

Azur 851N Network Player

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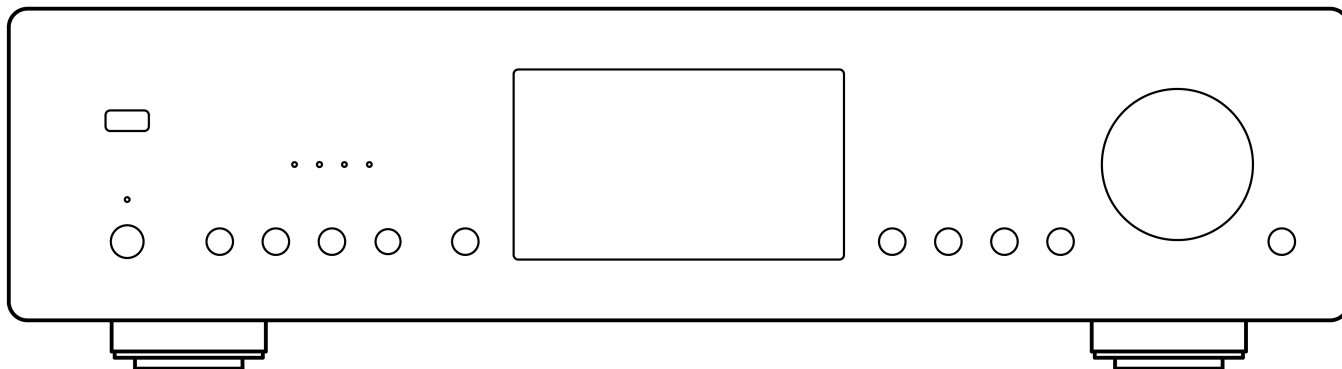


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Azur 851N Network Player

Last updated: April 29, 2024 02:12. Revision #12603



Users Manual

Introduction

Last updated: August 9, 2022 02:50. Revision #10054

This guide is designed to make installing and using this product as easy as possible. Information in this document has been carefully checked for accuracy at the time of publishing; however, Cambridge Audio's policy is one of continuous improvement, therefore design and specifications are subject to change without prior notice.

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This product support AirPlay 2 and requires iOS 11.4 or later.

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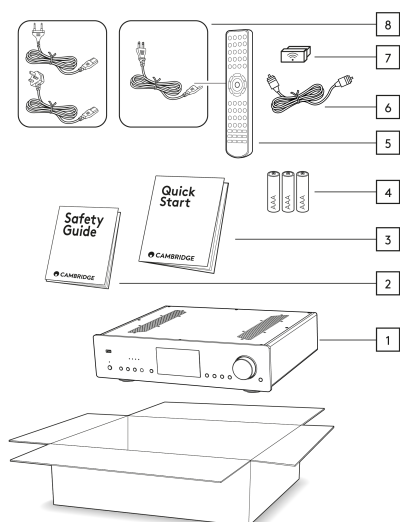
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What's included with the 851N?

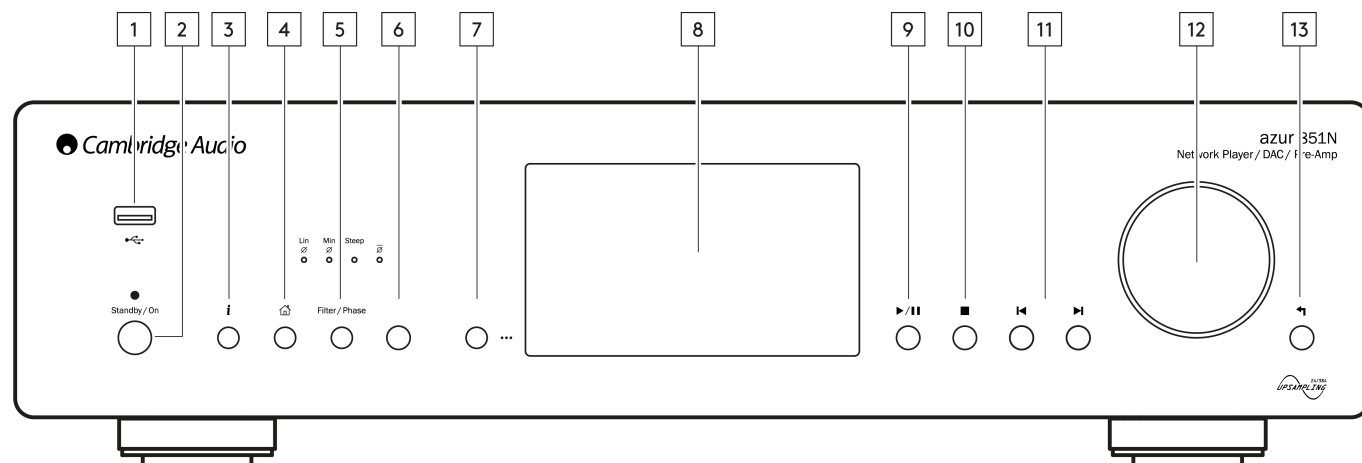
Last updated: August 9, 2022 02:50. Revision #10062



- 1) 851N Network Player
- 2) Safety Guide
- 3) Quick Start Guide
- 4) 3 x AAA Batteries
- 5) Remote Control
- 6) Control Bus Cable
- 7) Wi-Fi Dongle
- 8) Power Cable

Front Panel

Last updated: May 13, 2024 03:59. Revision #12727



1. USB

For use with USB storage devices. 1A maximum current consumption.

2. Standby/On

Switches the unit between Standby Mode (indicated by dim power LED) and On (indicated by bright power LED). Standby Mode is a low power mode (0.5 Watts) – This can only be achieved when using Eco mode. The unit should be left in Standby Mode when not in use.

3. Info

During playback, pressing this button will cycle through 'Now Playing' screens. Press and hold to display the product info.

4. Home

Press to navigate to Home menu.

5. Filter

Press to toggle through three alternative digital filter characteristics: Linear Phase, Minimum Phase or Steep.

Alternative digital filters can offer subtly different sound quality characteristics. The currently selected filter is displayed by the indicators just above the button.

Phase

Press and hold the Filter/Phase select button for approximately two seconds to select normal or inverted phase output. When the LED lights up, the phase is inverted by the 851N.

Detailed information on the 851N Filter Settings can be found [here](#).

Note: If you suspect that your source material or amplifier, etc., is inverting the phase of the musical signal, you can use this function to re-invert the audio and regain absolute positive phase

6. Infrared Sensor

IR sensor that receives IR commands from the remote control.

7. (More)

When playing from UPnP sources, this button displays queued tracks and options.

8. Display

9. Play/Pause

Play or Pause current track.

10. Stop/Delete

Press during playback to stop or delete items in various menus.

11. Skip

Skip to next track during playback.

