BRYSTON

BCD-3 CD Player

Owner's Manual

Important Safety Instructions

⚡ The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of un-insulated "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. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. 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.

TO COMPLETELY DISCONNECT THIS EQUIPMENT 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 OPERABLE.

BRYSTON LIMITED WARRANTY

Bryston analog audio products are warranted to be free from manufacturing defects for twenty (20) years from the original date of manufacture. The warranty includes parts and labour. Bryston digital products and cables are warranted for five years from the original date of manufacture. The warranty includes parts and labour.

Bryston products having motorized moving parts, excluding motorized volume controls, are warranted for three years from the original date of manufacture. The warranty includes parts and labour.

Bryston will remedy the problem by repair or replacement, as we deem necessary, to restore the product to full performance. Bryston will pay return shipping only for the full length of the specific product's warranty.

In the event of a defect or malfunction, contact Bryston's repair centers for return authorization. Products must be returned using original packaging material only. Packing material may be purchased from Bryston if necessary. This warranty is considered void if the defect, malfunction or failure of the product or any component part was caused by damage (not resulting from a defect or malfunction) or abuse while in the possession of the customer. Tampering by persons other than factory authorized service personnel or failure to fully comply with Bryston operating instructions voids the warranty. This warranty gives you specific legal rights and you may also have other rights which may vary from province to province and country to country. As of 2006-02-22 Bryston will only warranty Bryston products purchased through authorized Bryston dealers. Bryston products with a date code of 0608 or higher (date code format is "yyww", where "yy" is the two least significant digits of the year and "ww" is the week of the year) must be accompanied by a copy of the bill-of-sale from a Bryston authorized dealer to qualify for warranty service. The warranty is transferable from the original owner to a subsequent owner as long as a copy of the bill-of-sale from the original authorized Bryston dealer accompanies the re-sale. The copy of the bill of sale to any subsequent owner need ONLY include the Name of the Bryston Authorized Dealer and the Model and Serial number of the Bryston product The warranty will only be honored in the country of the original purchase unless otherwise pre-authorized by Bryston.

BRYSTON SERVICE in CANADA:		**BRYSTON SERVICE in the USA:**		**BRYSTON SERVICE outside Canada and the USA:**	
Postal address:	P.O. BOX 2170, Stn. Main PETERBOROUGH, ONTARIO CANADA K9J 7Y4	79 COVENTRY ST., Suite 5 NEWPORT, VERMONT U.S.A. 05855-2100		contact your local distributor or	
Courier address:	677 NEAL DRIVE PETERBOROUGH, ONTARIO CANADA K9J 6X7			CHECK OUR WEB SITE:	www.bryston.com
				E-MAIL BRYSTON DIRECTLY:	cdnser@bryston.com
		PHONE:	802-334-1201	FAX BRYSTON DIRECTLY:	01-705-742-0882
PHONE:	705-742-5325	FAX:	802-334-6658	PHONE BRYSTON DIRECTLY:	01-705-742-5325
FAX:	705-742-0882	E-mail:	usaser@bryston.com		
E-mail:	cdnser@bryston.com				

Table of Contents

General

Welcome

Thank you for your purchase of a Bryston BCD-3 redbook CD Player! Our most advanced DAC technology combined with our legendary fully discrete analog circuitry and a professional grade optical pickup mechanism constitute state of the art CD playback that is accurate, refreshing, and a testament to the resilience of the medium. We welcome your feedback and hope you enjoy your new BCD-3 for many years to come.

Description

The BCD-3 is a state of the art CD player capable of playing commercially produced audio CDs and burned CD-R and CD-RW discs. Discs are loaded through the motorized drawer type transport mechanism. Both digital and analog audio outputs are provided facilitating connection to analog preamplifiers and digital-to-analog converters. Internal digital to analog conversion is with a balanced pair of high quality ICs. The optical pickup and DAC are clocked by a single high precision quartz oscillator operating at a natural multiple of the 44.1kHz sampling frequency specified by the CD format.

