

CXN (V2) Network Player

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CXN (V2) Network Player

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Users Manual

Introduction

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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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What's included with the CXN (V2)?

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- 1) CXN (V2) 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

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1. 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.

2. USB

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

3. Skip

Skip to next track during playback.

4. Play/Pause

Play or Pause current track.

5. Stop/Delete

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

6. Display

7. Info

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

8. Home

Press to navigate to Home menu.

9. Infrared Sensor

IR sensor that receives IR commands from the remote control.

10. Return

Press to return to the previous menu.

11. (More)

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

12. Navigation/Select (Rotary Dial)

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

Rear Panel Connections

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1. 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.

2. 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 CXN (V2) 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.

3. Ethernet

Use to connect the CXN (V2) directly to a router.

4. Digital Inputs (D1 and D2)

TOSLINK 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.

5. Digital Outputs

TOSLINK and S/P DIF coaxial digital outputs.

6. 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 are also suitable.

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 CXA 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.

7. 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.

8. Control Bus

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

9. 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).

10. Line Output

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

Remote Control

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The CXN (V2) remote control handset duplicates some of the front panel control functions and is also able to control other CX 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 CXN (V2) between On and Standby mode.

2. Brightness

Alters the brightness of the CXN (V2) display. There are two brightness levels and an option to switch off the backlight.

Note: When the CXN (V2) display lights are selected to be off, selecting any of the functions will briefly switch on the lights to show the change.

3. Mute

Press to mute or unmute the loudspeakers, pre-out, sub, and the headphone outputs.

4. (More)

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

5. Digital Input

Shortcut to D1 Digital Input.

6. Random

Play random track within queue.

7. Repeat

Repeat all tracks in queue.

8. Volume

Volume level adjust.

9. Home Menu

Returns front panel display to Home menu option.

10. Info

Toggles between display information.

11. Skip

Skips between previous and next tracks.

12. Enter

Enter or select.

13. Navigation

To navigate between menus.

14. Return

Return or back.

15. Play/Pause

Play or Pause current track.

16. Presets

Recalls stored 1 – 8 presets.

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 CXN.

1. Line Output Connection (RCA)



2. Balanced Audio Connection (XLR)



Basic Digital Connections

There are two digital connection options for the CXN.

Note: If using either of the digital outputs of the CXN, the digital signal will bypass the DAC in CXN and will instead be processed by the unit connected to the digital output, E.g., CXA81

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 CX series units. See the following diagrams when connecting the CXN using the provided Control Bus cable.

Another added feature with this Control Bus is the use of the StreamMagic app. You can use the StreamMagic app to control other CX series units via the CXN.

CXN with CXA (via StreamMagic app)

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



CXA with CXN

Note: Without using the StreamMagic app to control the CXA.

When turning the CXA on/off, this will also turn the CXN on/off. Connect the CXA Control Bus Out to CXN Control Bus In.



CXA with CXN and CXC

When turning the CXN on/off, this will turn the CXA and CXC on/off.

With all three CX devices, connect the CXN Control Bus out to CXA Control Bus in. Then connect the CXA Control Bus out to CXC Control Bus in.

Note: Do **NOT** loop back from the CXC Control Bus out to the CXN Control Bus in.

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



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.

Connecting to WiFi

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Important Note: It is vitally important that your CXN (V2) remains connected to an internet network as often as possible, either via Wi-Fi or Ethernet. This will ensure that the unit is regularly updated to meet essential security protocols, third party compatibility and the latest software requirements. This will ensure that the unit is regularly updated to meet essential security protocols, third party compatibility and the latest software requirements.

Failure to maintain your device with regular firmware updates as provided by Cambridge Audio will void the product warranty and is likely to cause major issues to the unit in time. Please ensure that your unit is updated to the most current firmware version. Information on the latest firmware version for the CXN (V2) can be found [here](#).

Note: The CXN (V2) is not compatible with captive portal networks. The CXN (V2) can only on 2.4GHz WiFi. Where possible, avoid the use of powerline adapters, Wi-Fi signal boosters/extenders as these can disrupt the reliability of the network connection.

Connecting to a Wired Network

1. Connect a network cable (Category 5/5E straight-through Ethernet cable) between the CXN (V2) and your router.
2. Your CXN (V2) will now automatically connect to the network.



Connecting to a Wireless Network

Important note: Do not plug/unplug the wireless dongle when the unit is on.

