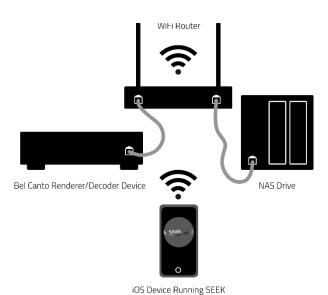
Bel Canto Design Guide to Audio Streaming Network Connected Streaming Products

UPnP Universal plug and play is a set of protocols designed to allow consumer devices to interact over a network. The network streaming system is made up of three standard UPnP components. UPnP control point, Media Renderer and Media Server. All media, song, and track information are stored and accessed through your streaming service or server. This can be a NAS (Network attached storage) or Linux, Windows or MAC based server. The Control point is your tablet or Smart Phone, this device connects the media from the Server or streaming Service provider, passing the audio information through the network to the Renderer to play. The Renderer retrieves media selected by the Control point from the network, decodes and plays the selection as it arrives over the network.

Setting up the network properly requires a standard infrastructure that includes the following components: Router, Bel Canto Renderer within a Bel Canto Streaming product, Wireless access point (WAP), Wireless control point. The Bel Canto SEEK app for IOS, MConnect Control for Android or MConnect Control HD for iPad and Tablets are control point applications. An example network is illustrated below:



Roon Ready

Bel Canto Renderers are all Roon Ready. If you have a Roon account, you need to install Roon Server on your NAS drive or on a networked Linux Server, Windows PC or Mac. You can then use Roon Remote to control playback. More information on Roon and its hardware requirements can be found at https://roonlabs.com.

Network Connection Options

There are several ways to connect Bel Canto Streaming products to your local Ethernet network:

Ethernet cable to local Ethernet port. You can use this for short runs of Ethernet cabling. We have found that sound quality can be affected by the quality of the local Ethernet cable, with very well-shielded audio grade cables offering improvement on the last run of cable to the audio system.

Ethernet cable to an Ethernet Over Powerline (EOP) module. Powerline modules use the house power line wiring to transmit network data between rooms. One module is plugged directly into a wall power outlet near the router, with an Ethernet cable connected from the module to the router. The second module is plugged directly into a wall outlet near the audio system, with an audio grade Ethernet cable connected from the module to the Ethernet port on the renderer. This approach works well and creates no noise issues with well-designed audio equipment.

USB/Wi-Fi adapter. The USB-A port on our equipment can be used with specific USB/Wi-Fi adapters to connect directly to the Wi-Fi signal of your router. Either a 2.4G or dual 5G/2.4G adapter can be used with the latest 3.7.49 or higher renderer firmware. Make sure you have first updated the renderer firmware in your equipment. See the User Guide for instructions. These adapters work well with good router and Wi-Fi coverage and sound as good as the best Ethernet cables. It is critical to have a good Wi-Fi signal in the listening room. We recommend using an adapter with an external antenna. Suitable adapters characteristics are listed below.

Connection of the renderer to the Wi-Fi network is performed by using the Settings menu within the Seek (iOS) or MConnect Control (Android) application. First ensure that the renderer is connected to the router with an Ethernet cable. Then select your Wi-Fi network and enter its password. Once your renderer is authenticated with your Wi-Fi network, you can remove the Ethernet cable and the renderer will connect automatically to your network after a power down reboot. In an environment with many local Wi-Fi networks, it can be advantageous to use a 5G connection to avoid channel interference.

If you need access to an additional USB-A port to stream music files, you can use a USB 2.0 hub to expand the USB bus.

Stream and earlier units are using the ConversDigital 2121 ethernet module, this number is seen in the module S/N using the Seek app Device Setup menu CDM2121 is the prefix.

CDM2121 supports 2G adapters using the Ralink RT5370 chipset and Dual Band 5G/2G adapters must use the Realtek RTL8811AU chipset and require V3.7.49 or later renderer firmware.

Stream2 and 2023 or later models are using the 4140 ethernet module, this number is seen in the module S/N using the Seek app Device Setup menu CDM4140 is the prefix.

CDM4140 supports Realtek's RTL8811AU, RTL8811CU and RTL8812BU chipsets.

Wi-Fi Connection Instructions

Following are step-by-step instructions to connect to Wi-Fi using the Seek IOS or Mconnect Android applications. You will need to have the USB Wi-Fi dongle installed in the USB-A port and an Ethernet cable attached to your router (Green and Yellow LEDs lit):

- 1. Open the app.
- 2. Tap Play to.
- 3. In the Devices list, tap the name of your renderer. If it is not listed, hit the refresh icon.
- 4. Tap Player.
- 5. Tap the Settings icon at the top-left corner of the app.
- 6. Tap Device Setup.
- 7. Tap the name of your renderer or the refresh icon if it is not listed.
- 8. You will see a screen like the one at the RIGHT→
- 9. Tap Wi-Fi Network Selection.
- 10. Tap the name of your network. If you do not see any networks listed, you have a problem with your Wi-Fi adapter. If you see the names of networks in your area, but your own, you have a problem with your Wi-Fi signal.
- 11. Enter the password for your Wi-Fi network connection, and tap Join this Network.
- 12. Tap OK to dismiss the Notice.
- 13. You should now be connected to your network by Wi-Fi.
- 14. Remove the Ethernet cable and restart the device.





