

# azur 840C

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Upsampling compact disc player

User's manual



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# 840C Upsampling compact disc player

## INTRODUCTION

**Thank you for purchasing this Azur 840C Upsampling Compact Disc Player. This unit is part of our new '8' series range, taking Cambridge Audio to new levels of audio excellence. The 8 series range has been developed as part of our commitment to the on-going development of the Azur range. We hope that you will appreciate the results and enjoy many years of listening pleasure from it.**

The 840C incorporates a raft of new technologies and features. Key to its abilities is the ATF™ (Adaptive Time Filtering) upsampling process - developed in conjunction with Anagram Technologies of Switzerland. This system intelligently interpolates 16 bit/44.1kHz CD (or other) data to 24bit/384kHz through the use of a 32 bit Analog Devices Black Fin DSP (Digital Signal Processor) for the very best sound quality. The ATF system applies sophisticated polynomial curve fitting interpolation and incorporates a time domain model which allows data buffering and re-clocking almost completely eradicating digital jitter.

Because the audio data rate is so high aliasing artefacts are moved way above audible frequencies allowing us to use a low order 2 pole linear-phase Bessel filter on the output for constant group delay and minimal phase shift.

Two very high quality Analog Devices AD1955 24 bit DACs (Digital to Analog Converters) are used in dual differential mode. As each channel has its own DAC to process information, completely separate and symmetrical analog filter circuitry can be implemented. These allow both left and right channel circuitry to operate identically, ensuring the 840C delivers fantastic sound-staging and stereo imaging properties. All filtering from DACs to output is also fully differential using unique differential output amplifiers.

This fully balanced configuration largely rejects the already very low noise and distortion products present in the DACs and filters and provides an unprecedented level of performance.

A true balanced (XLR) output is fitted as well as a summed conventional unbalanced phono/RCA output. Automatic DC servo circuits null all DC offsets allowing no capacitors in the signal path at all.

Two digital inputs are fitted allowing other digital sources to be brought into the 840C and upsampled, the 840C then working as a very high quality DAC.

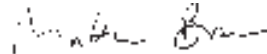
A digital output is also fitted which can even output upsampled data at various rates and word widths, independent from the main audio output, which is always set at 24/384 for best sound quality.

In addition to these audiophile features Control Bus Input/Output, IR Emitter Input and RS232 control are provided to make it easy to integrate this unit into Custom Installation systems if desired.

A completely new 8-series casework has been designed which combines massive structural rigidity with careful damping and control of acoustic resonance. An Azur Navigator remote control is also provided, giving full remote control of your CD player and Azur amplifiers in an attractive and easy to use handset.

Your CD player can only be as good as the system it is connected to. Please do not compromise on your amplifier, speakers or cabling. Naturally we particularly recommend amplification from the Cambridge Audio Azur range, and in particular the 840A Integrated Amplifier which has been designed to the same exacting standards as this CD player. Your dealer can also supply excellent quality Cambridge Audio interconnects to ensure your system realises its full potential.

Thanks for taking the time to read this manual; we do recommend you keep it for future reference.



## SAFETY PRECAUTIONS

### Checking the Power Supply Rating

For your own safety please read the following instructions carefully before attempting to connect this unit to the mains.

Check that the rear of your unit indicates the correct supply voltage. If your mains supply voltage is different, consult your dealer.

This unit is designed to operate only on the supply voltage and type that is indicated on the rear panel of the unit. Connecting to other power sources may damage the unit.

This equipment must be switched off when not in use and must not be used unless correctly earthed. To reduce the risk of electric shock, do not remove the unit's cover (or back). There are no user serviceable parts inside. Refer servicing to qualified service personnel. If the power cord is fitted with a moulded mains plug the unit must not be used if the plastic fuse carrier is not in place. Should you lose the fuse carrier the correct part must be reordered from your Cambridge Audio dealer.

The lightning flash with the 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 instructions in the service literature relevant to this appliance.

This product complies with European Low Voltage (73/23/EEC) and Electromagnetic Compatibility (89/336/EEC) Directives when used and installed according to this instruction manual. For continued compliance only Cambridge Audio accessories should be used with this product and servicing must be referred to



The crossed-out wheeled bin is the European Union symbol for indicating separate collection for electrical and electronic equipment. This product contains electrical and electronic equipment which should be reused, recycled or recovered and should not be disposed of with unsorted regular waste. Please return the unit or contact the authorised dealer from whom you purchased this product for more information.