1. Ensure that your CXN (V2) is in range of your wireless router, and then power on your unit.
2. On an iOS device go to Wi-Fi settings and under 'SETUP NEW AIRPLAY SPEAKER' select 'CXN v2'. Alternatively (or if using Android), when prompted on the front panel display connect the CXN (V2) to the Wi-Fi network of your choice. Select your Wi-Fi network from the list and then enter your password.
3. Once connected, to complete unit setup download and install the [StreamMagic app](#) either from the [Apple App store](#) or [Google Play store](#).

Note: Wi-Fi network passwords are case sensitive.

Character entry

This is typically for:

- Entering Wi-Fi network password.
- Searching for radio stations and content on UPnP servers.
- Customising the CXN (V2) name and digital input names.



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.



Cancels the text entry process.



Submits the entered text.

StreamMagic app

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The CXN (V2) 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/gbr/en/products/streammagic>

Built-in Streaming Services

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The CXN (V2) 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

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

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 Chromecast)

1. Open the Qobuz app and choose the playlist, album, song, etc. that you wish to stream to player.
2. Select the Qobuz Connect icon within Qobuz and select the Cambridge Audio network player from the list.
3. Qobuz should now be casting 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 Chromecast)

1. Open the Deezer app and choose the playlist, album, song, etc. that you wish to stream to your player.

2. Select the speaker icon within Deezer, then select 'Google Cast'. Select your player from the list.
3. Deezer should now be casting your chosen content to your 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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Chromecast Built-in

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Cast from Android Phone or Tablet

1. Ensure your player is connected to your network.
2. Open the app that you want to Cast from.
3. Select  .
4. Select your player as your Chromecast device.

Note: Currently Chromecast Built-in only supports audio apps. Therefore, you will not be able to cast YouTube to your speakers. However, YouTube Music is fully supported over Chromecast.

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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, AAC, HE AAC, 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 players **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 (1-8) whilst a station is playing. The remaining presets (9-99) can only be accessed via the StreamMagic app.

USB Audio

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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 CXN (V2), 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 CXN (V2) 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 CXN (V2) to a USB port on the PC.
2. Select the USB Audio source.
 - If using the front panel controls of your CXN (V2), 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 CXN (V2), 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 CXN (V2) **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 CXN (V2) as your output device from the drop-down menu. This will appear as '**CA CX 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 CX 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 CXN (V2).

Mac Setup

1. Connect your CXN (V2) to your Mac.
 - Using a USB audio cable (Type A to Type B), connect the **USB Audio In** on your CXN (V2) 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 CXN (V2), 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 CXN (V2), 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 CXN (V2) **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 CXN Audio Class 1 / 2** as the output sound device.



5. On the Mac navigate to **Applications > Utilities > Audio MIDI Setup**. Select the **CA CXN 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 CXN (V2).

USB Media

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You may connect a USB SSD, USB HDD or flash drive to the CXN (V2) 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, AAC, HE AAC, AAC+ and OGG Vorbis.

Note: The CXN (V2) 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 CXN (V2) will only support USB hard drives which are formatted to FAT32 and NTFS.

The primary function of the CXN (V2) 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 TRACK NOW**', '**PLAY TRACK NEXT**' or '**QUEUE TRACK**'.

Playback Options:

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

PLAY TRACK NOW – Selected track will playback immediately.

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

QUEUE TRACK – Selected track will be added to playback queue.

Streaming Your Local Digital Music Collection

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The CXN (V2) 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 CXN (V2) 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, Chromecast built-in 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 in 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 DSD 128/256 available by DoP (PCM). Depending on your PC or laptop you may require an additional driver.

For more info about USB Audio see our [online guide](#).

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, TIDAL Connect and Chromecast built-in 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 CXN (V2). 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 CXN (V2) 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 CXN (V2) 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

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D/A CONVERTERS

Dual Wolfson WM8740 24-bit DACs

ANALOGUE FILTER

2-Pole Dual Differential Bessel Double Virtual, Earth Balanced

THD @ 1kHz 0dBFS

<0.001% 24-bit (at volume set to full)

THD @ 1kHz -10dBFS

<0.001% (at volume set to full)

THD @ 20kHz 0dBFS

<0.002% (at volume set to full)

FREQUENCY RESPONSE

20Hz-20kHz +/- 0.1dB *

SIGNAL TO NOISE RATIO

-112dB (at volume set to full)

TOTAL CORRELATED JITTER

< 130pS

CROSSTALK @ 1kHz

< -100dB

CROSSTALK @ 20kHz

< -90dB

DIGITAL OUTPUTS

S/PDIF Coaxial: 16/24-bit, 32-192kHz

TOSLINK Optical: 16/24-bit, 32-96kHz

AUDIO FORMATS

WAV containing uncompressed, PCM 16-24 bit 32-192kHz, FLAC containing losslessly compressed, PCM 16-24 bit 32-192kHz, Apple Lossless (ALAC) containing losslessly compressed PCM 16-24 bit 32-192kHz, AIFF containing uncompressed, PCM 16-24 bit 32-192kHz, Microsoft® Windows Media TM Audio (WMA 9 Standard) 32-320kbps, MP3 (CBR or VBR) 16-320kbps, AAC, HE AAC and AAC+, (CBR or VBR) 16-320kbps, OGG Vorbis 32-320kbps.

