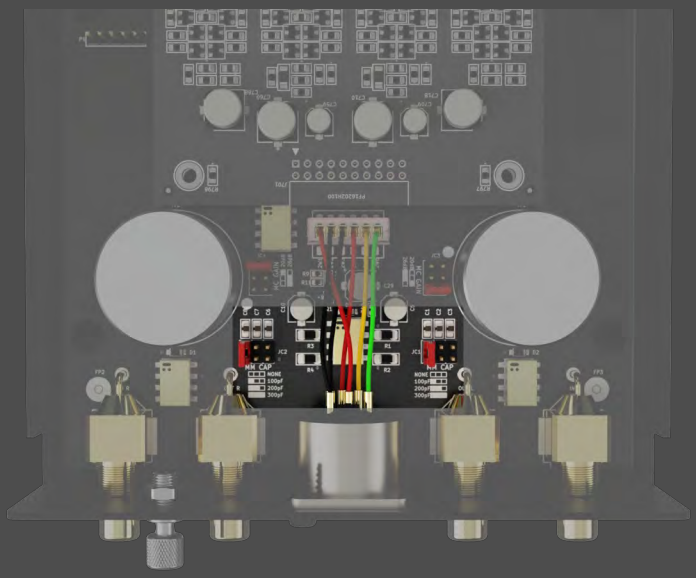
Moving-Coil cartridges only require gain changes using internal jumpers based on cartridge voltages out (see Page 7).

Please refer to Page 10 for MM loading diagram
Please refer to Page 11 for MC loading diagram