Features

Bryston BCD-3 includes the following features:
- DACs and transport slave to single master clock for jitter free performance
- Dual balanced AKM digital to analog converters based on BDA-3 design.
- Fully discrete class-A operational amplifiers form the analog output section
- Balanced XLR and single-ended RCA audio output
- AES/EBU XLR and BNC S/PDIF digital audio output
- Remote control via ethernet, USB, RS232, or IR
- Available in either 17 inch or 19 inch wide C-Series dress panel in silver-toned (clear anodized) or black anodized aluminum.

Shipping Box and Packing Material

Please keep the original shipping box and all packing material. This will ensure the BCD-3 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 BCD-3 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.

Installation

Ventilation

The BCD-3 is a cool-running line level component. It generates far less heat than amplifiers and many other components. It can be safely placed inside furniture or an equipment rack. However, it should not be tightly enclosed. Some airflow is desired.

Connecting to A/C Power

Please check the Data Plate on the right rear of the CD player to verify power requirements agree with your location. Plug the IEC-320 C14 end of the power cord into the BCD-3, then plug the other end into an approved and grounded A/C receptacle.

Connecting to a Preamplifier

Fixed level analog output is provided via left & right stereo pairs of XLR fully differential balanced outputs and RCA single-ended outputs. Balanced output is usually preferred when available on the partnering preamplifier especially when long runs (greater than 3 meters) of interconnect cable are required. Connect the Left and Right outputs to the respective inputs on the preamplifier. *Note that the BCD-3 has no volume control therefore should not be connected directly to an amplifier!*

You may also connect the BCD-3 to an external digital to analog converter using either the AES/EBU (XLR) or S/PDIF (RCA) output.

Network Connection

You may connect your BCD-3 to your local area network using CAT5 or better cable to facilitate use of the built in web-based user interface or to control and monitor the unit using an automation system. Once connected to the network, you may access the web user interface with a web browser by entering the host name into the address bar. The host name is formatted like so where the last 6 digits are the serial number of your unit:
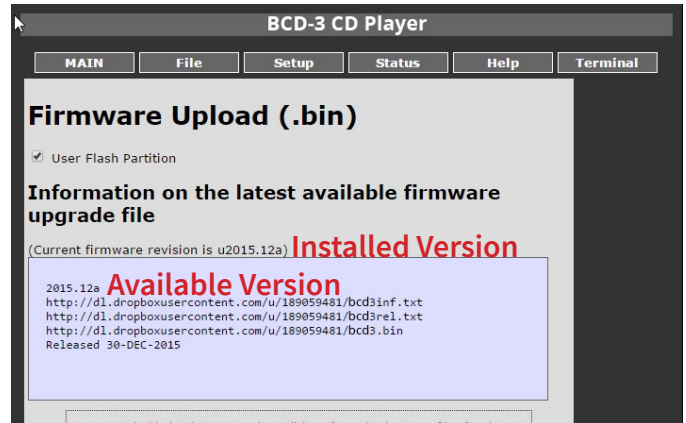
> *http://bcd3-000000*

Some web browsers and networks ignore NetBIOS names such as above. In this case, you will need to use the numerical IP address of your unit to access the web user interface. You can find the IP address on the display by pressing the STOP button while the unit is not playing.

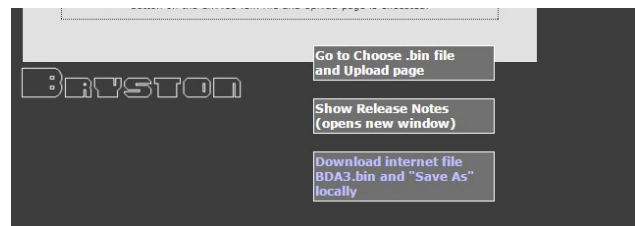The web user interface mimics that of the front panel.

Firmware Update

As with many other Bryston products, the BCD-3 may receive occasional firmware updates to ensure reliable operation and add new features. Check your installed version and for any new updates by using the File menu on the BCD-3 web user interface. Internet connection must be available to show correct information.
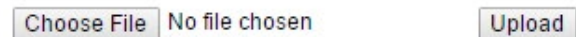

To update the firmware:

1. Download the firmware file by clicking the "Download Internet File..." button. Save the file in an easy to remember location.

