



Control4 Driver Manual

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Revision History		
Version	Date(dd/mm/yyyy)	Description
0.1	03/11/2014	Draft (driver v1.0.8)
0.2	15/01/2015	Draft (driver v1.2.1)
1.0	27/03/2015	Reformatted. First public release (driver v1.4.1)
1.1	29/04/2015	Added multi-zone (driver 1.6.0)
1.2	07/08/2015	Updated support section
1.3	13/08/2015	Added known issues section
1.4	03/09/2015	Add support for Node 2, Pownode 2, Pulse Flex, Pulse Mini, Pulse 2 and Vault 2.
1.5	08/03/2016	Updated screenshot in sect 2.2 & sect 3.3
1.6	01/06/2016	Updated screenshot in sect 2.2 & sect 3.3; Removed the known issue in sect 7.0
2.2	01/09/2016	Updated known issues. Supports driver v2.2.0.
2.4	22/11/2016	Updated driver properties to add new features (Auto Power Off, On Room Off); add mini drivers support; updated installation note to support CI580; removed Spotify playback problem from known issue.
2.6	20/01/2017	Added driver installation order, note for CI580 installation, keypad connection, and event programming. Updated known issues.
2.6.2	13/04/2017	Updated supported NAD models; updated event programming.
2.6.4	01/06/2017	Updated player audio path connection for matrix switches in sect 3.1, and "Auto Power Rooms" description in sect 3.4
2.6.5	22/06/2017	Added a note for multi-zone grouping in sect 5.8
2.8.0	07/07/2017	Updated "On Room Off" feature in sect 3.4
2.8.1	17/07/2017	Updated sect 3.1 to add extra note to explain how the Main Off scenario works within an Audio Matrix Switch
2.8.6	22/03/2018	Added Reindex and RebuildIndex in section 4.2 device specific commands
2.8.7	24/05/2018	Added Media Scenes; updated section 6.5 Local Sources screenshot
2.8.9	06/12/2018	Updated supported Bluesound model in sect 1.0 and screenshot in sect 3.2
2.9.0	15/01/2019	Updated NAD C658 to the supported models.
3.0.0	28/06/2019	Updated C4 OS3 requirement and driver UI screenshots; Added Play/Pause button link in sect 3.2; Added PlayDirectInput device specific command in sect 4.2; Added support for M10; Added a known issue for iOS app; Added section 3.2 for Input Connections.
3.0.1	06/09/2019	Updated sect 3.3 to add preset up/down button link; updated sect 4.2 to add shuffle queue, preset up/down device specific commands; updated sect 6.1 to add multi-zone grouping note.
3.0.2	28/01/2020	Updated sect1.0 to add support to Bluesound Professional and others; Updated sect1.0 to add driver names; Updated sect 3.2 for more audio inputs; Added sect 4.5 for audio input events.
3.0.3	21/02/2020	Changed sect 4.5 from audio input events to player state variables.
3.0.5	07/12/2020	Added "LoadPresetByID" device specific command in sect 4.2. Updated permanent group feature in sect 6.8.
3.0.6	05/06/2021	Added SiriusXM and Roon support in sect 1.0; Added support to NODE, POWERNODE, SOUNDBAR+
3.0.8	07/12/2021	Added support for C700, Roksan Attezza, M10v2, B170S, and BSP200. Added Tunify service. Updated sect 6.8 for multi-zone grouping. Added "Favorite To Room" feature in sect 6.9.
3.2.0	18/01/2023	Updated to add Global Linein driver; Added "Rename Driver" properties in player driver.

		Added support to devices Alpha iQ, POWERNODE EDGE, PULSE M, C3050, and HUB.
3.2.1	28/02/2023	Updated section 2.1 and section 2.5 for global line in driver installation guide.
3.2.2	08/12/2023	Updated section 3.5 for source override selection. Added support for Presto and Pandora music services. Added support for M66, Cyrusaudio Classic Streamer and Stream-XR
3.2.3	22/05/2024	Added KKBox and Neil Young Archives mini drivers in section 1.0
3.4.0	22/08/2024	Added support to NODE, NODE ICON, NODE NANO, C379/C389/C399, C700v2, BCS300; Added Play/StopDoorbell and SetListeningMode device specific commands for programming in section 4.2
3.4.1	18/11/2024	Added support to M10v3
3.4.3	03/06/2025	Added driver location in section 2.1; updated section 2.2 and 2.3 for driver installation; updated section 3.4 to add not hiding players in "Music".
4.0.0	04/11/2025	Updated section 1.0 to add newly supported Pulse Cinema, Pulse Cinema Mini, Pulse Flex, Cyrus 40 ST Streamer, NAD M33v2, NAD CI S1, and NAD CI SA2-120.
4.2.0	05/01/2026	Updated section 3.2 to add special HDMI ARC input, section 3.5 for Fixed Group Role property; Add section 3.7 for multi-zone grouping config and section 4.2 for BluOS announcement

