e.One by bel canto

C5i
User's Guide

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C5i

Integrated Amplifier / Audio DAC
with

HDR HIGH-DYNAMIC RESOLUTION **CORE**™

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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 magnitude to constitute a risk of 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.

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.

- Read, keep and follow these instructions.
- Heed all warnings.
- Do not use the apparatus near water, e.g. near a bathtub, kitchen sink, laundry tub, in a wet basement, near a swimming pool etc.
- Clean only with a dry cloth.
- Install in accordance with the Manufacturer's instructions.
- 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.
- 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.
- Do not expose the apparatus to liquids or moisture, 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.

Fuse replacement: 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: 1) Pull out the black fuse cover/carrier. 2) Remove and dispose of the blown fuse. 3) 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 the e.One C5i

Carefully inspect each item for any visual damage. If there is any damage, or anything missing from the list below, please contact your dealer or distributor.

Stream packaging contains the following:

> 1 (one) – C5i
> 1 (one) – C5i User's Guide
> 1 (one) – Power cord [6.6' – 2 meters long]
> 1 (one) – Remote Control

IMPORTANT: Save all packing materials as they are specially designed to protect the e.One C5i during transportation. If the packing materials are compromised, contact your dealer, distributor, or Bel Canto for proper packaging before attempting to ship your C5i.

Power Connection

The power supply in the e.One C5i 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. 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.

WARNING!
DO NOT CONNECT POWER TO THIS PRODUCT YET!

Setup & Placement

The e.One C5i can be placed in many locations without compromise. We do not recommend placing weights or other objects directly on this product. This may scratch or mar the chassis finish. Do not use harsh chemicals or abrasives when cleaning the outside of your C5i. Use a clean microfiber cloth to remove fingerprints from the chassis.

Single Ended RCA and Balanced XLR connectors are available. XLR connectors follow the standard AES pin configuration:
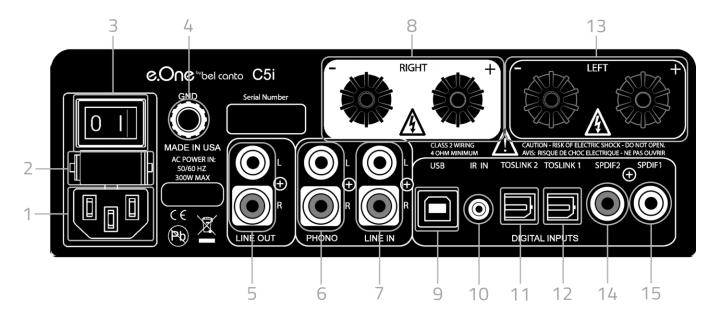
> Pin 1 Ground
> Pin 2 Signal +
> Pin 3 Signal -

We recommend placing the e.One C5i in an easily accessible location near your source components.

Rear Panel Connections

IMPORTANT: Never connect either the positive or negative speaker output to any ground contact. Use Class 2 Wiring for all loudspeaker connections.

1. **IEC Inlet.** Region specific voltage is internally set.
2. **Fuse Drawer** with 5 amp/250V slow blow 5mm x 20mm fuse.
3. **Mains Power Switch** connects AC input to the power board when set to the I position.
4. **Ground Lug** is provided to attach ground wire from your turntable.
5. **Line Out** is a volume-controlled line output that can be used to drive a second amplifier or powered subwoofer.
6. **Phono Input** supports MM cartridges and some high output MC cartridges (see page 8 for specs).
7. **Line In** is for analog signals up to 2.5Vrms.
8. **USB Input** can be connected to a computer for playback of any audio format up to a 24/96 data rate. The C5i is enumerated as *Bel Canto USB 2496* when using Windows 98 or later and any version of Macintosh OSX.
9. **IR In** increases the range of the remote when connecting an IR extension emitter.
10. **TOSLINK Inputs** accept any standard plastic or glass fiber optical TOSLINK cable and operate to 24/192 data rate
11. **SPDIF Inputs** accept RCA connections from any 75 ohm SPDIF source and operate to at least 24/192 data rate
12. **NextGen Loudspeaker Connectors** are optimized for sound quality with any good spade or NextGen banana connector. Note that the NextGen connector is clutched to ensure optimum pressure on the contact. **- Do not over tighten-** The NextGen connector creates a tight and damped contact preventing chatter and contact noise at the connection to the loudspeaker. Outputs are compatible with any loudspeaker down to 2 ohms.