12. Navigation/Select (Rotary Dial)

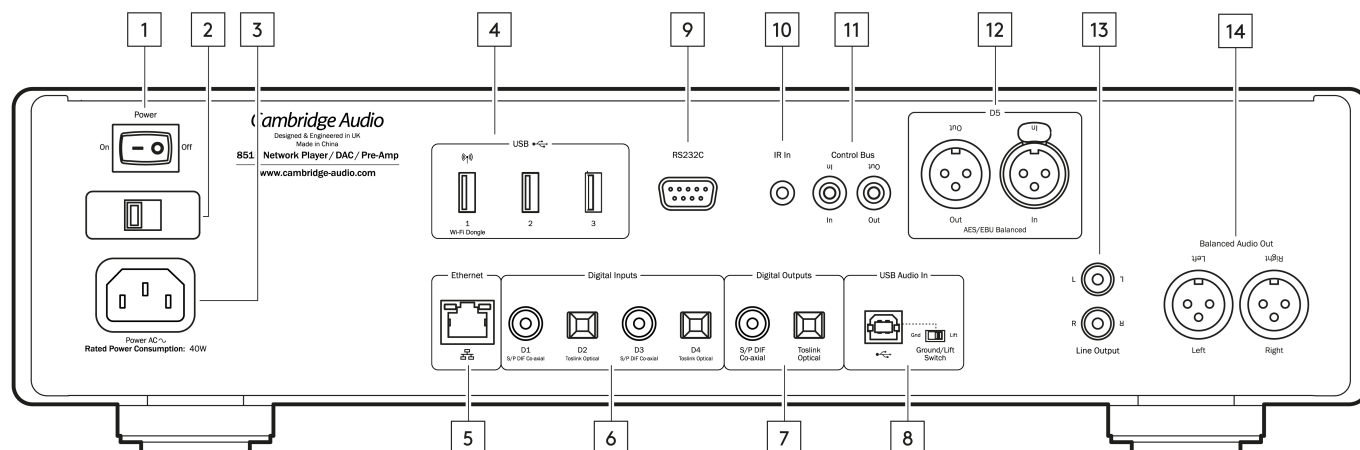
Rotate to scroll and navigate around the menus. Press to accept the item/function shown on the display.

13. Return

Press to return to the previous menu.

Rear Panel Connections

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1. Power On/Off

Switches the 851N on and off.

2. Mains Voltage Selector Switch (CU Version)

Switches the mains voltage between 100V and 115V.

Note: For use by Cambridge Audio service personnel 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.

4. USB Sockets

Pre-fitted Wi-Fi dongle and connection for USB HD/flash disk or optional BT100 Bluetooth audio receiver.

The USB ports are not intended for connection to Apple mobile devices, no functionality, charging or otherwise, is supported.

The Wi-Fi dongle is pre-fitted. Your unit will default to an Ethernet connection if one is made, however it is advised to remove the Wi-Fi dongle if using an Ethernet connection.

If you are using this 851N with Wi-Fi please make sure your unit is positioned within range of your wireless router.

Important Note: Do not connect/disconnect the Wi-Fi dongle when the unit is on.

5. Ethernet

Use to connect the 851N directly to a router.

6. Digital Inputs (D1, D2, D3 and D4)

TOSLINK Optical and S/P DIF coaxial digital inputs.

Coaxial – Use a high quality 75 ohm digital RCA Phono interconnect cable (This is different from an analogue audio phono interconnect). This input is suitable for 16-24 bit content up to 192kHz.

TOSLINK Optical – Use a high quality TOSLINK fibre optic interconnect cable designed specifically for audio use. This input is suitable for 16-24 bit content up to 96kHz (TOSLINK is not recommended at 192kHz sampling rates).

Note: To obtain the best results from your system we recommend using only high-quality Cambridge Audio interconnects. This will ensure that you hear your system as we designed it. Please ask your dealer for details.

7. Digital Outputs

TOSLINK Optical and S/P DIF coaxial digital outputs.

8. USB Audio In

A USB B type socket to enable the playback of audio from a computer running either Microsoft Windows or Apple Mac OS X operating systems. Some builds of Linux may also be supported but due to the open-source nature of the Linux operating system cannot be guaranteed.

Notes:

- Always use a high-quality USB connection cable certified as USB Hi-Speed. USB cable connections longer than 3m may result in inconsistent audio performance.

- Always turn the volume to minimum, switch to another input or turn the 851N off before plugging/unplugging cables to the USB input or whilst booting up/shutting down your PC/Mac.
- The use of USB hubs is not recommended for this input.

9. RS232C Interface

The RS232C interface enables external serial control of the 851N in custom installation applications, as well as for use by Cambridge Audio service personnel for software updates.

10. IR In

Allows modulated IR commands from an IR repeater or custom install systems to be received by the amplifier.

Commands received by the IR In socket are not looped out of the Control Bus.

Note: The IR input doesn't provide any power, so any device connected to this input will need to have its own power source.

11. Control Bus

RCA sockets used to send and receive power and volume commands from other connected 851 Series products. For more information on the Control Bus, see Control Bus section.

12. AES/EBU Balanced

In – For sources with a balanced (AES/EBU) digital output. This input is suitable for 16-24 bit content up to 192kHz.

Out – For external devices incorporating a fixed (AES/EBU) digital input.

13. Line Output

Line Output (fixed or variable) used to provide a signal to an amplifier or a recording device.

14. Balanced Audio Output

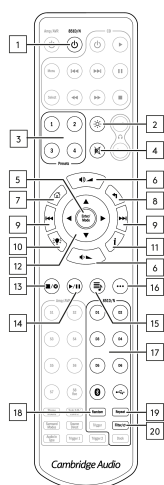
For use with balanced XLR connections. The balanced connection is the higher quality option and can reject noise and interference in the cable when used with other equipment that supports this function.

Note: XLR connectors should be wired as follows: Pin 1: Ground, Pin 2: Hot (in-phase) and Pin 3: Cold (phase-inverted).

Remote Control

Last updated: November 16, 2022 04:15. Revision #10040

The 851N remote control handset duplicates some of the front panel control functions and is also able to control other Azur 851 series products. The supplied AAA batteries must be fitted before the remote control can be used. The handset buttons function as described below:



1. Standby/On

Switches the 851N between On and Standby mode.

2. Brightness

Alters the brightness of the 851N display. There are two brightness levels and an option to switch off the backlight.

Note: When the 851N display lights are selected to be off, selecting any of the functions will briefly switch on the lights to show the change.

3. Presets

Recalls stored 1 – 4 presets. Holding a button will save current station as preset.

4. Mute

Press to mute or unmute output.

5. Enter/Mode

Enter or select.

6. Volume

Volume level adjust.

7. Home Menu

Returns front panel display to Home menu option.

8. Return

Return or back.

9. Skip

Skips between previous and next tracks.

10. Backlight Button

Illuminates the buttons.

11. Info

Toggles between display information.

12. Navigation

To navigate between menus.

13. Stop/Delete

Stop current track or delete from queue.

14. Play/Pause

Play or Pause current track.

15. Queue

View media playback queue.

16. (More)

When playing Internet Radio, the More button displays related options to the currently selected station, such as alternative stream types, content types or similar stations. When playing from UPnP sources, this button displays queued tracks and options.

17. Digital Inputs

Shortcut to D1 Digital Input.

18. Random

Play random track within queue.

19. Repeat

Repeat all tracks in queue.

20. Filter

Press to toggle through the three digital filter options.