Table of Contents

1.0 Introduction	6
2.0 Installation	9
2.1 Installation Order	9
2.2 Installing Bluesound Zone Network Driver	9
2.3 Installing Bluesound Player Driver	10
2.3.1 Manual Installation	10
2.3.2 Automatic Installation	10
2.3.3 Assign Player	11
2.4 Installing Bluesound Mini Drivers	12
2.5 Installing Bluesound Global Linein Driver	12
3.0 Configuration	14
3.1 Input / Output Connections	14
3.2 Input Connections	16
3.2.1 General Inputs	16
3.2.2 Special Input	17
3.3 Button Link Connections	18
3.4 Hide Sources in Navigator	19
3.5 Configure Driver Properties	20
3.6 Retrieve Player Settings	22
3.7 Multi-zone Grouping Configuration	23
3.7.1 Fixed Group	23
3.7.2 Auto Power Rooms	23
3.7.3 Multi-zone Audio Matrix	24
4.0 Events Programming	25
4.1 Zone Network and Player Events	25
4.2 Device Specific Commands in Player Driver	25
4.3 Device Specific Commands in My Playlists Driver	27
4.4 Keypad Events	28
4.5 Player State Variables	29
5.0 Media Scenes	31
5.1 Media Scene Agent	31

5.2 Event Programming To Control Media Scenes	31
6.0 Using Bluesound.....	33
6.1 Launching Bluesound	33
6.2 Presets	33
6.3 Now Playing.....	34
6.4 Playlist	37
6.5 Local Sources.....	41
6.6 Music Services Within Player Driver	43
6.7 Direct Accessed Music Services	46
6.8 Media Zones and Multi-zone Grouping	47
6.9 Favoriting Media To Room	49
7.0 Troubleshooting.....	51
7.1 Notifications	51
8.0 Support	52
9.0 Known Issues.....	53

1.0 Introduction

This document describes how to install, config and use the BluOS Control4 driver suite. This suite consists of media service driver for player, zone network driver, global linein driver, and mini driver for each music services. They are designed to work together. Zone Network driver uses AVSwitch proxy, Player driver uses Media Service Proxy (MSP) and Amplifier proxy, and mini drivers use Media Service Proxy (MSP).

The following Bluesound and NAD players are supported with this driver:

- Bluesound NODE Gen1 (N100)
- Bluesound NODE 2 (N110)
- Bluesound NODE 2i (N125)
- Bluesound NODE NANO (N030)
- Bluesound NODE (N132)
- Bluesound NODE ICON (N530)
- Bluesound POWERNODE Gen1 (N150)
- Bluesound POWERNODE 2 (N180)
- Bluesound POWERNODE 2i (N225)
- Bluesound POWERNODE 2i v2 (N225v2)
- Bluesound FLEX (P100)
- Bluesound FLEX 2i (P125)
- Bluesound FLEX (P130)
- Bluesound PULSE MINI (P200)
- Bluesound PULSE MINI 2i (P225)
- Bluesound PULSE Gen1 (P300)
- Bluesound PULSE 2 (P310)
- Bluesound PULSE 2i (P325)
- Bluesound VAULT Gen1 (V500)
- Bluesound VAULT 2 (V510)
- Bluesound VAULT 2i (V525)
- Bluesound PULSE SOUNDBAR (P400)
- Bluesound PULSE SOUNDBAR 2i (P425)
- Bluesound PULSE CINEMA MINI (P431)
- Bluesound PULSE CINEMA (P530)
- Bluesound Professional B100S
- Bluesound Professional B160S
- Bluesound Professional B170S
- Bluesound Professional B400S
- Bluesound Professional BSP125
- Bluesound Professional BSP200
- Bluesound Professional BSP500
- Bluesound Professional BSP1000
- Bluesound Professional CP100
- Bluesound Professional BCS300
- Bluesound NODE (N130)
- Bluesound NODE X (N131)

- Bluesound POWERNODE (N330)
- Bluesound POWERNODE EDGE (N230)
- Bluesound PULSE SOUNDBAR+ (P430)
- Bluesound PULSE M (P230)
- Bluesound HUB
- NAD CI720
- NAD CI580
- NAD C3050
- NAD C390
- NAD C658
- NAD C379
- NAD C389
- NAD C399
- NAD CI S1
- NAD CI SA2-120
- NAD M10, M10v2, M10v3
- NAD M33, M33v2
- NAD M50, M50.2
- NAD M66
- NAD VM130
- NAD VM300
- NAD C700, C700v2
- Monitor Audio IMS-4
- Roksan Attezza
- PSB Alpha iQ
- Cyrusaudio Classic Streamer, Stream-XR, 40 ST Streamer

This driver requires Control4 OS v3.4.3 or higher. Make sure BluOS firmware is updated to the latest version.