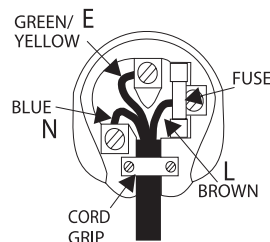
### Plug Fitting Instructions (UK Only)

The cord supplied with this appliance is factory fitted with a 13 amp mains plug fitted with a 3 amp fuse inside. If it is necessary to change the fuse, it is important that a 3 amp one is used. If the plug needs to be changed because it is not suitable for your socket, or becomes damaged, it should be cut off and an appropriate plug fitted following the wiring instructions below. The plug must then be disposed of safely, as insertion into a 13 amp socket is likely to cause an electrical hazard. Should it be necessary to fit a 3-pin BS mains plug to the power cord the wires should be fitted as shown in this diagram. The colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug. Connect them as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter 'N' or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter 'L' or coloured RED.

The wire which is coloured GREEN/YELLOW must be connected to the terminal which is marked with the letter 'E' or coloured GREEN.



If your model does not have an earth wire, then disregard this instruction.

If a 13amp (BS 1363) plug is used, a 3amp fuse must be fitted, or if any other type

## IMPORTANT SAFETY INSTRUCTIONS

Please take a moment to read these notes before installing your Azur CD player, they will enable you to get the best performance and prolong the life of the product. We advise you follow all instructions, heed all warnings and keep the instructions for future reference.

The unit is of Class 1 construction and must be connected to a Mains socket outlet with a protective earthing connection.

Only use the specified attachments/accessories with this unit.

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.

The unit must be installed in a manner that makes disconnection of the mains plug from the mains socket outlet (or appliance connector from the rear of the unit) possible. Where the mains plug is used as the disconnect device, the disconnect device shall remain readily operable. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the unit.

This unit must be installed on a sturdy, level surface. Do not place in a sealed area such as a bookcase or in a cabinet. Any space open at the back (such as a dedicated equipment rack) is fine however. When a cart is used, use caution when moving the cart to avoid injury from tip-over.



The unit requires ventilation. Do not situate it on a rug or other soft surface and do not obstruct any air inlets or outlet grilles.

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

**WARNING** - To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture. This unit must not be used near or exposed to dripping or splashing water or other liquids. No objects filled with liquid, such as vases, shall be placed on the unit. In the event, switch off immediately, disconnect from the mains supply and contact your dealer for advice.

Ensure that small objects do not fall through any ventilation grille. If this happens, switch off immediately, disconnect from the mains supply and contact your dealer for advice.

To turn the unit off completely switch off on the rear panel. If you do not intend to use this unit for a long period of time, unplug it from the mains socket. Unplug this unit during lightning storms.

To clean the unit, wipe its case with a dry, lint-free cloth. Do not use any cleaning fluids containing alcohol, ammonia or abrasives. Do not spray an aerosol at or near your CD player.

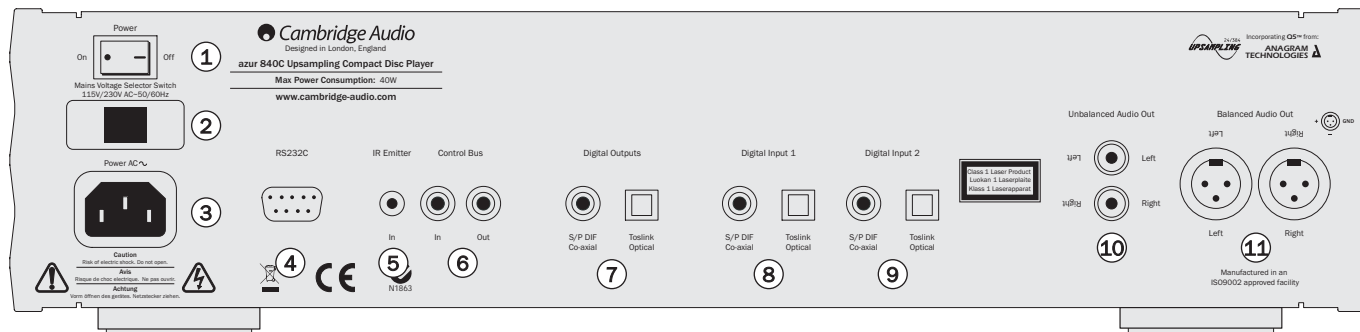
This unit is not user serviceable, never attempt to repair, disassemble or reconstruct the unit if there seems to be a problem. Servicing is required when the unit has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into it, the unit has been exposed to rain or moisture, does not operate normally or has been dropped. A serious electric shock could result if this precautionary measure is ignored.

