

e.One^{by} bel canto



PHONO
User's Guide

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PHONO

Two Channel Phono Preamplifier

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Important Safety Instructions

Explanation of symbols used in this manual or on the rear/underside of the apparatus:



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 enclosure that may be of sufficient



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.

- Read, keep and follow these instructions.
- Heed all warnings.
- Do not use the apparatus near water, ie near a bathtub, kitchen sink, laundry tub, in a wet basement, near a swimming pool etc.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the Manufacturer's instructions. Site the apparatus so that its location or position does not interfere with its proper ventilation. For example, the apparatus should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings, or placed in a built in installation such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
- 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 is provided for your safety. If the provided plug does not fit into your outlet; consult an electrician for replacement of the obsolete outlet.

TO COMPLETELY DISCONNECT THIS APPARATUS 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 ACCESSIBLE.

Disconnect supply cord before changing fuse. Refer servicing to qualified service personnel.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE AND OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS APPARATUS

- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and at the point where they exit from the apparatus.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- 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 has been 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.
- Mains plug: Use the mains plug to disconnect the apparatus from the mains supply. The mains plug must be accessible at all times. Use the mains switch (if applicable) when the apparatus is not in use.
- Objects and liquid entry: Do not let objects or liquids fall into the apparatus. Do not expose the apparatus to dripping or splashing. Do not place a vessel containing liquid on top of the apparatus.
- No naked flame sources, such as lighted candles, should be placed on the apparatus.
- The apparatus has been designed for use in moderate and tropical climates

IN THE U.K.

This appliance is fitted with a non-rewireable 10 amp mains plug. The plug contains a 10 amp fuse. If the fuse has blown it can be replaced as follows:

- a) Pull out the black fuse cover/carrier.
- b) Remove and dispose of the blown fuse.
- c) Fit a new 10 amp BS1362 approved fuse into the carrier and push the carrier back into the plug.

Always ensure the fuse cover is fitted. If the fuse cover is missing do not use the plug. Contact your Bel Canto retailer to obtain a replacement fuse cover. Fuses are for fire protection and do not protect against electric shock.



WARNING: THIS APPLIANCE MUST BE GROUNDED.

FCC NOTICE

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warranty Information

Bel Canto products are automatically covered by a 90 day factory warranty that covers all internal parts and labor. Register online (<http://www.belcantodesign.com/home/support/warranty-registration/eone/>) within 30 days of purchase from an authorized dealer to automatically extend your warranty for 2 years starting from the date of purchase. If you do not have web access, please contact your dealer for assistance. Upon fully completing registration, within 5 business days you will receive an email that officially validates your warranty. Your information will be used for internal use only and will not be sold or released outside Bel Canto. Your comments and suggestions are appreciated and help us continually improve our products and services.

The warranty is only valid to the original owner and is non-transferable. Damage caused by unauthorized modification, abuse, or neglect of product will void your warranty. Any cost associated with return of product is the sole responsibility of the owner. All returns require a return authorization number issued after completing the RMA form in the support section of our website. If you have any questions, please feel free to contact us online at info@belcantodesign.com.

Unpacking Your PHONO

PHONO box contents include the following:

- 1 (one) – PHONO Preamplifier
- 1 (one) – PHONO User's Guide
- 1 (one) – Power cord [6.6' – 2 meters long]

Carefully unpack each piece and check for shipping damage. If there is any damage, or if anything is missing, please contact your dealer, distributor or Bel Canto Design. Save all packing materials as they are specially designed to protect the unit during transportation or shipping. If the packing becomes lost or damaged, please contact your dealer, distributor or Bel Canto before attempting to transport your unit.

The power supply on the PHONO is preset for the proper power voltage. The power cable should have the correct plug for your local power system. If you believe this to not be true, please contact your dealer immediately.

Setup & Placement

This product, like any electrical component, can be dangerous and cause injury unless correct handling procedures are observed and used. Before powering this product, it is necessary to read and follow proper setup and procedures.

Because the PHONO runs cool, it can be placed in many system locations without compromise. We do not recommend placing weights or other objects directly on the PHONO. This may scratch or mar the chassis finish. Do not use harsh chemicals when cleaning the outside of your PHONO.

Single Ended RCA inputs and RCA and XLR outputs are available. You can place the PHONO close to the turntable and minimize the length of the low-level interconnect from your cartridge. When power is applied, the front panel green LED will light.



IMPORTANT!

Make all connections
before powering your
unit!