This driver package includes the following drivers:

bluesound_media_service.c4z Player driver, one for each player

bluesound_zone_network.c4z Zone Network driver, one for each project

bluesound_globallinein.c4z Global Linein driver, two for each HUB with one for each input type (i.e. digital and analog) of the HUB

bluesound_airable.c4z mini driver for Radio (Airable), one for each project

bluesound_amazon.c4z mini driver for Amazon Music, one for each project

bluesound_bugs.c4z mini driver for Bugs, one for each project

bluesound_calmradio.c4z mini driver for Calm Radio, one for each project

bluesound_customchannels.c4z mini driver for Custom Channels, one for each project

bluesound_deezer.c4z mini driver for Deezer, one for each project

bluesound_idagio.c4z mini driver for Idagio, one for each project

bluesound_iheartradio.c4z mini driver for iHeartRadio, one for each project

bluesound_kkbox.c4z mini driver for KKBox, one for each project

bluesound_library.c4z mini driver for Library, one for each project

bluesound_napster.c4z mini driver for Napster, one for each project

bluesound_nugs.c4z mini driver for Nugs.net, one for each project

bluesound_nya.c4z mini driver for Neil Young Archives, one for each project

bluesound_pandora.c4z mini driver for Pandora, one for each project

bluesound_playlists.c4z mini driver for My Playlists, one for each project

bluesound_presto.c4z mini driver for Presto Music, one for each project

bluesound_qobuz.c4z mini driver for Qobuz, one for each project

bluesound_qsic.c4z mini driver for Qsic, one for each project

bluesound_radiocom.c4z mini driver for Radio.com, one for each project

bluesound_radioparadise.c4z mini driver for Radio Paradise, one for each project

bluesound_roonready.c4z mini driver for Roon Ready, one for each project

bluesound_siriusxm.c4z mini driver for Sirius XM, one for each project

bluesound_slacker.c4z mini driver for XLive, one for each project

bluesound_soundmachine.c4z mini driver for SoundMachine, one for each project

bluesound_spotify.c4z mini driver for Spotify (Connect), one for each project

bluesound_tidal.c4z mini driver for Tidal, one for each project

bluesound_tunein.c4z mini driver for TuneIn, one for each project

bluesound_tunify.c4z mini driver for Tunify, one for each project

2.0 Installation

Ensure that your Control4 system is running OS 3.4.3 or higher before installing. Also ensure that your players are running the latest version of BluOS firmware.

2.1 Installation Order

- Install Bluesound Zone Network driver (one per Control4 project)
- Install Bluesound Player driver (i.e. Media Service driver, one for each room containing a Bluesound player)
- Install Bluesound mini driver (one per music service and per Control4 project)
- Install Bluesound Global Linein driver (recommended maximum two for each BluOS HUB, with one for digital input and one for analog input)

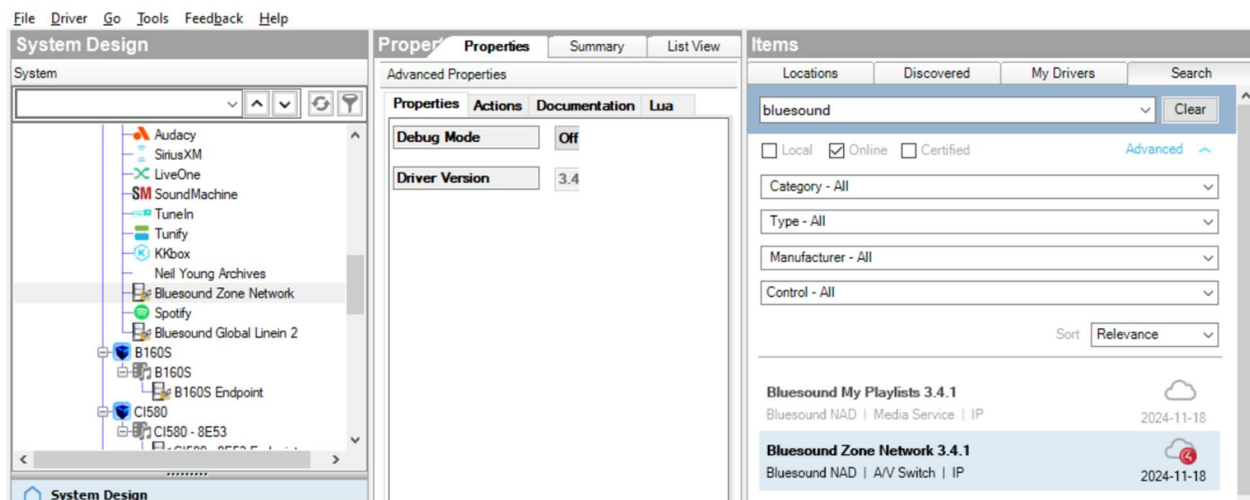
The drivers can be found in two places: online database in Control4 Composer and the bottom of <https://www.bluesound.com/downloads>. The drivers found in online database in Composer are the most recently **certified**. The drivers from <https://www.bluesound.com/downloads> are the **latest** version but unnecessarily certified. We recommend installing the latest version.