### Important Note



This unit has been designed to play compact discs, recordable CDs (CD-R) and re-writable CDs (CD-RW) bearing the identification logo shown here. No other discs can be used. The CD-R/CD-RW discs should contain properly recorded TOC (Table of Contents) information so that they can be played back. This unit can play only the discs recorded in the CD-DA format designed for music reproduction. Do not attempt to play a disc on this unit containing other data, such as a CD-ROM for PCs.

## REAR PANEL CONNECTIONS



### ① Power On/Off

Switches the unit on and off.

### ② Mains Voltage Selector Switch

Switches the mains voltage between 115V and 230V. For use by installer/dealer only.

### ③ AC power socket

Once you have completed all connections to the amplifier, plug the AC power cable into an appropriate mains socket then switch on. Your compact disc player is now ready for use.

### ④ RS232C

The RS232C port allows some external serial control of the 840C for custom install use. A command set is available on the Cambridge Audio website at [www.cambridge-audio.com](http://www.cambridge-audio.com). This port can also be used by Cambridge Audio service personnel for software updates.

### ⑤ IR (Infra Red) Emitter In

Allows modulated IR commands from multi-room systems or IR repeater systems to be received by the amplifier. Commands received here are not looped out of the Control Bus. Refer to the 'Custom Installation' section for more information.

# 840C Upsampling compact disc player

## ⑥ Control Bus

**In** - Allows un-modulated commands from multi-rooms systems or other components to be received by the unit.

**Out** - Loop out for control bus commands to another unit.

## ⑦ Digital outputs

The digital outputs allow a separate DAC or digital recording device to be connected. The sophisticated DSP software in the 840C even allows these outputs to be set to output raw (pass through) or upsampled data independently from the main audio outputs. Refer to the 'Operating instructions' section for more information.

**S/P DIF CO-axial Digital** - To obtain best results, use a high quality 75 ohm digital RCA interconnect cable (not one designed for normal audio use).

**Toslink Optical Digital** - Use a high quality TOSLINK fibre optic interconnect cable designed specifically for audio use.

Only one of the two output types should be used at a time.

## ⑧ & ⑨ Digital Inputs 1 / 2

The digital inputs allow the digital outputs of other source components to be connected to the 840C. The 840C can then act as a very high quality upsampling DAC, improving the sound quality of the connected sources. Two digital inputs allow two external sources to be connected:

**S/P DIF CO-axial Digital** - Use a high quality 75 ohm digital RCA interconnect cable (not one designed for normal audio use).

**Toslink Optical Digital** - Use a high quality TOSLINK fibre optic interconnect cable designed specifically for audio use.

Only one of the two input types for each input should be used at a time.

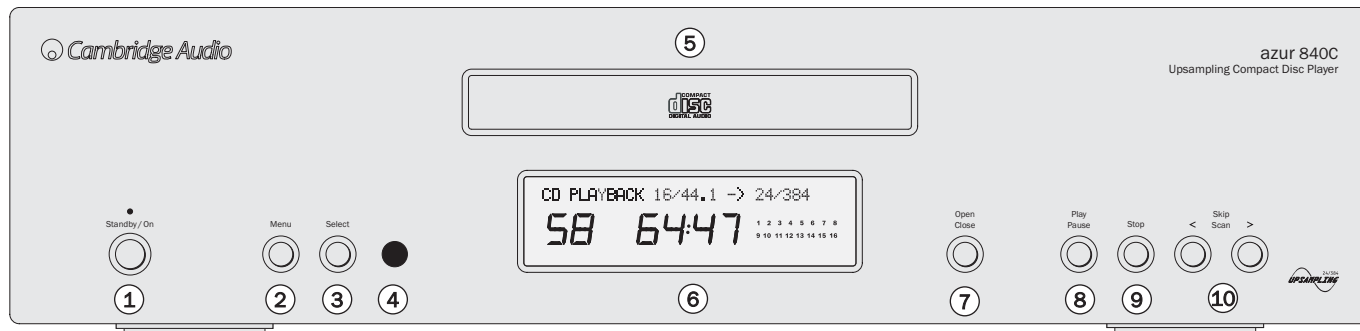
## ⑩ Unbalanced Audio Out

Single-ended conventional stereo outputs for connection to the line-level phono/RCA inputs of an amplifier.

