

Pre1

Balanced Control Preamplifier

User's Guide and Operating Information

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Pre1

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Bel Canto grew from the quest to achieve the ultimate musical satisfaction from an audio system. This quest began with the discovery of the inherent sonic qualities and musical performance potential of a nearly forgotten technology, the single-ended triode amplifier. The ability of this type of amplifier to recreate the musical experience and evoke a powerful emotional response in the listener, much like the live event, inspired the development of the SET line of amplifiers through the ultimate expression of this technology.

*For the better part of a decade this quest continued and has resulted in a line of fine audio amplifiers and preamplifier that are designed to provide unparalleled musical reproduction. Bel Canto Design's goal for the **Pre1** is simply to provide the most expressive and powerful musical experience outside of the live event and bring some of the greatest musicians and their performances into the intimacy of your home.*

*The **Pre1** represents the potential of modern technology when amalgamated with the very newest circuit architectures and parts. We hope you enjoy this fine instrument for many years to come.*

Bel Canto Design

Design Features

The Pre1 output stage uses the latest integrated technology to combine multiple amplifiers and Laser trimmed precision resistors in a true balanced output stage. This balanced stage mimics the operation of a transformer, providing ideal line-level audio drive into either a balanced or single-ended load. This operation eliminates ground loop issues with power amplifiers when used with either the RCA outputs or the XLR. This assures maximum signal to noise and extremely low distortion with the shortest audio signal path.

The power supply uses a separate low noise regulation for each channel's gain stage. Audio grade decoupling capacitors, star grounding and careful signal routing insure that low-level signals are preserved.

The volume control is a precision Crystal 3310 potentiometer controlled by a microcontroller. This device provides extremely low noise and distortion coupled with high accuracy. We have found the sonic quality to be as good as or better than the best potentiometers and switched attenuators with a long useful life and no wear.

The input processing provides two (2) true balanced input connections and three (3) RCA jack connections plus Tape In. The Tape Output is an RCA output with an active audio-grade buffer preamplifier to isolate the internal signal bus from the tape output. The main outputs are a single-ended RCA and a balanced connection for use with balanced cables and power amplifier inputs.

The elegant simplicity of the signal path and gain stage allows the **Pre1** to preserve the audio signal quality.

The **Pre1's** sonic performance will start to stabilize after approximately forty (40) hours of continuous power up.

Warm Up

Unpacking

This box should contain the following parts:

- 1 - **Pre1** User's Guide
- 1 - Power Cable for connection to utility power [1.85m, 6' long]
- 1 - **Pre1** audio preamplifier
- 1 - Bel Canto Owner's Warranty & Registration Card (If purchased outside the US please contact your dealer/distributor for warranty information.)

Carefully unpack each piece and check for shipping damage. If there is any damage, or if

a piece is missing, please contact your dealer or Bel Canto Design. **Save all packing materials** as the packing is specially designed to protect the preamplifier for shipping or transporting it. If you lose or damage the packing materials and carton, please contact your dealer or distributor before attempting to transport the preamplifier.

POWER Connection

The Pre1's power supply is preset for the proper national voltages before your receive it. The power cable should have the correct plug for your local power system. If you believe this is not true, please contact your dealer immediately.

Warning

Do not connect power to this preamplifier yet!

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

Do not open up your Pre1 (do not remove the chassis covers). There are no user serviceable parts inside. Any tampering of internal parts will immediately void your warranty and could cause serious injury to you.

Complete and mail the Owner's Registration Card immediately in order to activate your warranty.

Front Panel Controls

1) Volume Up – increases the output gain in 0.5 dB increments from 0 to 100 with 100 being maximum gain.

2) Volume Down – decreases the output gain in 0.5 dB decrements.

3) Balance Left – decreases the gain of the right channel in 0.5db increments to a maximum of -6 dB.

4) Balance Right – increases the gain of the right channel in 0.5db increments to a maximum of +6 dB.

5) Mute – Red Led above the mute button will illuminate when the preamplifier is in mute mode. Disconnects audio input, and hard mutes the audio output.

6) Inputs – One of the red LED's on the left side of the display panel will illuminate to show the selected input. The input button allows user to select between the source inputs labeled 1-4 on the back panel of the preamplifier. *Note: #5 is an internal input and is accessible only when the optional internal source is installed.*

7) Tape – Activates the **input** labeled tape on the back panel of the preamplifier. *Note: the tape output connectors, regardless of the tape button being selected on the front panel, will always output the signal of the main input (button 6) you have selected, **without going through the volume control (output will be full volume.)*** Selecting the tape function can be used for a variety of functions:

7a) When the tape input of a tape deck is connected to the tape output of the

~~preamplifier you may record any selected preamplifier source (CD, LP, Tuner, etc.)~~ When the tape output of the tape deck is connected to the tape input of the preamplifier you may also monitor the recording you are doing in order to verify the recording quality.