NOTE:

For players with 4 zones such as **CI580**, **IMS-4**, and **B400S**, only the first zone is discovered by SDDP and required to enter IP address in Composer "IP Network Connections" under "Connections" => "Network". The rest 3 zones need to be manually installed. These three zones will be connected to network binding by the driver and may not show up in IP Network Connections area after director reboot.

2.2 Installing Bluesound Zone Network Driver

Bluesound Zone Network driver needs to be manually installed first in a Control4 project. In Composer, search for Bluesound in the Items panel, choose the room the driver to be installed in, and double click on the driver from the search result. This will install the Bluesound Zone Network driver in the room.

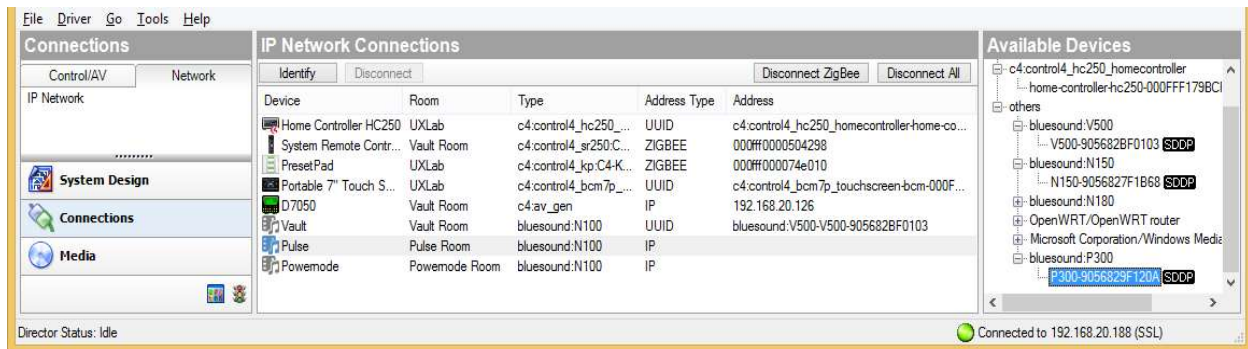


2.3 Installing Bluesound Player Driver

Bluesound Player driver can be installed both manually and automatically.

2.3.1 Manual Installation

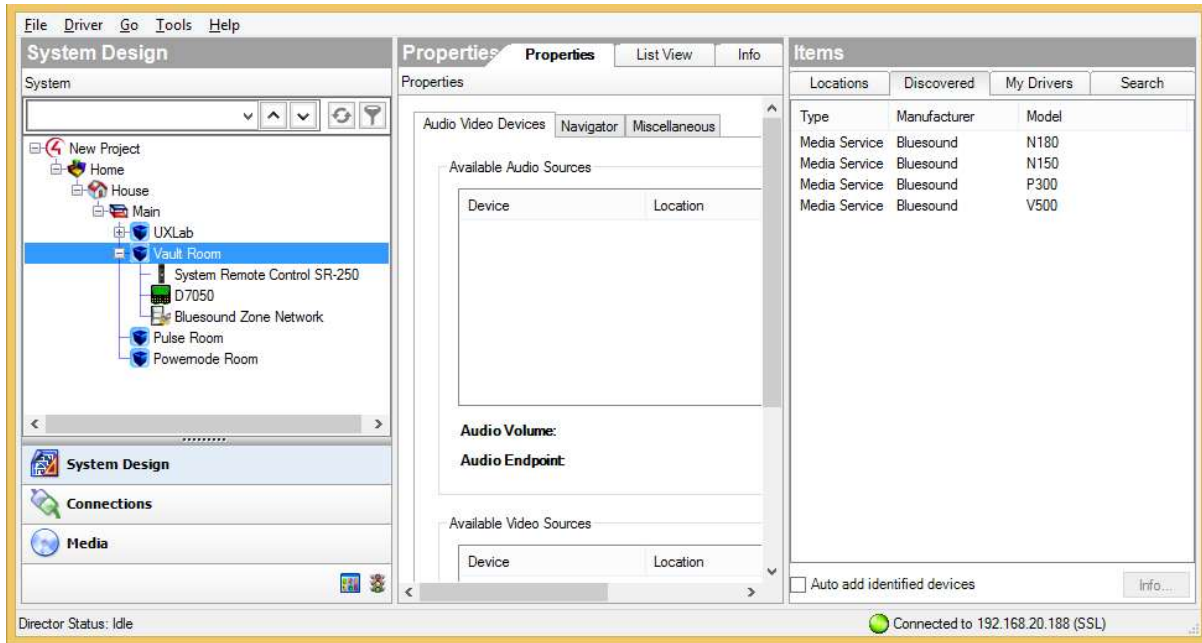
Bluesound Player driver installed manually in the same way as Bluesound Zone Network driver. After installation, go to “Network” tab in Composer “Connections” to manually identify the player by dragging the player’s UUID in “Available Devices” panel and dropping it into the corresponding player in “IP Network Connections” panel. Or, double click on the player in “IP Network Connections” panel to enter IP manually.