Getting Connected

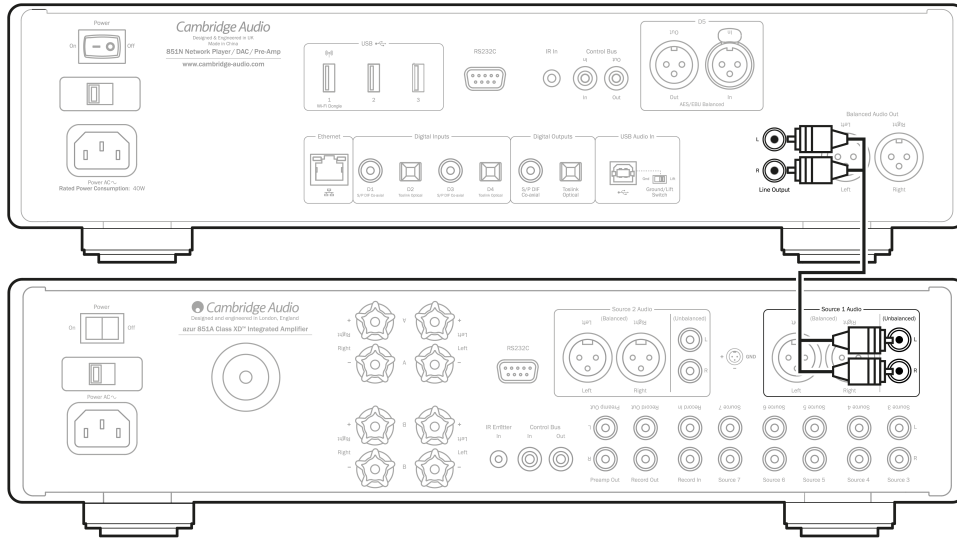
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Basic Analogue Connections

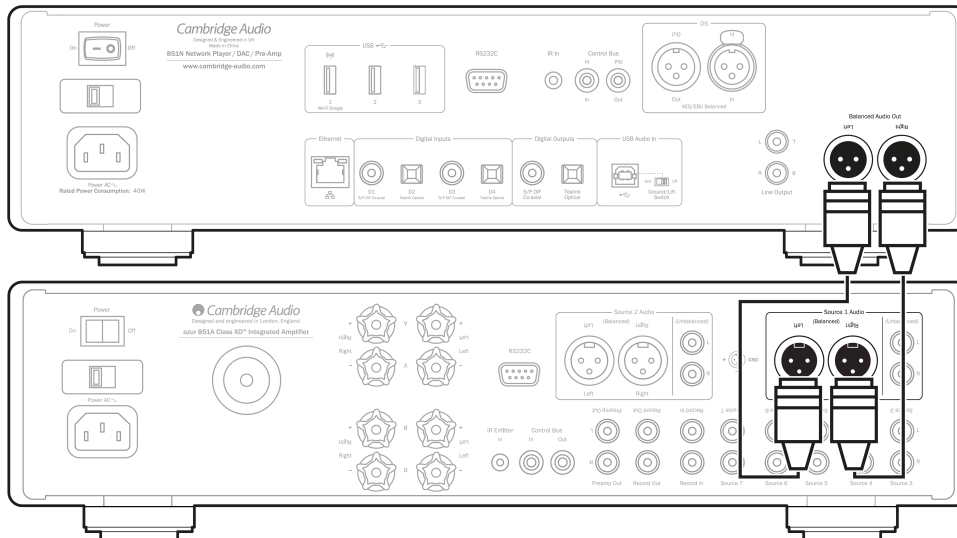
Important Note: Switch the power off before making any connections.

There are two analogue connection options for the 851N.

1. Line Output Connection (RCA)



2. Balanced Audio Connection (XLR)

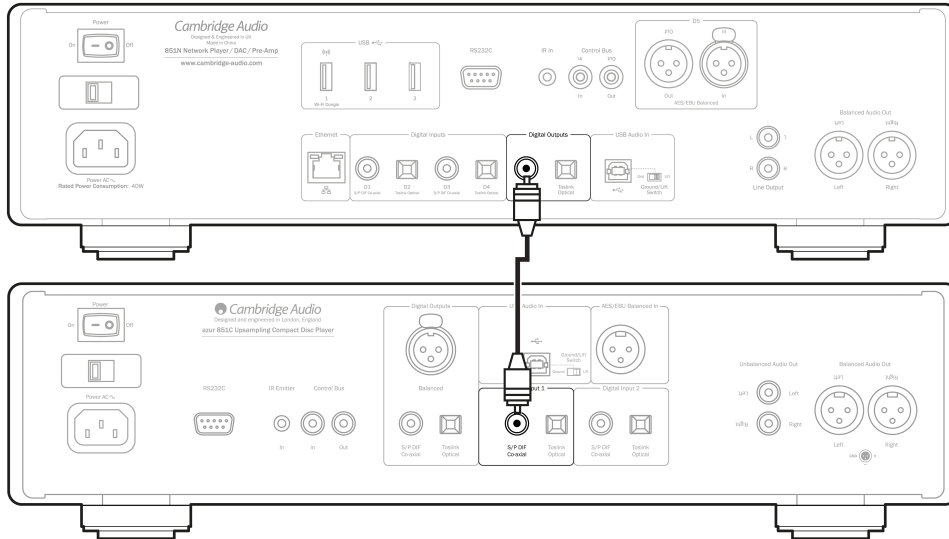


Please note: If using XLR cables, repeatedly press the Source 1 or Source 2 button (depending on which ports you are using) to toggle between 'Balanced' and 'Unbalanced'.

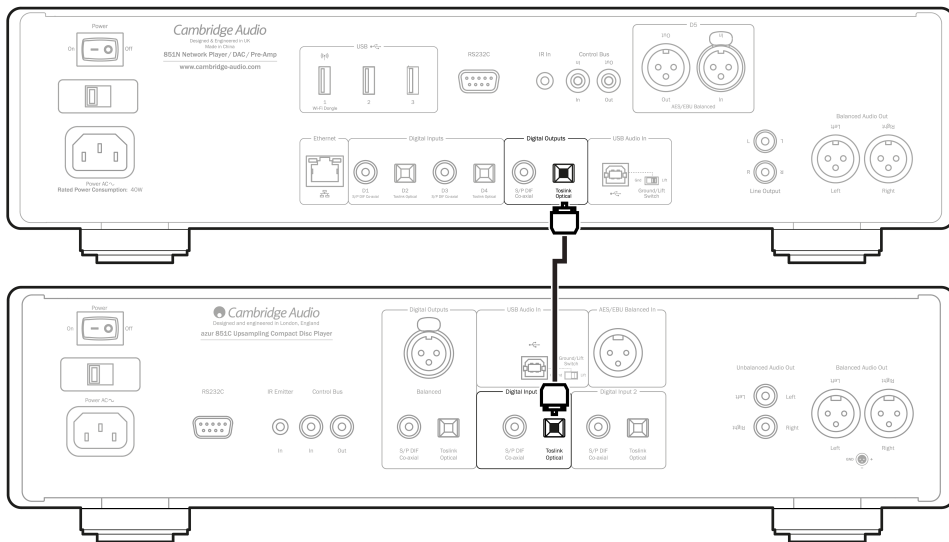
Basic Digital Connections

There are two digital connection options for the 851N.