When all connections to and from the unit have been made then double check everything before plugging the C5i into the power source. After turning on, the C5i will go through its display check and show the software revision number. The unit will be in Soft Mute with the SP1 input selected. The volume will be set to 50.0.

Single Knob Control Functions & Display

Front Panel Control Knob:

The control knob is a continuously rotating control with a push-switch function. Always push the button with your finger in the direct center of the knob. Pushing the knob will switch between selectable values on the display. Rotating the control left or right will adjust the selected value.

Upon Power Up:

When switched on, the C5i will perform its startup sequence followed by displaying the firmware revision.

After 2 seconds, Input Selection Mode will become active. The SP1 input will be selected and Soft Mute will be active. The volume will be set to 50.0.

Volume Control:

The C5i allows you to change volume level by rotating the knob. The volume down function (counter-clockwise rotation) is very rapid and allows quick changes in the volume level. Volume up (clockwise rotation) functions rapidly up to a displayed volume level of 65.0. It then continues slowly to a maximum of 100.0.

Input Selection Mode:

Pressing the control knob in briefly will toggle into the input selection mode. The selected input will be displayed for 5 seconds. During this time you can rotate the control knob to scroll to the desired input. Pressing the knob again will select the indicated input. The volume level will automatically ramp down and up during this selection process. If the control knob is not pressed for 3 seconds, the indicated input will automatically be selected and the C5i will return to the default volume control mode. Inputs are indicated as: SP1 (SPDIF1), SP2 (SPDIF2), OP1 (TOSLINK), OP2 (TOSLINK), USB, LIn (Line In) and PH (Phono).

Front Panel Digital Lock Indicator:

When no digital input signal is present on a selected input, the first decimal point on the display will blink on and off. For example, the display will show: .65.0 and the first decimal point will be slowly blinking. If this occurs, check that the correct input is selected and then check that the digital source is connected, active and functioning correctly. Once a digital signal is present, the first decimal point will remain constantly lit.

Hard Mute Using Control Knob

To Hard Mute the C5i from the front panel, press and hold the Control Knob for 2 – 3 seconds. To un-mute, rotate the Control Knob clockwise or press either the Mute or Vol+ button on the remote control.

Remote Control

The C5i Remote Control has a comprehensive set of control features that are not available on the front panel.

To access all C5i control features press the button marked PRE on the remote control. The Main CD controls will still operate in the DAC, PRE and Tuner modes.

Display: Toggles through several display options:

1. Normal mode with Level Displayed

2. Input Sample Rate Displayed for several seconds, example 44.1 or 96 or LOS indicating Loss of Signal or no digital input detected.

3. Display Off: Turns off the display. Display comes on for several seconds whenever a status change is detected

Mute: This will switch the analog output mode from Soft to Hard Mute to Un-muted. Soft mute is indicated by two decimal points in the far right of the display. Hard mute is indicated by 3 decimals on the display. The Mute function will punch through to any Bel Canto unit set in Variable Output mode.

VOL+: Increases the volume setting. This will punch through to any Bel Canto unit in Variable Output mode. The display will show the volume level while changing.

VOL-: Decreases the volume setting. This will punch through to any Bel Canto unit in Variable Output mode. The display will show the volume level while changing.

CH/SCAN+: This will toggle the input selection up in number and wrap around to the lowest number. Note that the first press of this control will show the active input selection.

CH/SCAN-: This will toggle the input selection down in number and wrap around to the highest number. Note that the first press of this control will show the active input selection.