2.3.2 Automatic Installation

Bluesound Player driver can also be installed automatically. The steps below show how to install Bluesound Player driver automatically in Composer.

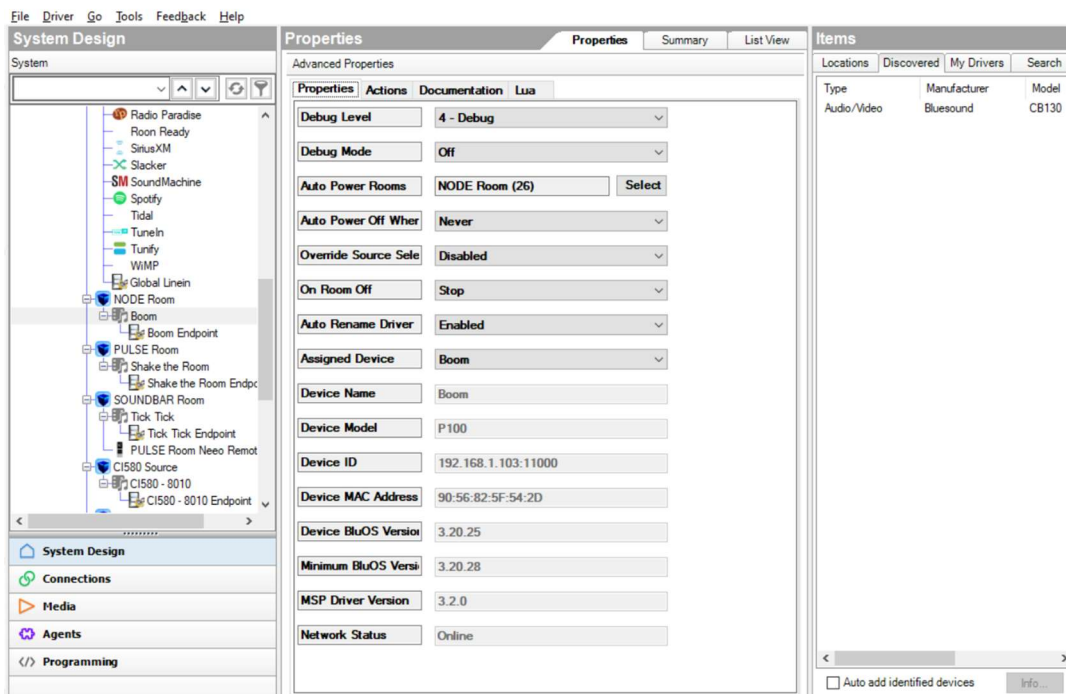
- Select the room where the Bluesound device is to be added, e.g. Vault Room.
- Click on “Discovered” tab at right hand side of Composer. If Bluesound device is connected in the same network as the Control4 Director, Bluesound Player driver will show up under “Discovered” tab. Make sure to choose the right model for the Bluesound device. If you have more than one device having same model in the same network, right click on the MSP driver and click on “Info...” to find the right driver.



- Double click on the driver to be added. This will add the Player driver to the project and configure the network connection automatically.

2.3.3 Assign Player

After the Player driver is installed, select the player from “Assigned Device” list in System Design. The player driver will be automatically named to be the player selected.