Loading Bel Canto SEEK onto Your iOS Device

From your iOS device open the App Store and search Bel Canto SEEK. Download the free app.

Loading MConnect Control or Control HD into your Android, iPad or Tablet devices.

Information about these applications can be found on the link below. You will go to either the Apple App Store or Google App Store to find and download these applications.

http://www.conversdigital.com/eng/product/product04.php

TIDAL: <u>WWW.TIDAL.COM</u>
Qobuz: <u>WWW.QOBUZ.COM</u>
Spotify: <u>WWW.SPOTIFY.COM</u>

Set Up Subscription: On your preferred streaming services, make sure to subscribe to the highest available quality in the account. **IMPORTANT:**

Once you set up your subscription account in TIDAL or Qobuz, you will need to use the same username and password in the SEEK App to connect to your subscription account. You will also have to make selections in the SEEK app to ensure the highest resolution audio is broadcast to the Renderer.

Setting Up SEEK: Open SEEK and open the "Browser" at the bottom of your screen select Tidal and press the 3 horizontal lines in the upper left corner to access the drop-down menu. (This opens several options you will want to become familiar with to utilize all the functions in SEEK). Select "Settings" at the bottom of the menu. Here you can select for Tidal 'Hi/Fi/Master' or Qobuz 24/192 streaming output. This controls your Streaming service from TIDAL and Qobuz through SEEK and allows SEEK to pass the Hi Resolution files you've selected in your subscription account to your component. Press the return arrow to go back one screen.

Making the connection from SEEK to your Bel Canto Renderer:

- 1. Main screen press cog wheel (Image1)
- 2. Select device set up (Image2)
- 3. Choose the device, each Bel Canto Renderer has a unique serial number (Image3)
- 4. Selecting the device displays Firmware and serial number. This is where you check for firmware updates. (Image4)
- 5. If there is a notice that the FTP update site is not available on older units, please contact: info@belcantodesign.com





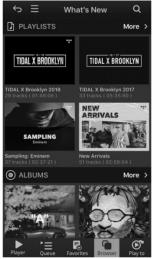


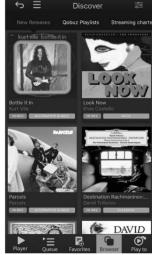


Selecting music:

- 1. Press browser (Image1)
- 2. Choose Internet music source from library: Tidal, Qobuz, Vtuner, Cloud, Local Server (USB-A drive) (Image1)
- 3. Choose from Playlists, Albums, Tracks (explore using the search function to find music) (Image2)
- 4. Press "more" to open categories of music and Masters (MQA) on Tidal (Image2)
- 5. Press any of the headings in Qobuz to search music that will play up to the selected rate in settings (Image3)

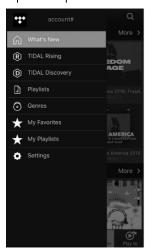


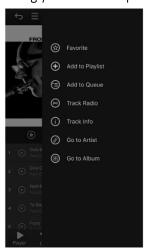


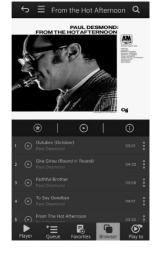


Browser music management:

- 1. Press the 3 horizontal lines while in the browser screen in the upper left corner to open drop-down menu (Image1)
- 2. The 3 circles on the right of each track, (Image3) will open a drop-down menu (Image2) that offers options; "go to album" or places the track in a folder "Favorites" (Image4) or "add to Queue" or "search artist".
- 3. Select a specific track from the browser by pressing the line item, this will play once or repeat depending on your settings indicated by the blue loop symbol on the upper left portion on the main page.
- 4. *Middle bar (Image3)* play symbol plays the complete album, star places the album in a favorite folder and 3 dots opens drop down menu allowing you to add to a playlist or Queue.









Playing music with the SEEK or MConnect apps.

- 1. Press the "Play to" at the bottom of the main screen, (Image1) this displays devices on your network. And lets you select the device you would like to send music.
- 2. Main screen (Image2) shows album art and controls track, pause, stop function and volume management
- 3. Touching the album artwork toggles the display that shows the codec, bit/sample rate and time remaining in track (Image3)
- 4. Managing volume, we suggest you use the micro volume (Image3) when changing levels, press the volume up symbol at the right of the volume slider (Image2) to choose micro volume.
- 5. Blue circle upper left corner (Image2) gives you the option to repeat track, play track once, advance track.
- 6. 3 dots upper right corner opens a page to select gapless track play
- 7. You should always see the device you are playing to at the top of the screen (image 1) when in network.







Spotify Connect

Both CDM2121 and CDM4140 Renderers work with Spotify connect directly through the Spotify app on your control device or by pressing Spotify in the Browser window in Seek or MConnect. This will open the Spotify app in your device.

Tidal Connect

The CDM4140 in Stream2 units and other units starting in 2023 also supports Tidal Connect and is used directly from the Tidal app on your control device. Please note that the Seek or MConnect app can be used to control the volume when using the Tidal app.

CDM2121 based units can be updated to CDM4140 at the factory. Contact info@belcantodesign.com



info@belcantodesign.com

www.belcantodesign.com

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