Number Buttons: Use for direct input selection.
1: SPDIF1 *2:* SPDIF2 *3:* TOSLINK1 *4:* TOSLINK2 *5:* USB
6: Line In *7:* Phono

Tips for Operation

Using Headphones

When headphones are inserted into the headphone jack, the volume can be adjusted via the control knob or remote. The input can be selected as normal from the front panel or remote. The Loudspeaker and Line Outputs of the C5i are disabled when headphones are connected.

Power Up

We recommend leaving the C5i 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. **NOTE: If the C5i does not receive any sort of user input for 2 hours, the display will turn off.**

Programming Input function and Home Theater Bypass

Inputs can be put in ON or OFF mode and the analog line Input can be placed into Home Theater Bypass by pressing the PGM button, pushing up or down to toggle to YES and pressing the center select > button. Then you can use the left/right buttons to move to the desired input and use the up/down to select the operating mode using the enter > button. When asked to save the programming toggle to YES and press the enter > button.

Connection to a Computer

The USB port can be used for up to 24/96 data, enough for any CD source. For connection at 24/192 or higher data rates, we recommend using a quality sound card with SPDIF or glass TOSLINK connection. For more details on optimizing computer audio sources please refer to our on-line guide at: www.belcantodesign.com

What to do if there is hum or ground noise

The design of the C5i greatly reduces the chance for ground loop induced hum and noise. Connect all power cables of the audio system to a common outlet box or power conditioner unit. Having the audio system components share a common ground will greatly reduce the possibility for ground current noise being introduced into the audio signal path.

Volume Control Punch Through

The Volume Up, Down and Mute functions on the remote control will affect any Bel Canto unit in Variable Output mode regardless of whether PRE, DAC, CD or TUNER is selected. It is recommended that only the device with volume control closest to the power amps be in Variable Output mode. Any other devices that are capable of volume control should be in Fixed Volume mode.

Output Connectors

Bel Canto amplifiers are all equipped with WBT Nextgen binding posts that accept spade lugs measuring 6mm, standard 4 mm² banana plugs, and wire with a diameter of 6mm² (10AWG). **DO NOT USE TOOLS** when tightening binding posts as it can damage the connector.

Specifications

Amplifier Section:

Power Output 1% THD:	120W @ 4 ohms, 60W @ 8 ohms per channel
Minimum Load:	3 ohms per channel
Peak Output Current:	30 amperes
Frequency Response:	+/-3 dB 1.5Hz-90kHz, 4 ohm load
THD+N:	0.003% 1W, 1kHz, 4 ohms
IMD (CCIF):	0.0003%, 1W, 14:15kHz, 4 ohms
Output noise:	<50uVRMS A-weighted 10Hz-20kHz
Damping factor:	>200
Output Impedance at 100Hz:	<20 milliohms
Dynamic Range:	115 dB

Digital Inputs:

Maximum Data Input Rate	
24bit Data at 192KS/s:	SPDIF RCA x2, TOSLINK x2
24bit Data at 96KS/s:	USB

Analog Inputs:

Line In impedance:	11 k ohms
Phono In Impedance:	47 k ohms/150pF
Phono Accuracy:	+/- 0.25dB, 50Hz-15KHz

General:

Output connections:	2 sets of Binding Posts, RCA Line Out, Headphone Output
Headphone Output Current and Voltage Level:	300mA peak at 4Vrms
Line Out Impedance:	100 ohms
Power On usage:	14W
Power Off usage:	0.0W
Power Input:	100-120VAC, 230-240VAC 50/60 Hz
Fuse:	Littlefuse 215 Series, 5 ampere, time-lag, 250VAC, 5x20mm ceramic body fuse
Size:	8.5 x 3.5 x 12[inches], 216 x 88 x 305[mm] (WxHxD)
Weight:	13lbs, 6.5Kg

Features and specifications are subject to improvements and changes without prior notice.

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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 62368-1:2014+A11:2017

Manufacturer:
Bel Canto Design, Ltd.
221 1st Street North
Minneapolis, MN 55401 USA

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

Type of Equipment:	Integrated Power Amplifier
Models:	C5i
Date:	July, 2020

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