1. Digital Coaxial Output - Digital Coaxial connections are commonly used with CD players and amplifiers and is recommended for use as it has higher bandwidth.



2. TOSLINK Optical Output - Whilst having lower bandwidth, TOSLINK Optical connections are commonly found on televisions, DVD players and A/V units.



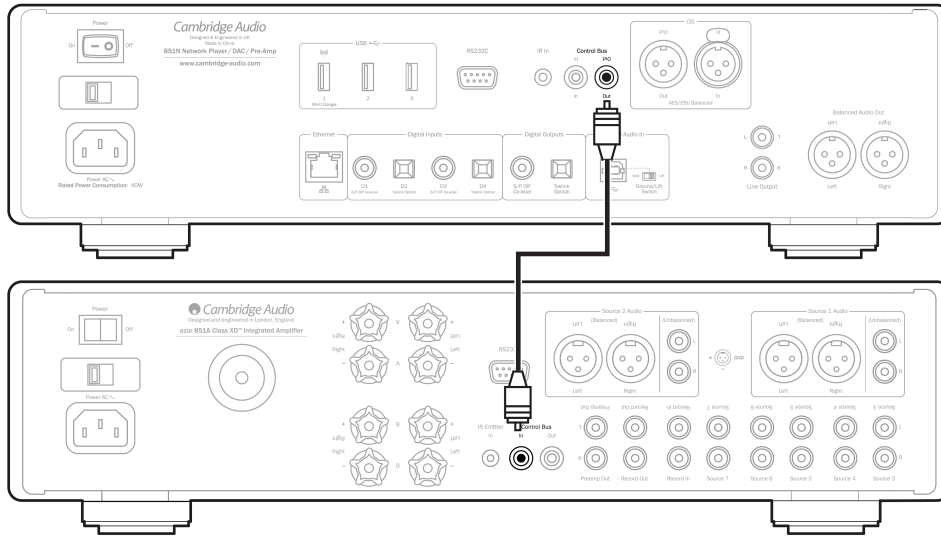
Control Bus

The Control Bus lets you control your other Azur 851 series units. See the following diagrams when connecting the 851N using the provided Control Bus cable.

Another benefit of the Control Bus is the use of the StreamMagic app. You can use the StreamMagic app to control other Azur 851 series units via the 851N.

851N with 851A (via StreamMagic app)

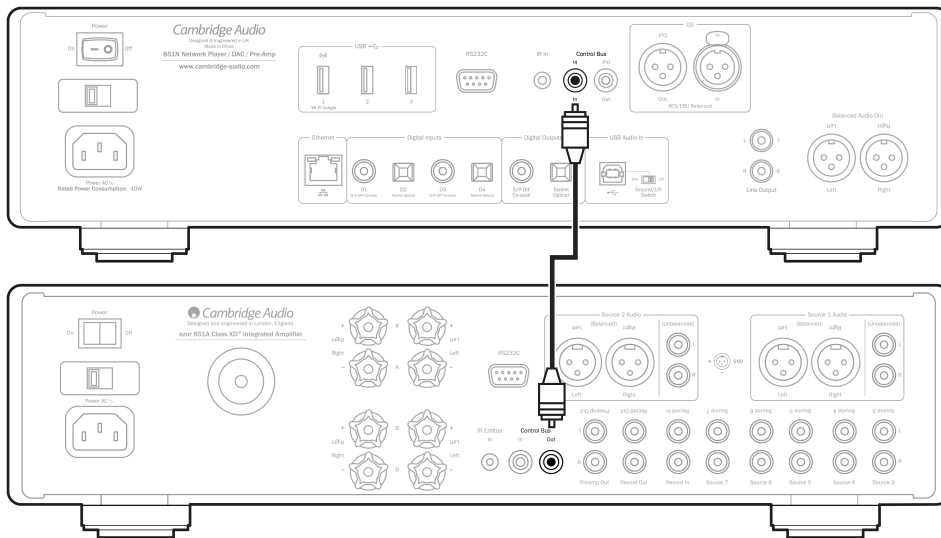
When using the app to turn the 851N on/off, this will also turn the 851A on/off. The app can also be used to control the volume of the 851A. Connect the 851N Control Bus Out to 851A Control Bus In.



851A with 851N

Note: Without using the StreamMagic app to control the 851A.

When turning the 851A on/off, this will also turn the 851N on/off. Connect the 851A Control Bus Out to 851N Control Bus In.



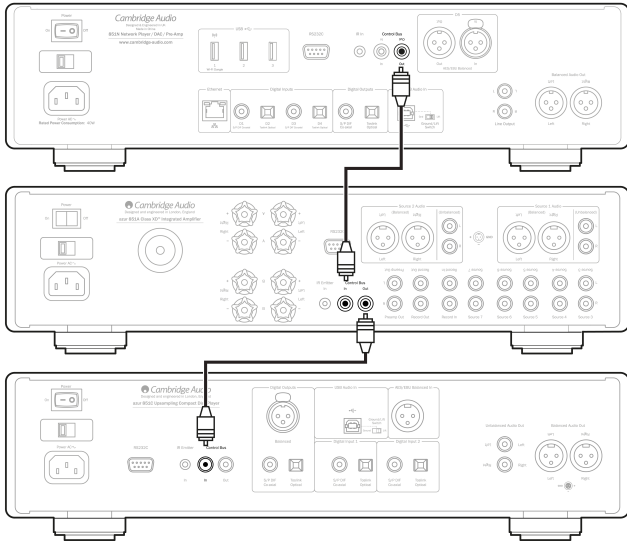
851A with 851N and 851C

When turning the 851N on/off, this will turn the 851A and 851C on/off.

With all three 851 devices, connect the 851N Control Bus out to 851A Control Bus in. Then connect the 851A Control Bus out to 851C Control Bus in.

Note: Do **NOT** loop back from the 851C Control Bus out to the 851N Control Bus in.

Control Bus will also need to be enabled and set to Amplifier within the 851N device settings in the StreamMagic app once the app has been connected to the 851N.



Note: If a device with APD enabled automatically switches off after the selected period of inactivity, this will also switch off the other connected devices.


- Entering Wi-Fi network password.
- Searching for radio stations and content on UPnP servers.
- Customising the 851N name and digital input names.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
U	V	W	X	Y	Z	0	1	2	3	4	5	6	7	8	9	<		=	>
+	-	_	!	?	@	#	\$	%	^	&	*	:	;	`	'	"	.	,	\
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X

- To enter text:
- 1. Use the front panel rotary encoder to scroll through each symbol.
 - 2. Using the IR remote control, you can navigate horizontally and vertically.
 - 3. Press Enter on the front panel or remote control to select the highlighted character.



Deletes the last character selected. This is the equivalent to the  button on the front panel or IR remote control.



Cancels the text entry process.



Submits the entered text.

StreamMagic app

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The 851N allows you to stream music from many different sources both on your home network and from the internet.

To set up your player, please first download the StreamMagic app from the Apple app store or Google Play store.