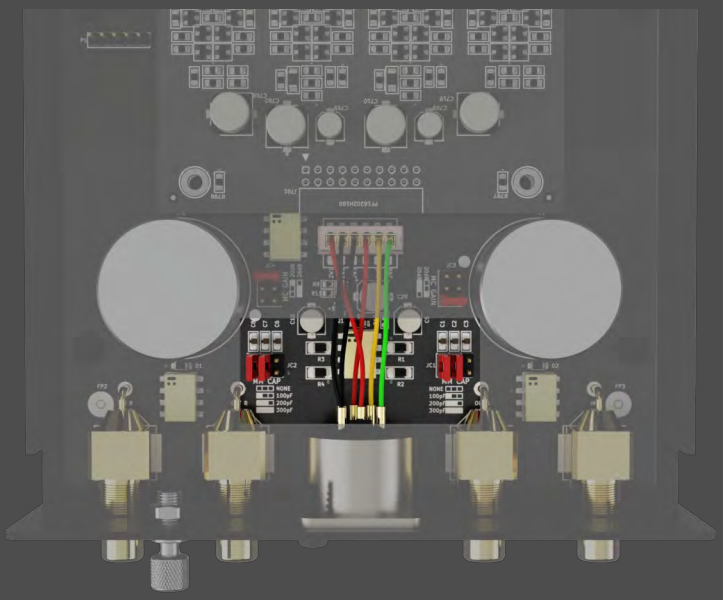
MOVING MAGNET CAPACITANCE LOADING



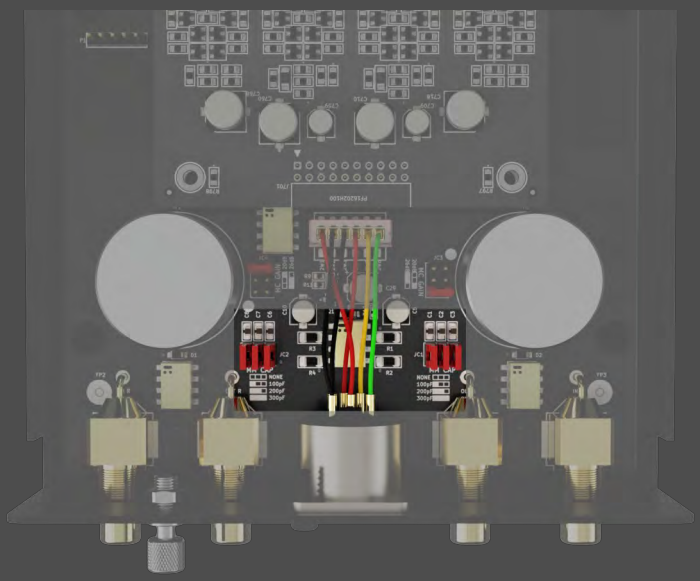
NONE



100 pF

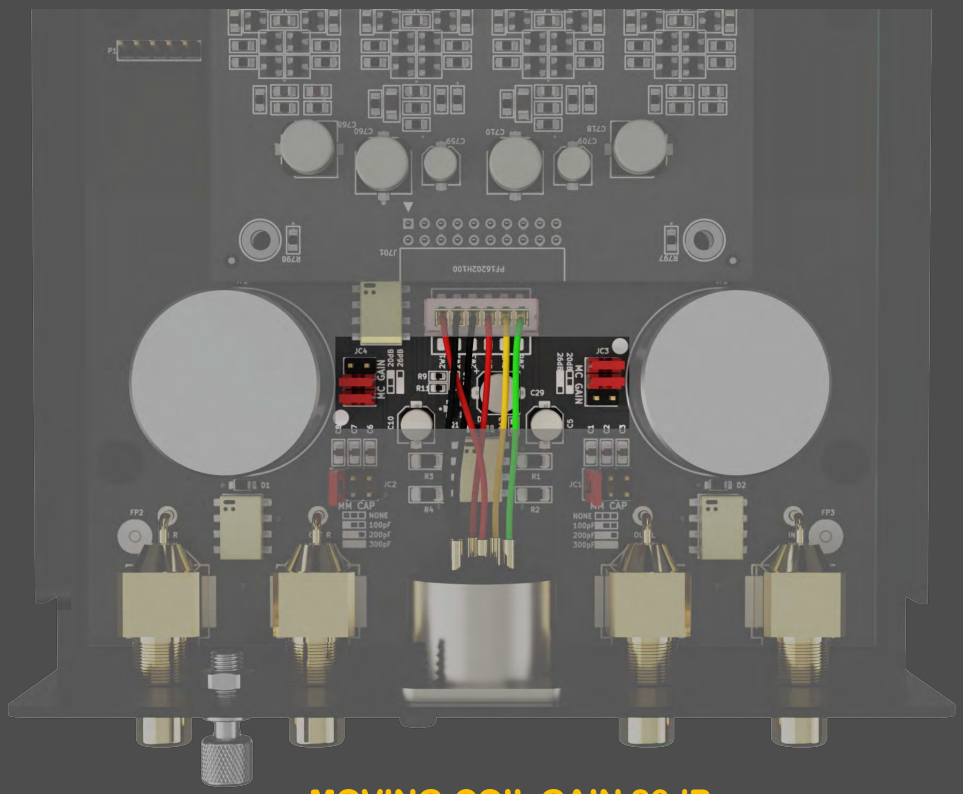


200 pF

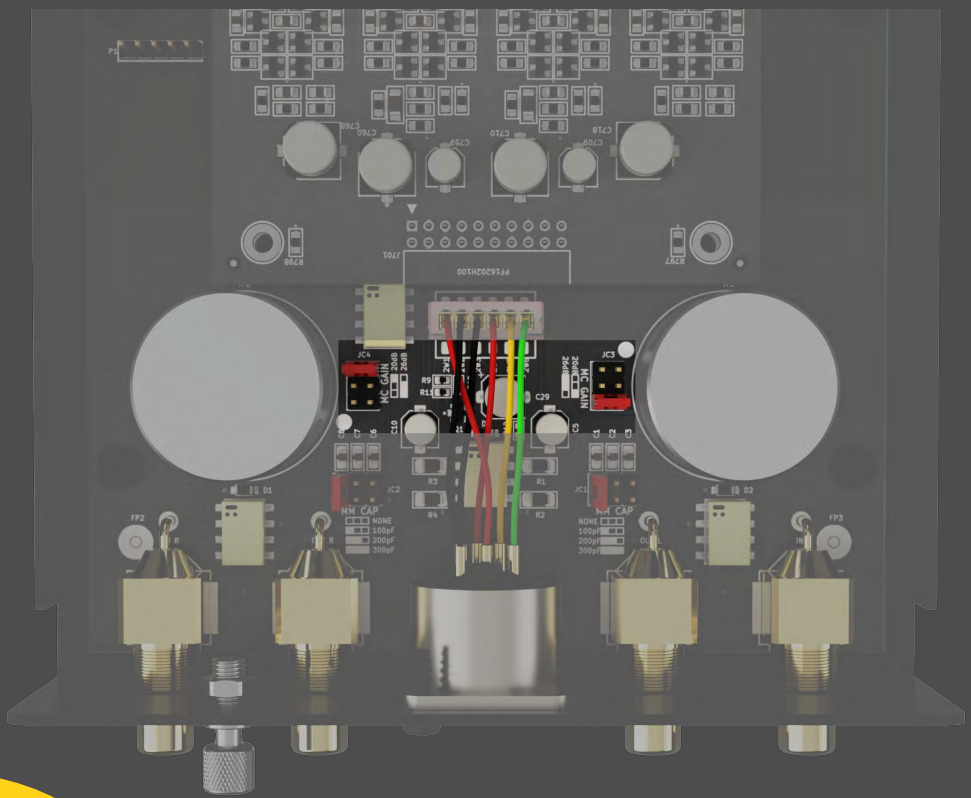


300 pF

MOVING COIL GAIN LOADING



MOVING-COIL GAIN 26dB



MOVING-COIL GAIN 20dB



GENERAL SPECIFICATIONS BP3

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	6W X 2.75H X 8.5D 15.25W X 7H X 21.6D
POWER CONSUMPTION @120V/60Hz	STANDBY IDLE PLAYING	0.5W 18W 18W





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