## ⑪ Balanced Audio Out

The 840C also features true balanced (XLR) outputs. This is a higher quality output that can reject noise and interference in the cable when used with equipment with balanced inputs. XLR connectors should be wired: Pin 1 - Ground; Pin 2 - Hot (in-phase); Pin 3 - Cold (phase-inverted).

## FRONT PANEL CONTROLS



### ① Standby/On

Switches the unit between Standby mode (indicated by dim power LED) and On (indicated by bright power LED). Standby is a low power mode where the power consumption is less than 10 Watts. The unit should be left in Standby mode when not in use.

### ② Menu

Press to scroll through 840C menu screens. Please refer to the 'Operating instructions' section of this manual for more information.

### ③ Select

Press to select between CD Playback or Digital Inputs 1 and 2. Also used to toggle through the options on selected menu screens. Please refer to the 'Operating instructions' section of this manual for more information.

### ④ Infrared sensor

Receives IR commands from the supplied Azur remote control. A clear unobstructed line of sight between the remote control and the sensor is required.

### ⑤ Disc tray

Compact Disc tray. Use the *Open/Close* button to activate.

## ⑥ Display

LCD used to display upsampling rate, CD track number, elapsed/remaining time and other CD functions. Please refer to the 'Operating instructions' section of this manual for more information.

## ⑦ Open/Close

Allows you to open and close the disc tray thus making it possible to load a disc. Pressing *Play* will also close the tray and start the CD.

## ⑧ Play/Pause

Plays the disc and pauses play.

## ⑨ Stop

Stops the CD playing.

## ⑩ Skip/Scan

Allows for skipping between tracks and also searching within tracks. Press once to skip a track, press and hold to search within a track.

## REMOTE CONTROL

The 840C is supplied with an Azur Navigator remote control that operates both this CD player and other Cambridge Audio Azur amplifiers. Insert the supplied AAA batteries to use.

**Note:** The remote may be in Amp mode when first activated. Please refer to the Amp Control section for more information.

### Standby/On

Switches the unit between On and Standby mode.


### Open/Close

Opens and closes the disc tray.

### Numerical Track select

Press the number of the desired track. The track will then be played from the start of the track.

### Track select

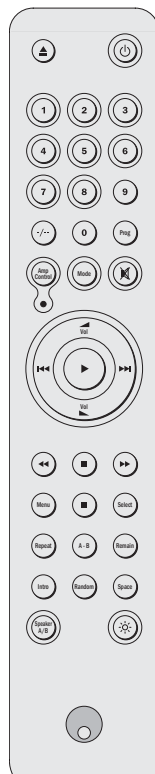
To select a track number greater than ten, press  followed by the track number.

### Bright

Alters the brightness of the display backlight. There are three levels of brightness: Bright, Normal, and Off.

### Play / Stop / Pause

Press the relevant button to play, stop or pause the CD.



### Skip

Right Skip - press once to skip forward by one track on the CD. Press and hold to skip forwards through tracks.

Left Skip - press once to skip backward by one track on the CD. Press and hold to skip backwards through tracks.

### Search

Press and hold to search within the selected track. Right button to fast forward, left button to rewind.

### Menu

Press to access the 840C menu system on the front panel display. Please refer to the 'Operating instructions' section of this manual for more information.

### Select

Press to accept the item/function highlighted in the display menu. Please refer to the 'Operating instructions' section of this manual for more information.

### Program, Remain, A-B, Repeat, Intro, Random, Space

Read the 'Operating Instructions' section of this manual for information on the functions of these buttons.

## REMOTE CONTROL OF MATCHING PRODUCTS

### Amp Control mode



The 840A/C remote control comes with an Amplifier Control button, that when pressed, puts the remote into Amp mode, allowing operation of a Cambridge Audio Azur amplifier. When pressed, the LED will light up for 7 seconds (to let you know you are in Amp mode), and will then flash when any of the relevant circled Amp buttons is pressed. All other remote buttons are inactive when in Amp mode.

The functions relevant to the amplifier are as follows:

#### **Standby/On**

Switches the amplifier between On and Standby mode.