Note: The StreamMagic app is only available for iOS and Android mobile devices such as smartphones and tablets. It is not available on PC or Mac.



Once your player is connected to your home network you'll have full control of your sources, including internet radio, streaming services, network and USB drives and more via the StreamMagic app.

For more information on our StreamMagic app, please visit: <https://www.cambridgeaudio.com/streammagic>

Built-in Streaming Services

Last updated: May 29, 2024 03:29. Revision #13075

The 851N has the following built-in streaming services:

- **Spotify Connect**
- **TIDAL**
- **Qobuz**
- **Deezer**

Note: It is essential that the device you are streaming from (smartphone, tablet, computer, etc.) is on the same Wi-Fi network as the network player to ensure that the units can communicate with each other.

Spotify Connect

Use your phone, tablet or computer as a remote control for Spotify.

Go to connect.spotify.com to learn more.

TIDAL (Connect)

1. Open the TIDAL app and choose the playlist, album, song, etc. that you wish to stream to player.
2. Select the Sound Output devices icon within TIDAL and select your Cambridge Audio network player from the list.
3. TIDAL Connect should now be streaming your chosen content to the player.

TIDAL (via StreamMagic)

1. Open the StreamMagic app and navigate to the Library tab, and then select TIDAL.

Note: Please ensure that you sign into your TIDAL account when prompted to do so. This will only be required on the first instance of use to link the account to the StreamMagic app.

2. Choose the playlist, album, song, etc. that you wish to stream to player.
3. TIDAL should now be streaming your chosen content to the player.

Qobuz (via StreamMagic)

1. Open the StreamMagic app and navigate to the Library tab, and then select Qobuz.

Note: Please ensure that you sign into your Qobuz account when prompted to do so. This will only be required on the first instance of use to link the account to the StreamMagic app.

2. Choose the playlist, album, song, etc. that you wish to stream to player.
3. Qobuz should now be streaming your chosen content to the player.

Deezer (via StreamMagic)*

1. Open the StreamMagic app and navigate to the Library tab, and then select Deezer.

Note: Please ensure that you sign into your Deezer account when prompted to do so. This will only be required on the first instance of use to link the account to the StreamMagic app.

2. Choose the playlist, album, song, etc. that you wish to stream to your player.
3. Deezer should now be streaming your chosen content to your player.

*Deezer is only available within the StreamMagic app when running firmware version **022-a-131** or later and StreamMagic app version 2.10.0 or later.

AirPlay 2

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AirPlay 2 from iPhone or iPad

1. Ensure your player is connected to your network.
2. Open the app that you want to AirPlay 2 from.



3. Select  or  .

4. Select your player as your AirPlay 2 device.

Note: This product supports AirPlay 2 and requires your mobile device to be running iOS 11.4 or later.

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Use of the Works with Apple badge means that an accessory has been designed to work specifically with the technology identified in the badge and has been certified by the developer to meet Apple performance standards.

Internet Radio

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You can assign up to 99 of your favourite Internet Radio stations to presets on your player, which can then be recalled using the StreamMagic app, front panel controls or remote control.

There are two ways to search and store radio stations.

StreamMagic app


To search and assign a preset:

1. Within the StreamMagic app navigate to the **Radio** tab.
2. Use the **Search for Radio** search tab at the top of the page or enter a Custom URL link by selecting URL.

Note: Please ensure that the custom URL stream is one of the following supported file types: ALAC, WAV, FLAC, AIFF, DSD (x64), WMA, MP3, MPEG-4, AAC, AAC-HE, AAC+ and OGG Vorbis.

3. Once you have located the station you wish to store, select and you will be prompted with the option to **Play now** or **Add to presets**.
4. Add station to the desired preset for your player between 1-99.
5. You will then receive confirmation that the station is saved to the chosen preset.

To remove a preset (**iOS**):

1. Within the StreamMagic app navigate to the **Home** tab.
2. Scroll to the bottom of the page where you find your player's **Presets**, and select **EDIT**.
3. To remove station from preset, tap the  icon and then press **Delete**.

To remove a preset (**Android**):

1. Within the StreamMagic app navigate to the **Home** tab.
2. Scroll to the bottom of the page where you find your players **Presets**, and select **EDIT**.
3. Tap on the station you wish to remove.

Front Panel Controls

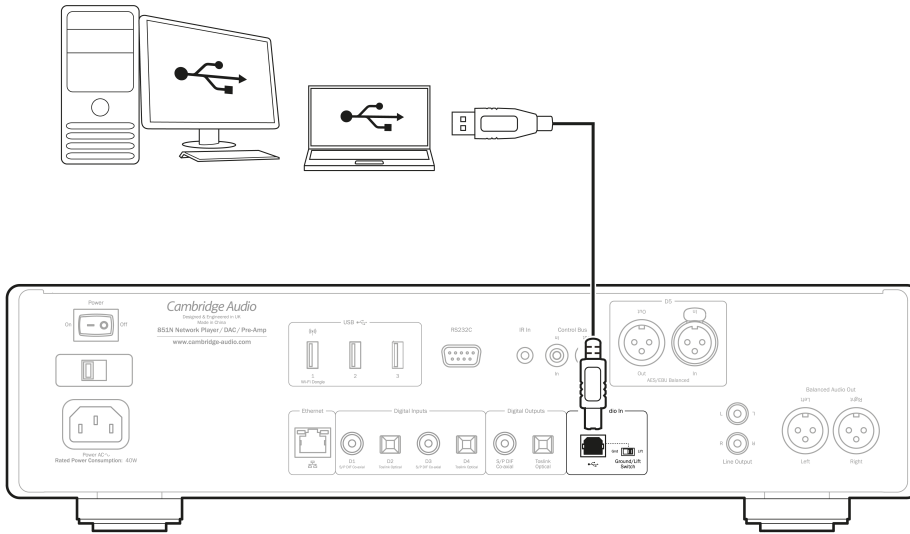
1. Press the Home button. Using the front panel knob, navigate to **Radio**.
2. Search for station either by location, genre or station name.
3. Once you have located the station you wish to store, select and play.
4. Whilst station is playing, press the Home button and navigate to **Presets** > **[Set Preset]**.
5. Using the front panel knob select your chosen preset. This will then be confirmed on the front panel display.

Note: You may also assign a preset using the remote control, by pressing and holding a number on the remote (1-4) whilst a station is playing. The remaining presets (9-99) can only be accessed via the StreamMagic app.

USB Audio

Last updated: November 10, 2022 04:44. Revision #10064

The USB Audio Input on your player is designed for use with PC and Mac computers. When connected, you will be able to playback music to the network player directly from the computer's apps, software or media players.



Note: If using **USB Class 1.0**, you will be able to playback at a maximum of **24bit / 96kHz**. If using **USB Class 2.0**, you will be able to playback at a maximum of **24bit / 192kHz**.

PC Setup

Note: Before connecting your PC to the 851N, ensure you install the required Cambridge Audio Windows 2.0 USB driver on your PC. Please find a link to the most recent USB audio driver [here](#).

1. Connect your 851N to your PC.

- After installing the correct driver, using a USB audio cable (Type A to Type B), connect the **USB Audio In** on your 851N to a USB port on the PC.