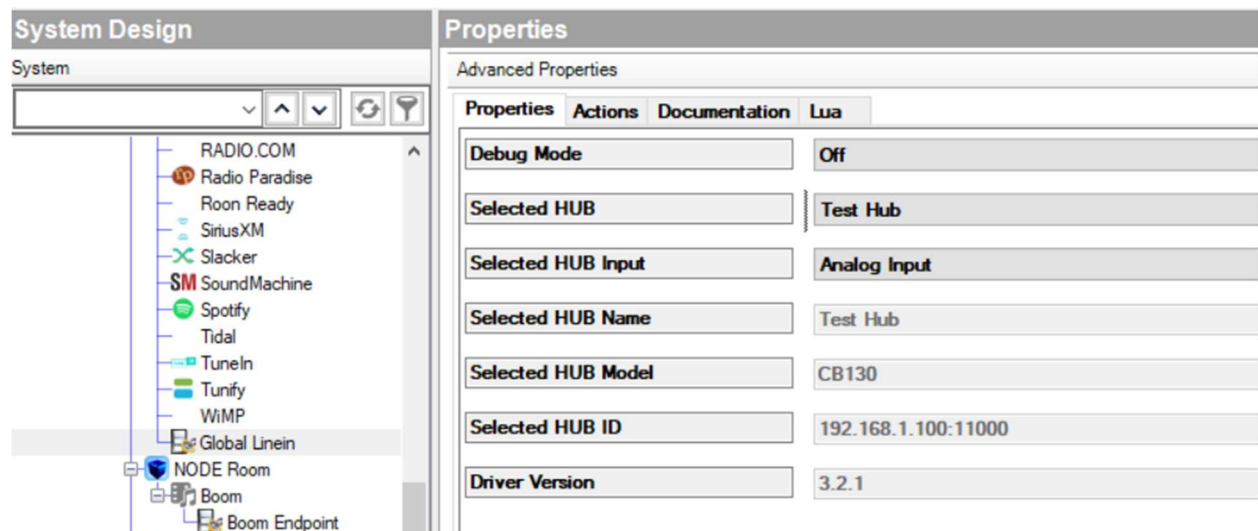
2.4 Installing Bluesound Mini Drivers

Bluesound Control4 driver provides mini drivers for each supported music service. They can be installed as per customer's needs. Each Control4 project only requires one mini driver for each service. Mini drivers must be manually installed in the same way as Bluesound Zone Network driver.

2.5 Installing Bluesound Global Linein Driver

It's optional to install Bluesound Global Linein driver. It's required **only** if BluOS HUB is in system. It's **STRONGLY** recommended to install maximum two BluOS Global Linein driver for one BluOS HUB, with one for HUB's digital input and one for HUB's analog input. The driver can be manually installed in the same way as that of Bluesound Zone Network driver.

After installation, select the HUB to be controlled by the driver from the list "Selected HUB" and the input for the HUB.



The screenshot displays two panels from a software interface. The left panel, titled "System Design", shows a tree view of system components. The right panel, titled "Properties", shows the "Advanced Properties" for the selected "Global Linein" driver. The "Global Linein" driver is highlighted in the tree view, and its properties are displayed in the right panel.

Advanced Properties	
Properties	Actions
Debug Mode	Off
Selected HUB	Test Hub
Selected HUB Input	Analog Input
Selected HUB Name	Test Hub
Selected HUB Model	CB130
Selected HUB ID	192.168.1.100:11000
Driver Version	3.2.1

Global Linein driver's input can be connected to an audio source and output should be connected to Bluesound Zone Network driver Global Line In.

Connections

Control/AVNetwork

▼▲↺↻

- SiriusXM
- Slacker
- SM SoundMachine
- Spotify
- Tidal
- TuneIn
- Tunify
- WIMP
- Global Linein
- NODE Room
 - Boom
 - Boom Endpoint
- PULSE Room
 - Shake the Room
 - Shake the Room Endpc
- SOUNDBAR Room
 - Tick Tick
 - Tick Tick Endpoint
 - PULSE Room Neo Remot
- CI580 Source

Control & Audio Video Connections

Global Linein

Name	Type	Connection	Input/Output	Connected To
Audio/Video Inputs				
HDMI ARC	Audio	HDMI	Input	
Analog Input	Audio	STEREO	Input	Sharp DVD-S48->Output
Phono Input	Audio	STEREO	Input	
Optical Input	Audio	DIGITAL_OPTICAL	Input	
Coaxial Input	Audio	DIGITAL_COAX	Input	
Audio/Video Outputs				
Network Line Out	Audio	RF_BLUESOUND_NET_LINEIN	Output	Bluesound Zone Network->Global Line In 1