2. Click "Go to Choose .bin..." button. You will be taken to a mostly blank page.

3. Click "Choose File" or "Browse". Navigate to the location to which you downloaded the BCD3.bin file in step 1. This is most likely your Downloads folder. Click the file and press "Open" or "OK" You will be returned to the upload page. Press the Upload button to initiate firmware upgrade.

4. Uploading takes up to 5 minutes. The power LED will turn off during the update.

5. Do not power off. The BCD-3 will reboot itself. You may check the web user interface to verify that the new firmware version agrees with the version you just downloaded. You may need to force refresh your browser window to see any new UI changes.

Remote Control

The BCD-3 can be controlled and monitored through a variety of mechanisms including TCP/IP when connected to your local area network, USB, RS232, DC trigger, and IR.

Serial Protocol

The BCD-3 can receive commands and can send responses to each command. It can also (optionally) broadcast automatic responses to certain system events such as front panel button presses. Commands can be sent over RS232, RS485 (with an RS232 to RS485 interface) and TCP/IP using HTTP cmd.cgi.

The RS232 input is a 3.5mm mini-jack configured as:

Tip	*Ring*	*Sleeve*
Transmit	*Receive*	*Ground*

Command Format

RS232	#	5	D2	C1	C2	C3	C4	P1	P2	...	CR
TCP/IP	%23	5	D2	C1	C2	C3	C4	P1	P2	...	.

The command format always begins with a command start character.

The next two digits are the Device ID. The first of which is always "5" for BCD-3s, and the second will be "0" except when using RS232/RS485 in a multi-drop configuration.

Next are C1 through C4 which comprise the command name. These are typically uppercase ASCII letters.

Following the command name are the arguments or parameters for that command. These are two or more ASCII characters.

The command is always terminated with a carriage return character. For RS232, this is ASCII code 13. TCP/IP commands are terminated with a period (.)
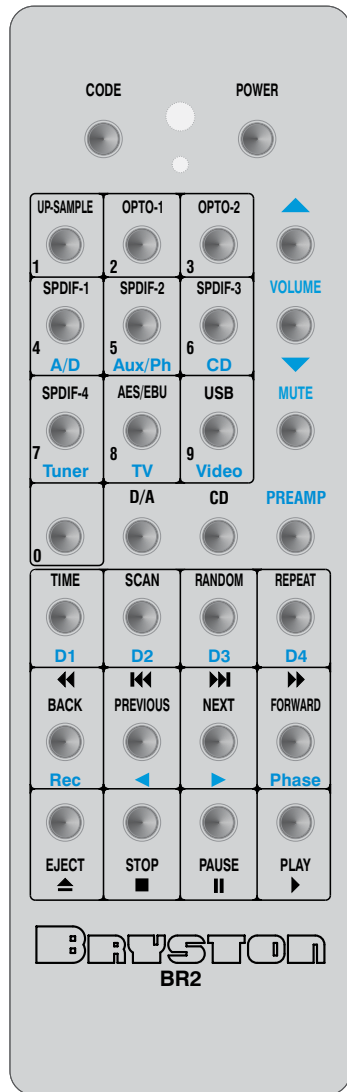
Responses are returned in the same format as commands. Note that responses may contain up to 320 characters. All characters preceding the **#** or **%23** and following **<CR>** or **.** are ignored. Do not insert **#**, spaces, **<LF>**, **<TAB>** or other non-ASCII characters inside the command string.

Example of power up command in RS232:
#50MPWR01<CR>

Example of power up command in TCP/IP:
%2350MPWR01.

The following are selected commands most pertinent to initial setup and everyday operation. Find complete documentation by accessing the BCD-3 web UI or by contacting Bryston.