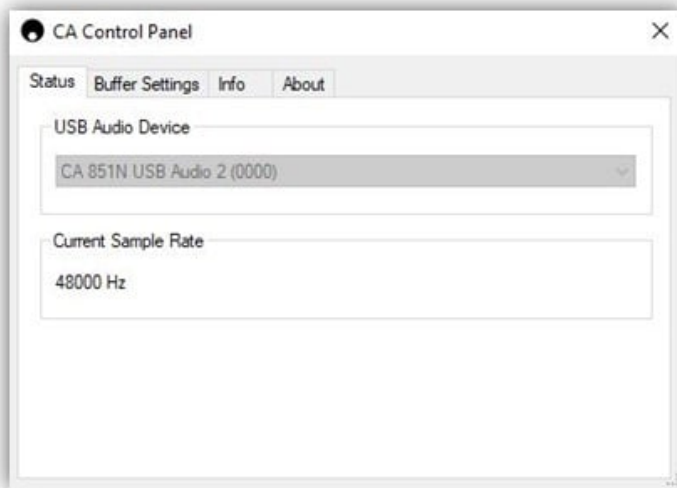
2. Select the USB Audio source.

- If using the front panel controls of your 851N, navigate to **Home > Inputs > USB Audio**.
- If using the StreamMagic app, go to the **Home** tab, then select **USB Audio** within the **Sources** section.

3. Switch the USB Class.

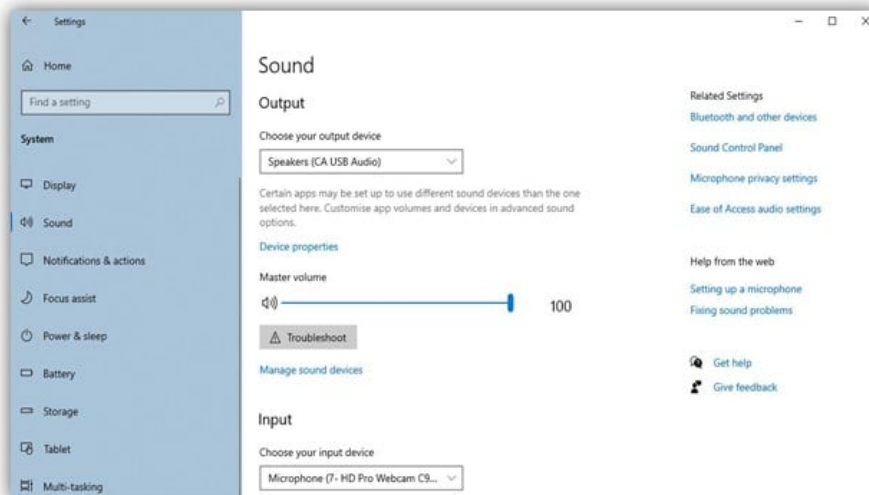
- If using the front panel controls of your 851N, navigate to **Home > Settings > Audio > USB Audio Class** > Then toggle between **USB Audio Class 1.0** or **2.0**.
- If using the StreamMagic app, go to the Home tab, locate the 851N Settings > USB Audio Class > Then toggle between USB Audio Class 1.0 or 2.0.

4. Navigate to the **CA Control Panel** which should now be installed in your Windows taskbar. This will show any connected Cambridge Audio USB Audio device and current sample rate.

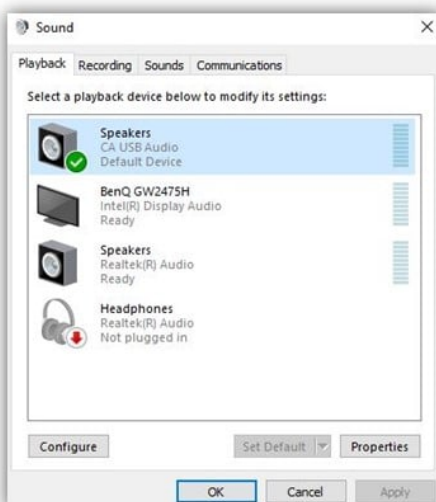


4. On your PC, navigate to **Settings > System > Sound**. Select the 851N as your output device from the drop-down menu. This will appear as '**CA USB Audio**'.

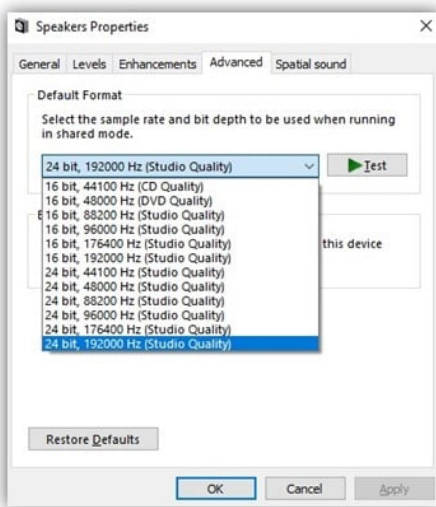
5. Within this same window under **Related Settings** on the right-hand side, select **Sound Control Panel**.



6. On the **Playback** tab, ensure that CA USB Audio is the default output device, then select **Properties**.



7. Within **Speaker Properties**, navigate to the **Advanced** tab. Select the desired bit depth and sample rate preference. Once selected, select **Apply**, then **OK**.



8. Your PC's output will now playback via the 851N.

Mac Setup

1. Connect your 851N to your Mac.

- Using a USB audio cable (Type A to Type B), connect the **USB Audio In** on your 851N to a USB port on the Mac.

Note: If using a Mac without a USB Type A port, you may also use USB Type C (Thunderbolt 3) to USB Type B connection.

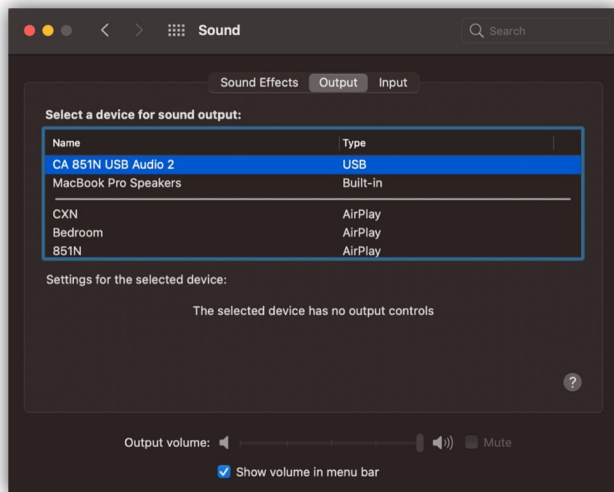
2. Select the USB Audio source.

- If using the front panel controls of your 851N, navigate to **Home > Inputs > USB Audio**.
- If using the StreamMagic app, go to the **Home** tab, then select **USB Audio** within the **Sources** section.