#### **Numerical buttons 1-8**

Press to change the input source to the amplifier. Button 8 toggles Tape Monitor on/off.

#### **Mode**

Press to switch between Volume and Balance modes.

#### **Mute**

Mutes the audio on the amplifier. The mute mode is indicated by MUTE appearing and the volume level being replaced by two flashing dashes

#### **Volume**

Increase or decrease the volume of the amplifier output.

#### **Speaker A/B**

Press to scroll through the speaker sets connected to the loudspeaker terminals on the back panel (speaker sets A, B or A and B).

#### **Bright**

Adjust the backlight of the front panel display; bright, dim or off.

To exit Amp mode (and return to CD mode), press the *Amp Control* button again (the LED will light up for one second).

## OPERATING INSTRUCTIONS

### Loading and unloading discs

1. Press the *Standby/On* switch.
2. Press the *Open/Close* button.
3. When the disc tray has opened fully, place a disc carefully in the tray with the label side facing up.
4. To close the disc tray, press the *Open/Close* button again. When the tray, with a correctly loaded disc, is fully closed the disc will start turning automatically. After the CD player has read the disc it will be ready to play. Pressing *Play* will also close the tray and start playing the disc.
5. The disc tray can be opened at any time by pressing the *Open/Close* button. Only remove the disc after the tray has fully opened.

#### Note:

- Do not put anything except a Compact Disc into the tray, foreign objects may damage the mechanism.
- Do not force the tray by hand during the opening and closing operations.
- To avoid dirt and dust entering the mechanism, keep the disc tray closed.
- If the Compact Disc is seriously scratched or too dirty the player may not be able to read it or play it.
- Never load more than one disc into the disc tray at one time.

### Normal disc play

1. Switch on your amplifier and set its input selector to the correct position. Adjust the volume control to a minimum.
2. Press the *Standby/On* switch.
3. Press the *Open/Close* button to open the disc tray, and load a disc.
4. Press the *Open/Close* button again to close the tray. The CD player will read the disc and enter Standby mode. Alternatively pressing *Play* will close the tray and start playing the disc.
5. Press the *Play* button. The disc will start playing from the beginning of the first track. When the last track has finished playing, the CD player will return to Standby mode.
6. To stop the disc at any point press the *Stop* button. Pressing the *Pause* button while the disc is playing will pause the disc. When the disc is paused the display will flash, play can be resumed by pressing the *Play* button again.

### Locating a specific track

1. Ensure that a disc is loaded.
2. Pressing the right *Skip/Scan* (*Skip* on remote) button once will forward the CD by one track. Repeat as necessary.
3. Press *Play*. The disc will play to the end of the disc and then return to Standby mode.
4. Pressing the left *Skip/Scan* (*Skip* on remote) button will access the previous track.

## Locating a particular point in a track

1. Ensure that the disc is playing the desired track.
2. Press and hold the right *Skip/Scan* (*Search* on remote), the CD will then fast forward within the track.
3. Release the button when the desired time has been reached. Play will resume.
4. Press and hold the left *Skip/Scan* (*Search* on remote) button, the CD will then rewind within the track.

## Repeating discs and tracks

1. Ensure that the disc is playing.
2. Press the *Repeat* button on the remote control. 'Repeat All' will appear on the display. The whole disc will now be repeated until the function is turned off.
3. To repeat a specific track press *Repeat* twice while the track is playing. 'Repeat' will appear on the display and the selected track will now be repeated until the function is turned off.
4. Press *Repeat* again to turn off the repeat function.

## Playing tracks in a random order

1. Ensure that a disc is loaded and the player is in Standby mode.
2. Press the *Random* button on the remote control. 'Random' will appear on the display.
3. Press *Play*. The CD Player will now play the entire disc in a random order.
4. Press *Random* to exit Random function. The disc will continue playing to the end in the correct order.
5. Press the *Stop* button at any time to stop the disc.

## Using the Intro function

1. Ensure that a disc is loaded. The player can be in Standby mode or playing.
2. Press *Intro* on the remote control. If the player is in Standby mode it will automatically play the first ten seconds of each track and then return to Standby mode. If a disc is being played when *Intro* is pressed the player will progress to the next track and play the first ten seconds of any remaining tracks.
3. Press *Intro* again at any time to enter normal play mode.