7b) Output to an external signal processor; surround sound processor, or equalizer. Proper setup of this loop may differ depending on the processor, refer to the owners manual of your processor for setup instruction.

7c) Output to a separate audio system. By connecting the tape out of the preamplifier to any input on a second audio system you can listen to any source you have selected on the preamplifier, on both systems, at the same time.

8) Loop - Activates the input marked loop on the back panel of the preamplifier. This input bypasses the volume control and all other internal circuits and allows the loop-input signal to go directly to the preamplifier output. Uses include: pass-through for a CD player or other source with its own volume control and pass-through connection to external surround sound processor.

9) Standby – When in standby mode all front panel lights are turned off, except for the standby LED. Most of the internal circuitry is active while muting output.

Rear Panel Connections

The rear panel provides 5 total source inputs and 3 total source outputs, including RCA and XLR type connections. Beginning from the left side of the rear panel the connections are as follows:

- ***XLR Output Jacks for Left and Right Channels***

These outputs go to your power amplifier or active crossover if it has XLR inputs. They use the standard Male XLR pinout pattern of:

- 1 - Gnd
- 2 - Plus Signal
- 3 - Minus Signal

- ***RCA Output Jacks for Left and Right Channels***

These RCA outputs can be used instead of, or in addition to, the main XLR outputs to your power amplifier, active crossover, or sub-woofer.

- ***Loop Input for Left and Right Channels***

Passes the input signal directly through to the main outputs and bypasses all internal circuitry. Used for sources with internal volume controls. This input bypasses the preamplifier for use with a surround sound processor.

- ***Tape Output***

Buffers the signal from the source selected at the front of the preamplifier to drive the input of a separate piece of audio equipment. See explanation under the **Tape** heading on the *Front Panel Connections* page.

- ***Tape Input***

May be used as an input from any source including the source hooked up to the tape

output, see explanation under the **Tape** heading on the *Front Panel Connections* page. ***To use this input you must push the button labeled Tape on the front panel of the preamplifier.***

- ***Balanced XLR Inputs #4 & #3***

These inputs come from a balanced signal sources (CD, LP, Digital Converter, etc.) A non-balanced source can be connected to these inputs using a specially constructed cable with an RCA plug on one end and an XLR Male connector on the other end, or RCA to XLR adapters can be used. Contact your retailer, cable supplier or Bel Canto Design for details on this. These female XLR inputs use the standard pinout pattern of:

- 1 - Gnd
- 2 - Plus Signal
- 3 - Minus Signal

- ***RCA Inputs #2 & #1***

These inputs can be used only with sources with RCA type outputs and RCA type interconnect cables (CD, LP, TV, VCR, etc.)

- ***System placement of the Pre1***

The **Pre1** may be situated within your system in any convenient manner desired. For easy access to the control buttons the most typical arrangement places the **Pre1** on the top of a rack or shelf unit.

We do not recommend placing weights or other objects directly on the **Pre1**. This may mar or scratch the chassis finish.

Specifications

Volume setting for unity gain • 84
Input overload • 5 Volts rms
Bandwidth Into >600 Ohms • 0 Hz-200 kHz
Signal to Noise Ratio re 1 volt out • >100 dB A weighted, 20-20KHz
Distortion at 1 Volts rms Out • <0.01%
Input configuration and impedance • Single-ended/balanced 20K ohm
Output Options • 2-XLR Balanced; 2-RCA; 1-buffered RCA Tape Out
Output Impedance • 50 ohms
Maximum Output Level • 10 volts rms Balanced
Gain Single-ended • 16 dB
Gain Balanced • 16 dB
Power Requirements • 100-120 VAC 50-60 Hz or 230-240 VAC 50-60 Hz 25VA
Size • 17.5"W x 15"D x 4"H (mm x mm x mm) Weight • 14lbs. (6.5kg)

Warranty Information

Please take a moment to fill out your warranty registration card. Returning this registration validates your warranty and allows us to send you information on product updates and new product development. Completion of this card is requested within 15 days of purchase to ensure immediate warranty coverage.

Bel Canto Design offers a 5-year limited warranty on internal parts and workmanship and will replace any defective parts directly. This warranty is void if damage is due to abuse, neglect or unauthorized modification.

Bel Canto Design products are uniquely identified with a serial number on the back panel or the bottom plate of each unit. This number is required to validate your warranty along with a copy of the original purchase receipt, please reference it if service is required. If you have any questions, comments or if we can be of service, please contact us Monday through Friday 9:00 a.m. - 5:00 p.m. central time.