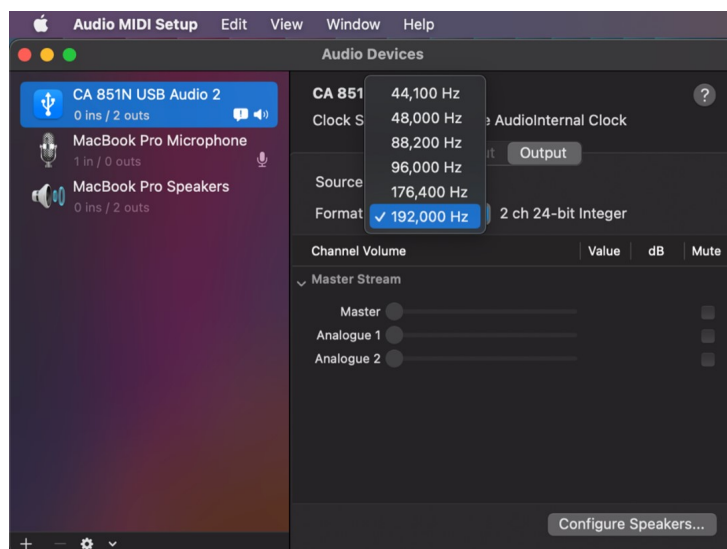
3. Switch the USB Class.

- If using the front panel controls of your 851N, navigate to **Home > Settings > Audio > USB Audio Class** > Then toggle between **USB Audio Class 1.0** or **2.0**.
- If using the StreamMagic app, go to the **Home** tab, locate the 851N **Settings > USB Audio Class** > Then toggle between **USB Audio Class 1.0** or **2.0**.

4. Within the System Preferences of the Mac, locate the **Sound** settings. Select the **CA 851N Audio Class 1 / 2** as the output sound device.



5. On the Mac navigate to **Applications > Utilities > Audio MIDI Setup**. Select the **CA 851N Audio Class 1 / 2** as the output sound device on the left column, and then using the drop-down options select the desired bit depth and sample rate preference.



6. Your Mac's output will now playback via the 851N.

USB Media

Last updated: August 9, 2022 02:51. Revision #10041

You may connect a USB SSD, USB HDD or flash drive to the 851N via the USB Media inputs located on the front and rear of the unit for playback. Once connected the following formats are supported: ALAC, WAV, FLAC, AIFF, DSD (x64), WMA, MP3, MPEG-4, AAC, AAC-HE, AAC+ and OGG Vorbis.

Note: The 851N will read large capacity hard drives connected to their USB inputs. However, some larger capacity drives will require you to use their own power supply.

The 851N will only support USB hard drives which are formatted to FAT32 and NTFS.

The primary function of the 851N is as a network music player. The USB ports are intended for convenient connection of USB thumb drives. As such, we cannot guarantee compatibility with all USB HDD's.

USB Media Playback (via Front Panel Controls)

1. Connect USB SSD, HDD or flash drive to either to front panel or rear panel USB Input.
2. Press the **Home** button on the front panel, then navigate to **Music Library**.
3. Within the Music Library locate the USB device and select the track, album or folder you wish to playback.
4. Upon selecting a track you will have the option to '**PLAY FROM HERE**', '**PLAY TRACK NOW**', '**PLAY TRACK NEXT**' or '**QUEUE TRACK**'.

USB Media Playback (via StreamMagic app)

1. Connect USB SSD, HDD or flash drive to either to front panel or rear panel USB Input.
2. Navigate to the Library tab of the StreamMagic app.
3. Under USB Drives, locate your USB Media device and open.
4. Upon selecting a track you will have the option to '**PLAY FROM HERE**', '**PLAY NOW**', '**PLAY NEXT**' or '**ADD TO QUEUE**'.

Playback Options:

PLAY FROM HERE – Playback of album/folder will begin from this point onwards.

PLAY NOW – Selected track will playback immediately.

PLAY NEXT – Selected track will be added to queue and playback next.

ADD TO QUEUE – Selected track will be added to playback queue.

Streaming Your Local Digital Music Collection

Last updated: May 13, 2024 04:05. Revision #12745

The 851N can play content from many different physical sources and this section will explain what you need to do to access and play your locally stored digital music collection. 'Locally Stored' means the digital music files you have on your **PC, Mac** or **Network Attached Storage devices (NAS)**.

To stream local content, you will need the following hardware and software running in your network:

1. Your Cambridge Audio 851N Network Player.
2. A mobile device such as a smartphone or tablet on which you can run the StreamMagic app, or by accessing your collection via the front panel controls.
3. A hard drive, computer or NAS containing your compatible digital music files.
4. An active UPnP music or media server.
5. A router which is configured to allow the UPnP service.

Note: The above items must be correctly connected and configured, and it is important to note that depending on the server, NAS, computer, etc. you're using this will differ from setup to setup. To help you with this we have created best practice guide which should get you up and running with minimal fuss and effort. This can be found [here](#).

Settings

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Device Name

This is how your player will appear in your StreamMagic app and on your home network when using services like Spotify and TIDAL Connect.

Giving your player a unique name makes it easier to distinguish when using streaming and smart home services.

AirPlay Name

This is how your player will appear when using AirPlay 2 or the Apple Home app.

Standby Mode

This selects what type of standby mode your player will use.

In **Network Standby mode** your player will still be controllable by the StreamMagic app and other network services

In **Eco mode** your player will use less power than in Network Standby mode but will need to be switched on either by the front panel or the remote control before it can be seen and controlled by the StreamMagic app and other services.

Automatic Power Down

This sets how long your player will wait while inactive before switching to standby.

Display Brightness

This sets the brightness of your player's display. If set to 'Off' the display will show for a few seconds after any change and then switch off.

USB Audio Class

This sets the USB Audio Class for the USB Audio input.

USB Audio Class 1.0 (default) works with USB 1.1 ports and supports up to 24-bit/96kHz.

USB Audio Class 2.0 requires a USB 2.0 port and can support up to 32-bit/384kHz (asynchronous) and up to DSD-256. Depending on your PC or laptop you may require an additional driver.

Roon Ready DSD

This will allow you to choose how Roon provides DSD content.

Use DoP for digital output – If your device does supports native DSD in DoP format.

Use PCM for digital output – If your device doesn't support native DSD.

Control Bus

If your device is connected to a Cambridge Audio amplifier using a control bus connector, volume commands can be sent directly to the amplifier. For more information, please refer to the Getting Connected section of this manual under 'Control Bus'.

Pre-amp

With Pre-Amp mode enabled the volume of the device's line output can be controlled using the app, the remote or the rotary dial.

For more information see our [FAQ](#).

Volume Limit

This sets the maximum volume that other streaming services like AirPlay 2, Spotify and TIDAL Connect can set. The front panel, remote control and StreamMagic app volume controls can override this setting.

Early Update

Early Updates provide the opportunity to receive pre-release firmware for your 851N. To subscribe to Early Updates, select **On**, and to opt out select **Off**.

Note: Information on what is included in the current early update for the 851N can be found [here](#).

Firmware

This will check for and apply any new firmware available for your network player. You can also check for new updates on the info screen. When left in network standby overnight your player will check and apply any new updates.

Note: Your network player must be connected to the internet to carry out firmware updates. It is recommended that you keep your network player connected to ensure optimal performance. Information on the latest firmware version for the 851N can be found [here](#).

Factory Reset

This will return your player to its factory settings.