## OPERATING INSTRUCTIONS (CONTINUED)

### Using the A-B function

1. Ensure that the disc is playing, press *A-B* on the remote control. This will allow you to continuously repeat a specific section of a track.
2. Press the *Repeat* button on the remote control at the beginning of the section you want to loop. The A-B icon will be displayed and the player will memorise the time A-B was pressed.
3. Press *A-B* again at the end of the section that you want to loop. The player will now continuously repeat the selected section.
4. Press *A-B* again to return to normal play mode.

### Using the Remain function

1. Ensure that the disc is playing.
2. Press the *Remain* button on the remote control once to display the time remaining on the track playing.
3. Press *Remain* a second time to show remaining number of tracks and total disc time remaining.
4. Press *Remain* again to return to normal play mode.

### Using the Space function

1. Ensure that a disc is loaded. The player can be in Standby mode or playing.
2. Press *Space* on the remote control. 'Space' will appear on the display and a four second gap will be put between each track played.

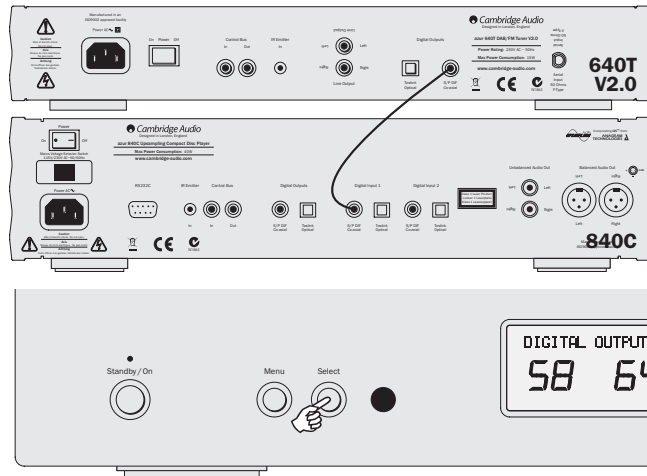
### Programming disc play

1. Ensure that a disc is loaded and the player is in Standby mode.
2. Press *Program* on the remote control. The Program set-up will appear in the display.
3. Using the *Skip/Scan* (*Skip* on the remote) buttons, skip to the track number that you want to program as your first track (or press the actual track number on the remote).
4. Press *Program*. The desired track is now entered and the program number increases by one.
5. Repeat steps three and four until all your desired tracks are entered.
6. Press *Play*. The programmed tracks will play.
7. You can use the *Skip* and *Search* functions on your remote control to move through your programmed selection in the same way as normal playback.
8. Pressing *Stop* once will stop play and pressing *Stop* twice at any time will wipe the program and return the player to stopped mode.

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## EXTERNAL DIGITAL SOURCES

To access external digital sources connected to the rear of the 840C, press the **Select** button (on front panel or remote) to change between CD playback, Digital Input 1 and Digital Input 2.



### CD playback

The 16 bit/44.1kHz sampling data on a standard CD is upsampled to 24 bit/384kHz for best possible sound quality.

CD PLAYBACK 16/44.1 -> 24/384  
58 64:47 1 2 3 4 5 6 7 8  
9 10 11 12 13 14 15 16

### Digital Input 1/2

Press **Select** again to select Digital Input 1.

INPUT 1 16/44.1 -> 24/384  
58 64:47 1 2 3 4 5 6 7 8  
9 10 11 12 13 14 15 16

The incoming word length (16 to 24 bit) and sample rate will be displayed along with the indication that the data is being upsampled to 24 bit/384kHz. Note that rather than exact word width, some sources report data as either 20 bit maximum (displayed as < = 20) or 24 bit maximum (displayed as < = 24).

INPUT 2 UNLOCKED -> 24/384  
58 64:47 1 2 3 4 5 6 7 8  
9 10 11 12 13 14 15 16

If no digital signal is present, the display will show "UNLOCKED" and the output will be muted.