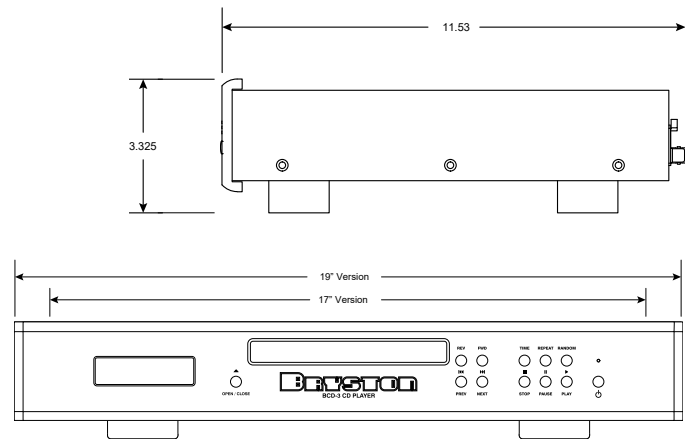| Comm.	Param.	Description
BRIG		Display Brightness
	00	Display Off
	01	Brightness Level 1 (dimmest)
	02	Brightness Level 2
	03	Brightness Level 3
	04	Brightness Level 4
	05	Brightness Level 5
MPWR		Switch between On and Standby
	00	Off (standby)
	01	On
	02	Toggle On/Standby
	QS	Query Status
MCTR		Transport controls
	00-09	Numeric 0-9 - used for direct track access.
	EJ	Drawer open/close toggle
	RE	Reverse search
	PT	Previous track
	FO	Forward search
	NT	Next track
	TI	Change time mode display
	ST	Stop
	RP	Toggle Repeat track, disc, off
	PA	Pause
	SH	Random (Shuffle)
	PL	Play
	SC	Scan
	BA	Go back 10 seconds
	SK	Skip

IR Control

You may control the BCD-3 with a traditional infrared remote control such as Bryston's BR2.

To use a Bryston BR2 with the BCD-3, press the CD button. You can use the BR2 to control all transport functions and enter one or two digit track numbers for direct track access.

Specifications and Dimensions

Output Voltage	Balanced:	4.0V
	Single Ended:	2.0V
Frequency Response	20Hz - 20kHz:	± 0.1dB
Noise	Balanced Out:	-140dB
	Single Ended Out:	-140dB
IMD	≤0.0003%	
THD + Noise	20Hz-20kHz :	≤0.001%
Weight	4kg	8.75lbs	
Dimensions (See Diagram)	Inches: 17 or 19 W x 3.325 H x 11.53 D	
	Cm: 43. or 48.3 W x 8.5 H x 29.3 D	
Power Consumption at 120V/60Hz	Standby:	1.8W
	Idle:	11W
	Playing	13W

Front Panel

1. Power / Standby

Press this button to toggle the BCD-3 on or into standby mode.

Unlit	BCD-3 is not receiving power. Plug unit into AC mains power.
Red	Plugged into AC Mains but in standby mode.
Green or Blue	BCD-3 is on and operational.
Blinking Red	Secondary power supply failure. Contact Bryston technical support.

2. Transport Controls

Each of these 10 buttons controls a specific aspect of CD playback.

• Play: Once a disc is inserted, press Play to initiate playback. If a disc is already playing, press Play to restart the current track from the beginning.

• Pause: While a disc is playing, press Pause to freeze playback at the current location.

• Prev / Next: While a disc is playing, press Prev to skip to the track number before the current playing track and press Next to skip to the next track. Press multiple times quickly and the bottom row of text on the display will indicate the track number on which you will land.

• Rev / Fwd: While a disc is playing, Press Rev once and audio will scrub backwards through the currently playing track slowly. Press again and it will reverse quickly. Press Fwd once and it will search forward once slowly. Press again it will search forward more quickly. Press a third time to resume normal playback. Pressing play during any forward or reverse searching will resume normal playback.

• Stop: Press once during playback to halt playback and forget current playback location. Press once

when disc is stopped to display the IP address if the BCD-3 is connected to the network.