3.0 Configuration

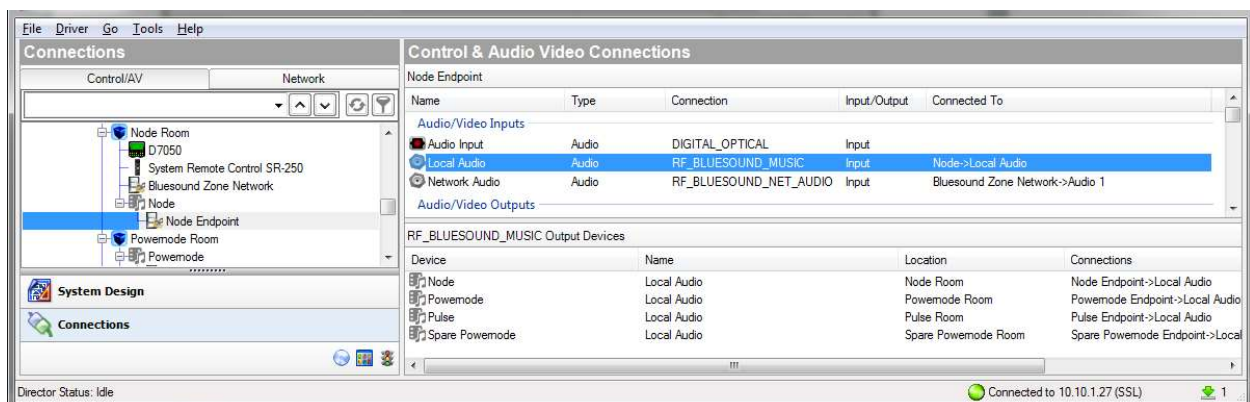
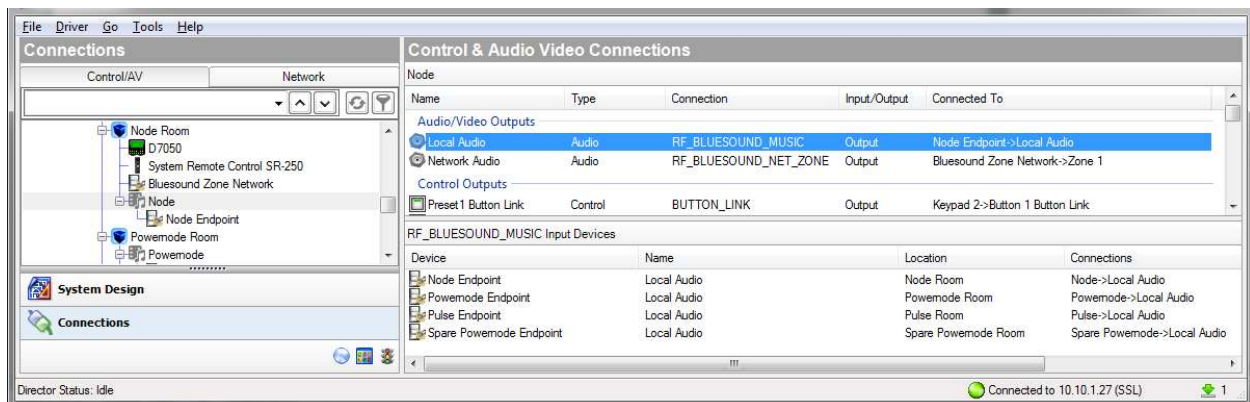
Bluesound Player driver must be configured properly for all Bluesound devices in the same network to work well together.

3.1 Input / Output Connections

Bluesound Player audio path must be complete for the driver to work properly. The audio input / output connections between Bluesound Zone Network and Bluesound Player drivers are automatically bound.

Note 1 - Bluesound Player driver lists all possible audio inputs / outputs for all Bluesound models. Only the supported audio input / output should be connected for the player.

Note 2 - Please **DO NOT** delete any connection between Zone Network driver and Player driver. In case the connection is broken, follow the example below (Node's Audio/Video Outputs and Node Endpoint's Audio/Video Inputs) to repair it.



Note 3 - If more than one player is connected to the same matrix switch, please disconnect the players' Network Audio Outputs from Bluesound Zone Network Zone as below. Otherwise, routing source players to multiple speakers may actually group the players! Because of the removal of this binding, when the starting stream of a multiple room session is turned off it will be necessary to make sure all added rooms are turned off within Control4's UI.

Connections

Control/AV
Network

New Project

Work

Office

Main Floor

MSP2 Desk

Source Room

Bluesound Zone Network

NODE-30CE

NODE-30CE Endpoint

VAULT 2 - 1FAA

VAULT 2 - 1FAA Endpoint

NAD T187

AM FM Tuner

XM Tuner

Dock

Control & Audio Video Connections

NODE-30CE

Name	Type	Connection	Input/Output	Connected To
Audio/Video Outputs				
Local Audio	Audio	RF_BLUESOUND_MUSIC	Output	NODE-30CE Endpoint->Local Audio
Network Audio	Audio	RF_BLUESOUND_NET_ZONE	Output	
Control Outputs				
Preset1 Button Link	Control	BUTTON_LINK	Output	
Preset2 Button Link	Control	BUTTON_LINK	Output	
Preset3 Button Link	Control	BUTTON_LINK	Output	
Preset4 Button Link	Control	BUTTON_LINK	Output	
Preset5 Button Link	Control	BUTTON_LINK	Output	
Preset6 Button Link	Control	BUTTON_LINK	Output	
Preset7 Button Link	Control	BUTTON_LINK	Output	
Preset8 Button Link	Control	BUTTON_LINK	Output	
Preset9 Button Link	Control	BUTTON_LINK	Output	
Preset10 Button Link	Control	BUTTON_LINK	Output	

Note 4 - If a player is physically connected to a receiver, connect the player's Audio Output to the receiver's Audio Input to match the physical connection. For example, Node in the project has the optical output connected to optical input of the receiver D7050.