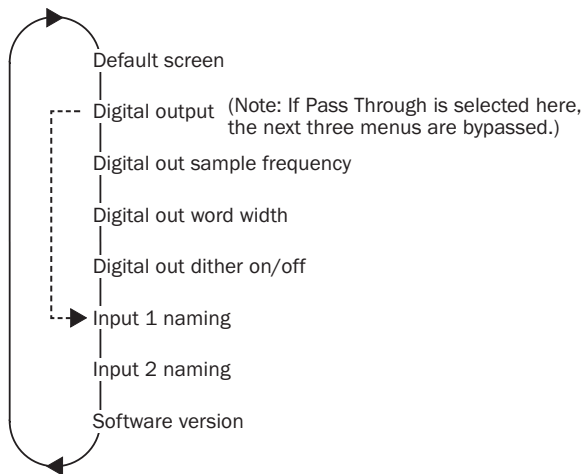
Press **Select** again to select Digital Input 2.

## CD PLAYER SETUP

The 840C has a custom-made display on the front of the unit showing the current status and allowing access to the 840C System Configuration menus. The 840C features some advanced settings that allow its use to be customised to user preference.

### Menu structure

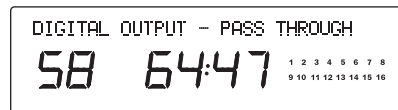
Press the *Menu* button to scroll through the menus, then use the *Select* button to scroll through the options/sub menus of that menu. Press the *Menu* button again to move to the next menu, or after a few seconds the display will return to the default main menu.



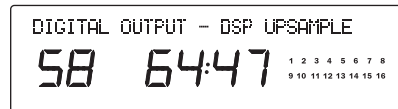
### Digital outputs

The digital outputs can be set to two options:

1. Output the raw data from the CD (or digital input) with no processing.



2. Upsampled data processing by the DSP to greater resolution.

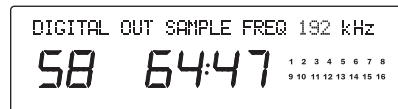


Press *Select* to switch between DSP Upsample or Pass Through.

For DSP upsampling the sample frequency, word width and dither are set by the next three available menus.

### Digital out sample frequency

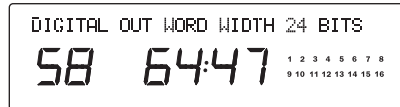
The digital output sample frequency (note this is different to the main audio output sample frequency which is fixed at 384kHz for best sound quality) can be set to 48, 96 or 192kHz (the maximum frequency supported by SPDIF/Toslink):



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## Digital out word width

The digital output word width can be set to 16, 20 or 24 bit (note this is different to the main audio output word width which is fixed at 24 bit for best sound quality):

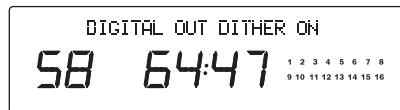


Press *Select* to switch between the word width options.

## Digital out dither

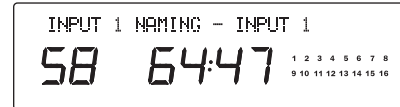
Dithering is a process where pseudo random noise is added to a signal to remove quantization effects that cause harmonic distortion and replace them with a slightly increased noise floor. The process can improve the perceived quality of digitised audio signals as a small decrease in signal to noise ration (especially where the noise is random) is much preferably to harmonic distortion to the human ear.

The 840C is able to add what is called Triangular Probability Density Function dither to the upsampled Digital Output signals. Normally, dither will have already been added to any CD or source material during its mastering process so the default for this option is off. However if a source with no dither is used (perhaps an off board A/D converter etc) TPDF dither can be turned on:

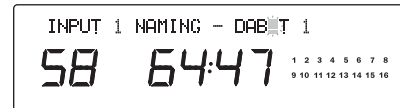


## Changing input names / source naming

The 2 digital inputs can be renamed to reflect the actual source units you have connected to the 840C. Press the *Menu* button to scroll to either the Digital Input 1 or Digital Input 2 naming menus:



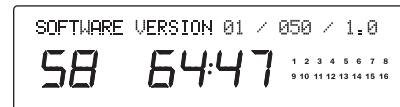
Press *Select* to start changing the name of the input. The first editable character will begin to flash. Use the *Stop* button to go up through the alphabet/available characters, and *Play/Pause* to scroll down. To accept your character selection, move to the next character by using the *Skip/Scan* buttons:



To save and exit, press *Select*. To cancel and exit, press *Menu*.

## Software version

Displays the currently loaded software version:



## CUSTOM INSTALLATION (C.I.) USE

The 840C features a Control Bus input/output that allow un-modulated remote control commands (positive logic, TTL level) to be received electrically by the unit and looped to another unit if desired.