You may perform a factory reset via the front panel controls/remote control (**Home > Settings > Factory Reset**). Or, via Settings in the StreamMagic app.

Note: Returning the player to its factory settings will delete all previously saved network settings and presets.

Technical Specification

Last updated: February 17, 2025 03:41. Revision #14223

D/A CONVERTERS

Twin Analog Devices AD1955 24-bit DACs

DIGITAL FILTER

2nd Generation ATF2 up-sampling to 24-bit/384kHz. Linear Phase, Minimum phase or Steep modes

ANALOGUE FILTER

2-pole differential Bessel with DC servo (for both XLR and RCA outputs)

DIGITAL AUDIO INPUTS

1 x AES/EBU, 2 x S/PDIF coaxial and 2 x TOSLINK optical

USB AUDIO INPUT

USB Type B conforms to USB Audio profile 1.0 or 2.0 (user selectable)

ANALOGUE AUDIO OUTPUTS

Balanced XLR and unbalanced RCA analogue audio outputs

COMPATIBILITY

UPnP: Linear PCM 16-24 bit, 11.025-192kHz Local USB media: Linear PCM 16-24 bit, 11.025-192kHz USB Audio1.0: Linear PCM 16-24 bit, 44.1-96kHz USB Audio 2.0: Linear PCM 16-24 bit, 44.1-192kHz or DSD (x64) TOSLINK 16-24 bit, 32-192kHz (using high quality TOSLINK optical cable) S/PDIF: Linear PCM 16-24 bit, 32-192kHz AES3/EBU: Linear PCM 16-24 bit, 32-192kHz BT100 Bluetooth receiver: A2DP plus aptX Internet radio: 16-24 bit, 11.025-192kHz

AUDIO FORMATS

ALAC, WAV, FLAC, AIFF, DSD (x64), WMA, MP3, MPEG-4, AAC, AAC-HE, AAC+ and OGG Vorbis

STANDBY POWER CONSUMPTION

<0.5W

DIMENSIONS

115 x 430 x 360mm (4.5 x 16.9 x 14.7")

WEIGHT

8.1 Kg (17.9lbs)

Source Quality Matrix

Last updated: December 11, 2024 03:03. Revision #14188


SOURCE	DELIVERY METHOD	MAXIMUM RESOLUTION
Spotify Connect	Mobile/Desktop App	320kbps
Spotify AirPlay	Mobile/Desktop App	320kbps
Spotify Bluetooth	Mobile/Desktop App	aptX HD
TIDAL Connect	Mobile/Desktop App	24bit / 192 kHz
TIDAL (via StreamMagic app)	StreamMagic App	24bit / 192 kHz
TIDAL AirPlay	AirPlay 2	16bit / 44kHz
TIDAL Bluetooth	Bluetooth	aptX HD
TIDAL Roon	Roon Endpoint	24bit / 192 kHz
TIDAL Roon	USB Class 2	24bit / 192 kHz
TIDAL Desktop App	USB Class 2	24bit / 192 kHz
Qobuz (via StreamMagic app)	StreamMagic App	24bit / 192 kHz
Qobuz AirPlay	AirPlay 2	16bit / 44kHz
Qobuz Bluetooth	Bluetooth	aptX HD
Qobuz Roon	Roon Endpoint	24bit / 192 kHz
Qobuz Roon	USB Class 2	24bit / 192 kHz
Qobuz Desktop App	USB Class 2	24bit / 192 kHz
Third Party App (via AirPlay)	AirPlay 2	16bit / 44kHz

Troubleshooting

Last updated: May 13, 2024 04:12. Revision #12763

General Help guidelines:

If you have trouble connecting the 851N to your network, these steps may help to resolve the problem:

- Confirm that a connected computer can access the Internet (i.e., can browse the web) using the same network.
- Check that a DHCP server is available, or that you have configured a static IP address on the 851N. You can configure a static IP address on the 851N using the menu item **Settings > Network Config > Edit Config**, and then select '**No**' for '**Auto (DHCP)**'. DHCP is however the recommended method.
- Check that the UPnP is enabled on your router if this is an option.
- Check that your network's firewall is not blocking any outgoing ports. As a minimum, the radio needs access to UDP and TCP ports 80, 554, 1755, 5000, 6000 and 7070.
- Check your access point does not restrict connections to a particular MAC address. You can view the radio's MAC address using the menu item **Settings > Network Config > View Config > MAC address**.
- If you have an encrypted Wi-Fi network, check that you have entered the correct key or passphrase into the 851N. Remember that text-format keys are case sensitive. If, when attempting to connect to an encrypted network, your 851N displays: 'Wireless error' followed by a 5-digit number, then please ensure that you enter the correct passphrase for the network. If the problem persists, then you may need to consult your network configuration.
- Check the Wi-Fi dongle is securely connected to the unit, and in the correct USB port labelled '**Wi-Fi Dongle**'.
- Check the units Wi-Fi signal strength. You can do this by pressing and holding the front panel  button. If signal is low, try connecting your 851N directly to your router using a wired Ethernet connection.
- If none of the above steps work, reboot and/or factory reset your router.

If your 851N can connect to the network successfully, but is unable to play particular StreamMagic stations, it may be due to one of the following causes:

- The station is not broadcasting at this time of the day (remember it may be in a different time zone).
- The station has reached the maximum allowed number of simultaneous listeners.
- The station is not broadcasting anymore.
- The link in our database is simply out of date.
- The Internet connection between the server (often located in a different country) and you is slow.
- Try using a computer to play back the stream via the broadcaster's web site.

If you have problems with UPnP playback, always check the following:

- Ensure your chosen UPnP server software can serve the file type you are trying to access. Some servers do not serve FLAC for instance.

- The 851N can only play non-DRM files. Files that have DRM controls cannot be played by the 851N. Some servers may be able to authorise and de-crypt Microsoft Playsforsure before then serving the content to the 851N but this operation is not guaranteed as it is purely a function of the server.
- If attempting to play 24-bit WAV or FLAC content note a wired Ethernet connection is normally required for reliable operation due to bandwidth considerations.
- Check the 851N can play back the file type you are trying to access. WMA, AAC, MP3, Vorbis, FLAC and WAV can currently be played. The 851N does not support ALAC, WMA Pro, WMA lossless, RAW, AU or other file types not mentioned.

If you have problems with USB Media playback, always check the following:

- Check the 851N can playback the file type you are trying to access. ALAC, WAV, FLAC, AIFF, DSD (x64), WMA, MP3, MPEG-4, AAC, AAC-HE, AAC+ and OGG.
- The 851N does not support WMA Pro, WMA lossless, RAW, AU or other file types not mentioned.
- For USB Media the 851N can only play non-DRM files. Files that have DRM controls cannot be played.
- Check that your device does not require more than 1A if it is powered from the USB socket itself.
- Check your device is formatted in FAT32/NTFS format.
- The way you organise your USB media affects the size of internal database the 851N needs to build dynamically as you browse content. It is good practise to create folders for Artists within which you should have a sub folder for each Album which then containing the tracks for that Album. Libraries with thousands of tracks in one folder will progressively slow down the 851N's media browsing.