Rear Panel Connections



- IEC power cord jack: Connect the supplied or a quality aftermarket power cord from this jack. Note the power setting indicated on the back of the unit before connecting the power
- Ground: If your turntable has a grounding wire, try connecting it to this post. In many but not all cases, this will eliminate the electrical hum that may be present in your signal
- XLR and RCA Outputs: Connect from these outputs to either a line stage Preamp or the analog input of your DAC
- Dip Switches for Gain and Resistive Loading: Your cartridge manufacturer will recommend a certain load which may require adjusting these settings. Refer to the following pages to adjust settings.
- RCA Inputs: Connect from your turntable

CONDITIONING

The sonic performance of the PHONO will begin to stabilize after 100 hours of continuous power up. We recommend leaving the PHONO powered on at all times as it benefits the overall sound quality and draws little power. If your system will not be used for an extended period of time, such as two weeks, or if there is an imminent electrical storm, we recommend shutting off your system.

Settings

Switch Settings

A set of 6 switches are located next to each RCA input. These are used to setup the optimum Gain, Resistive Load, and Capacitive Load for your cartridge. Please refer to your cartridge manual for the optimum gain and RC loading recommendations.



Note that you should MUTE your line stage Preampilfier or analog input on your DAC and turn the PHONO OFF before making any changes to the rear panel switches.

We recommend using a small flat tip screwdriver such as used for attaching your cartridge to a tonearm or a similar tool to gently change the switch positions.

Gain Setting Switches

The PHONO default gain setting will be for typical high output cartridges, from 3mV to 5mV nominal output levels the 38 dB gain setting will be best. If you are using a low output 0.3mV Moving Coil cartridge, switch each channel to the 60 dB setting by pressing the Gain Switches to the DOWN position. The interim positions can be used to optimize setup for different cartridge and preamplifier sensitivities.



Ensure that you MUTE your line stage Preampilfier or analog input on your DAC and turn the PHONO OFF before changing this setting to prevent a large transient from damaging your loudspeakers or power amplifiers!

Input Resistor Load Setting Switches

The default input resistance is 47,000 (47K) ohms when all switches are in the DOWN position. When a switch is set in the UP position the corresponding resistor value is placed in parallel to the 47K resistor, resulting in a lower input resistance. This means that a large range of effective input resistance values can be selected by selecting different parallel combinations of resistance value. The table on the following page can be used to determine the switch positions for different input resistance values.

NOTE: Both channels need to have the same switch settings!

Settings

Refer to these charts when adjusting the dip switches.

Gain Adjustment		
Switch 1	Switch 2	Gain dB
Up	Up	38dB MM
Down	Up	50dB MC Low
Up	Down	58dB MC
Down	Down	60dB MC High

Resistance Adjustment				
1000	500	100	50	Effective Load Resistance (ohms)
Down	Down	Down	Down	47K
Up	Down	Down	Down	980
Down	Up	Down	Down	495
Up	Up	Down	Down	331
Down	Down	Up	Down	100
Up	Down	Up	Down	91
Down	Up	Up	Down	83
Up	Up	Up	Down	77
Down	Down	Down	Up	50
Down	Up	Down	Up	45
Down	Up	Up	Up	31
Up	Up	Up	Up	30

Specifications

Bandwidth:	1Hz-50KHz
RIAA Accuracy:	20Hz-20KHz +/- 0.2 dB
Signal to Noise Ratio 40 dB gain:	>80 dB A weighted, re 5mV RMS in
Distortion @ 2 Volt RMS/1kHz:	<0.01%
Maximum Output Level:	7 V RMS
Output Impedance:	100 Ohms Single Ended and Balanced
Input Impedance:	Adjustable See page 6
Gain Level Options:	Adjustable See Page 6
Power On usage:	10W
Power Off usage:	0.0W
Internally Set Operating Voltages:	100-120VAC or 230-240VAC 50/60 Hz
Dimensions:	8.5" W x 12.5" D x 3" H (216 mm x 318 mm x 75 mm)
Weight:	10 lbs. (4.5 kg)

Declaration Of Conformity

Application of Council Directive(s):

2004/108/EC and 2006/95/EC, as amended

Standard(s) to Which Conformity Is Declared:

EN 55013:2001 + A1:2003 + A2:2006

EN 55020:2007

EN 61000-3-2:2006

EN 61000-3-3:1995 + A1:2001 + A2:2005

EN 60065:2002/A12:2011

Manufacturer:

Bel Canto Design, Ltd.

221 1st Street North

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The equipment identified here conforms to the Directive(s) and Standard(s) specified above.

Type of Equipment: Audio Preamplifier

Models: PHONO

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