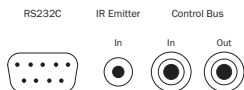
These control commands are typically generated by custom installation (multi-room) systems or remote IR receiver systems. The Control Bus sockets are colour-coded orange.

An IR Emitter Input is also provided that allows modulated IR remote control commands to be received electrically by the unit. Commands on this input operate the unit only and are not looped out demodulated on the Control Bus Output. This feature is useful for multi-room systems (such as the Cambridge Audio Incognito multi-room system) which feature routed I.R. emitter outputs. Instead of using window emitters stuck over the CD players front panel IR receiver, a mono 3.5mm mini-jack to 3.5mm mini-jack lead can be used for a more reliable electrical connection. An RS232 port is also featured which allows the 840C to be controlled by C.I. systems.

In addition the units feature 'direct' IR/Control codes as well as toggle codes for some of their features to simplify programming custom installation systems. Special direct On/Off and Mute commands can be accessed on the supplied remote control for teaching into C.I. systems as follows:

1. Press and hold the Standby button. The remote first generates it's standby (toggle) command. Keep the button held down, after 12 seconds a CD player "On" command will be generated. If the button is kept held down for a further 12 seconds, a CD player "Off" command is generated.

A full code table and RS232 protocol for this product is available on the Cambridge Audio website at [www.cambridge-audio.com](http://www.cambridge-audio.com).



## TROUBLESHOOTING

### There is no power

Ensure the AC power cord is connected securely.  
Ensure the plug is fully inserted into the wall socket and is switched on.  
Check fuse in the mains plug or adaptor.

### The player will not read the disc

Check the disc is not loaded upside down.  
Check that the disc is not too scratched or dirty.

### There is no sound

Ensure that the amplifier is set correctly.  
Check that the interconnects are inserted correctly.

### The disc is skipping

Check that the disc is not too scratched or dirty.  
Ensure the player is on a firm surface and not subject to vibrations.

### There is a hum coming from the speaker

Ensure that all cable connections are secure.

### The remote handset will not function

Check that the batteries have not expired.  
Ensure that nothing is blocking the remote sensor.

## TECHNICAL SPECIFICATIONS

<b>D/A converters</b>	Dual Analog Devices AD1955 24 bit DACs	<b>Crosstalk @1kHz</b>	< -130dB
<b>Digital filter</b>	Analog Devices Black Fin ADSP-BF532 32 bit DSP Performing ATF™ upsampling to 24 bit 384kHz	<b>Crosstalk @20kHz</b>	< -114dB
<b>Analog filter</b>	2 Pole Fully Differential Linear Phase Bessel filter	<b>Output impedance</b>	< 50 ohms
<b>Frequency response</b>	20Hz to 20kHz (+/-0.1dB)	<b>Digital input word widths supported</b>	16 - 24 bit
<b>THD @ 1Khz 0dBFs</b>	< 0.0005%	<b>Digital output word widths supported</b>	16, 20, 24 bit
<b>THD @ 1Khz -10dBFs</b>	< 0.0004%	<b>Digital input sampling frequencies supported</b>	32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
<b>THD @ 20Khz 0dBFs</b>	< 0.0007%	<b>Digital output sampling frequencies supported</b>	32kHz - 192kHz pass through (Including 44.1kHz for CD)
<b>IMD (19/20kHz) 0dBFs</b>	< 0.0002%		48kHz, 96kHz, 192kHz upsampled
<b>Linearity @ -90dBFs</b>	+/- 0.5dB	<b>Audio output upsampling</b>	Fixed 24 bit, 384kHz
<b>Stopband rejection (&gt;24kHz)</b>	> 120dB	<b>Dimensions - H x W x D</b>	115 x 430 x 360mm (4.5 x 16.9 x 14.7")
<b>S/N ratio, A weighted</b>	> 113dB	<b>Weight</b>	8.5kg (18.7lbs)
<b>Total correlated jitter</b>	< 130pS		

## LIMITED WARRANTY

Cambridge Audio warrants this product to be free from defects in materials and workmanship (subject to the terms set forth below). Cambridge Audio will repair or replace (at Cambridge Audio's option) this product or any defective parts in this product. Warranty periods may vary from country to country. If in doubt consult your dealer and ensure that you retain proof of purchase.

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Proof of purchase in the form of a bill of sale or receipted invoice, which is evidence that this product is within the warranty period, must be presented to obtain warranty service.

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**azur 840C**



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