STREAMING PROTOCOLS

RTSP (Real Time Streaming Protocol), MMS (Microsoft Media Server Protocol), HTTP (Hyper Text Transfer Protocol).

CONNECTIVITY

UPnP, Local USB media, Airplay 2, Chromecast built-in, Internet Radio, Spotify Connect, TIDAL, Qobuz, Roon Ready.

PLAYLIST

ASX (Microsoft® playlist format) M3U, PLS

WI-FI

IEEE 802.11 b/g or n (2.4GHz only)

WI-FI ENCRYPTION

WEP, WPA, WPA2

ETHERNET

IEEE 802.3, 10 Base-T or 100 Base-T

USB

3 x USB 1.1 current limited to 1A each

FILE SYSTEMS

FAT32, NTFS

MAINS INLET VOLTAGE

100-240 VAC (switch mode)

STANDBY CONSUMPTION

<0.5W

MAX POWER CONSUMPTION

30W

DIMENSIONS

85 x 430 x 305mm (3.4 x 16.9 x 12.2")

WEIGHT

4 Kg (8.8lbs)

Source Quality Matrix

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SOURCE	DELIVERY METHOD	MAXIMUM RESOLUTION
Spotify Connect	Mobile/Desktop App	320kbps
Spotify AirPlay	Mobile/Desktop App	320kbps
Spotify Chromecast	Mobile/Desktop App	320kbps
Spotify Bluetooth	Mobile/Desktop App	aptX HD
TIDAL Connect	Mobile/Desktop App	24bit / 48 kHz
TIDAL (via StreamMagic app)	StreamMagic App	24bit / 48 kHz
TIDAL AirPlay	AirPlay 2	16bit / 44kHz
TIDAL Chromecast	Chromecast	24bit / 96 kHz
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 Chromecast	Chromecast	24bit / 96 kHz
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
Third Party App (via Chromecast)	Chromecast	24bit / 96 kHz

Troubleshooting


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If you experience any trouble with your CXN (V2), then you may find it useful to visit the help section on our webpage at:

[https://casupport.cambridgeaudio.com/en/product/7838334-CXN-\(v2\)](https://casupport.cambridgeaudio.com/en/product/7838334-CXN-(v2))

General Help guidelines:

If you have trouble connecting the CXN (V2) 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 CXN (V2). You can configure a static IP address on the CXN (V2) 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 CXN (V2). Remember that text-format keys are case sensitive. If, when attempting to connect to an encrypted network, your CXN (V2) 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 CXN (V2) 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 CXN (V2) 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 CXN (V2) can only play non-DRM files. Files that have DRM controls cannot be played by the CXN (V2). Some servers may be able to authorise and de-crypt Microsoft Playsforsure before then serving the content to the CXN (V2) 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 CXN (V2) can play back the file type you are trying to access. WMA, AAC, MP3, Vorbis, FLAC and WAV can currently be played. The CXN (V2) 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 CXN (V2) can playback the file type you are trying to access. WMA, AAC, MP3, Vorbis, FLAC and WAV can currently be played.
- The CXN (V2) does not support ALAC, WMA Pro, WMA lossless, RAW, AU or other file types not mentioned.
- For USB Media the CXN (V2) 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 CXN (V2) 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 CXN (V2)'s media browsing.

FAQ's:

- [What does the red symbol on the CXN \(V2\)'s screen mean?](#)
- [Can the CXN \(V2\) support MQA content?](#)
- [How do I setup my CXN \(V2\) with a DacMagic 200M for MQA Passthrough?](#)
- [Why are files stored on my USB HD or NAS in the wrong order or have artwork missing?](#)
- [Can I use more than one of the CXN \(V2\)'s outputs at once?](#)

- [How can I stop the CXN \(V2\) powering down when not in use?](#)
- [How do I change the volume of the CXN \(V2\)?](#)
- [How do I view album art on the CXN \(V2\)'s front panel?](#)
- [How can I play 'all tracks' from a connected USB hard drive on my CXN \(V2\)?](#)
- [Why can't I cast YouTube from an Android device to the CXN \(V2\)?](#)