• Time: The display normally displays time elapsed during playback for each track. Cycle through time display modes by pressing the Time button. The modes in order are: track elapsed (default), track remaining, disc elapsed, disc remaining

• Repeat: Press once to engage Repeat Track mode which will play the currently playing track again upon completion. Press again to repeat the entire disc. Press a third time to resume normal disc playback operation.

• Random: In random mode, the disc plays tracks in random order.

3. CD Tray

Press the Open/Close button to open and close the CD tray. Discs should be carefully placed into the tray with the label side facing up. Be careful not to smudge or scratch either surface of your CDs. Never force the CD tray to open or close. Only use the button. Do not place any object besides a single CD on the tray to avoid damage.

4. Open / Close Button

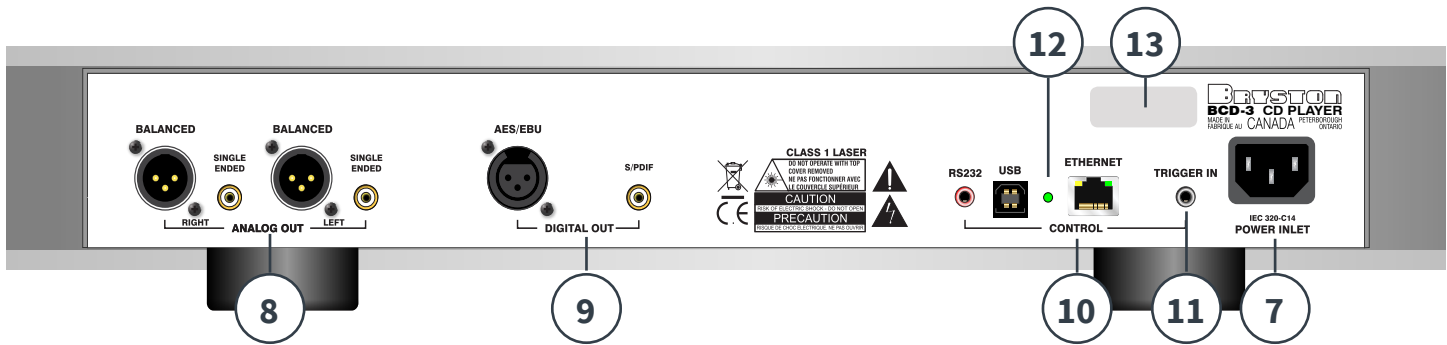Press the button to open or close the CD tray when loading and unloading a disc.

5. Infrared Receiver

The BCD-3 can be controlled by an IR remote control such as models provided by Bryston or third-party manufacturers.

6. Display

The OLED display indicates relevant information about the player or disc loaded depending on the current state of the BCD-3. It can be ordered from the factory as blue or green.

Rear Panel

7. A/C Input

An IEC-320 C14 power inlet provides for connection of an IEC-320 C13 equipped power cord. Before connecting the power cord, check that the voltage rating on the data plate conforms with your locality. Upon applying power, the BCD-3 will enter standby mode. See "Connecting to A/C Power" on page 4.

8. Analog Outputs

Balanced and single ended analog output are provided via respective left/right pairs of XLR and RCA jacks. Connect to a preamp or similar device with a volume control. ***Do not connect directly to an amplifier that has no volume control!*** See "Connecting to a Preamplifier" on page 4.

9. Digital Outputs

A balanced AES/EBU XLR connector and single ended S/PDIF RCA connector are both provided to output digital audio to a DAC should you choose to bypass the internal analog circuitry in the BCD-3.

10. Control Interfaces

RS232, Ethernet, and USB two-way control interfaces are available to enable BCD-3 control by home automation systems. Note that these ports do not accept audio and are for remote control and diagnostics only. See "Remote Control" on page 6 for connection diagrams and protocol details.

11. Status LED

LED lights to indicate the following status:

Red: Standby   Green: On
Amber: Starting up   Blinking Amber: Updating firmware
Blue: Self programing. Do not power off

12. Data Plate

The data plate indicates hardware version, serial number, and A/C mains voltage of your unit.