Control & Audio Video Connections

Node Endpoint

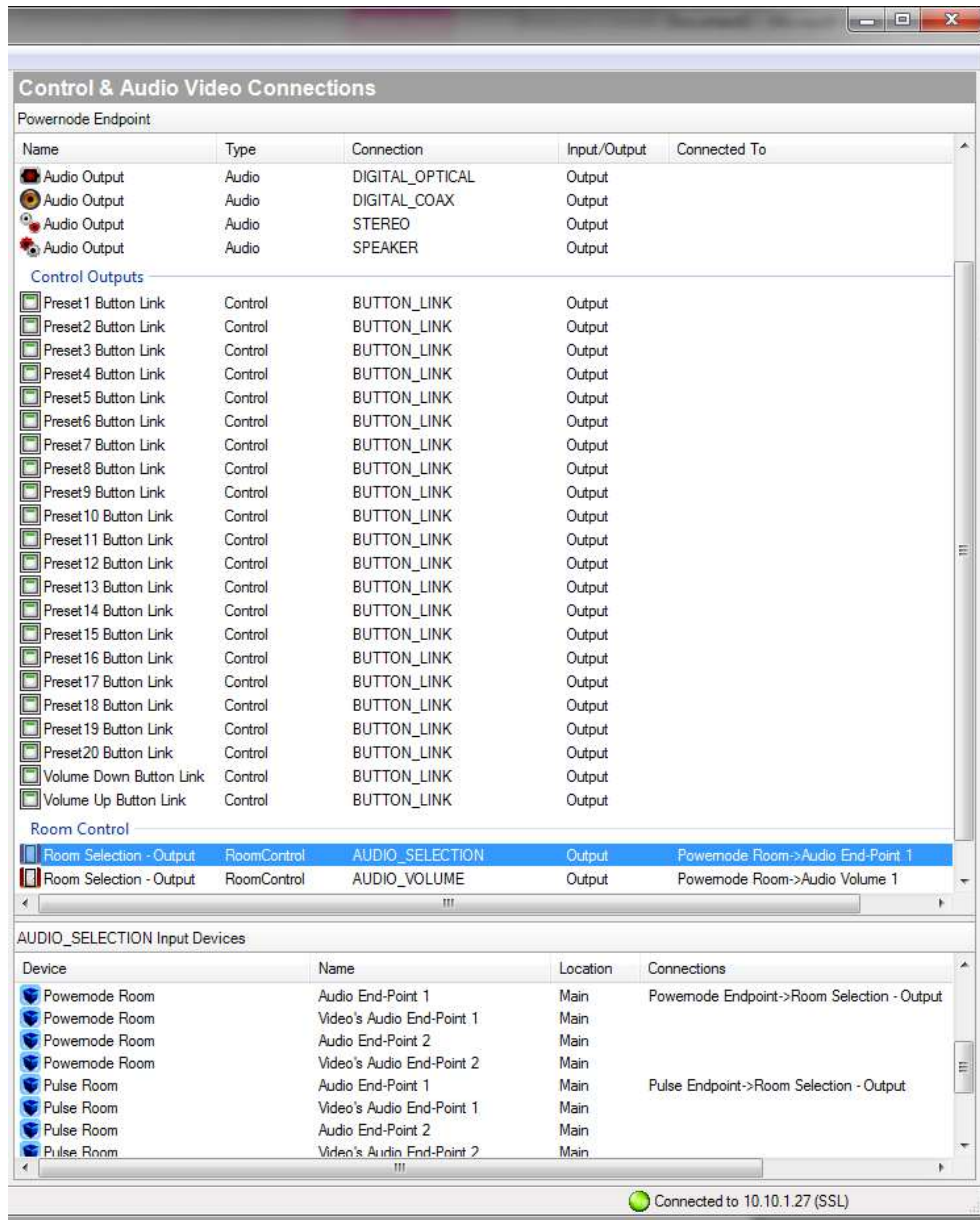
Name	Type	Connection	Input/Output	Connected To
Audio/Video Outputs				
Audio Output	Audio	DIGITAL_OPTICAL	Output	D7050->Digital Audio Input 1
Audio Output	Audio	DIGITAL_COAX	Output	
Audio Output	Audio	STEREO	Output	
Audio Output	Audio	SPEAKER	Output	
Control Outputs				
Preset1 Button Link	Control	BUTTON_LINK	Output	Keypad 2->Button 1 Button Link
Preset2 Button Link	Control	BUTTON_LINK	Output	Keypad 2->Button 2 Button Link
Preset3 Button Link	Control	BUTTON_LINK	Output	Keypad 2->Button 3 Button Link
Preset4 Button Link	Control	BUTTON_LINK	Output	Keypad 2->Button 4 Button Link
Preset5 Button Link	Control	BUTTON_LINK	Output	Keypad 2->Button 5 Button Link
Preset6 Button Link	Control	BUTTON_LINK	Output	
Preset7 Button Link	Control	BUTTON_LINK	Output	
Preset8 Button Link	Control	BUTTON_LINK	Output	
Preset9 Button Link	Control	BUTTON_LINK	Output	
Preset10 Button Link	Control	BUTTON_LINK	Output	
Preset11 Button Link	Control	BUTTON_LINK	Output	
Preset12 Button Link	Control	BUTTON_LINK	Output	
Preset13 Button Link	Control	BUTTON_LINK	Output	
Preset14 Button Link	Control	BUTTON_LINK	Output	
Preset15 Button Link	Control	BUTTON_LINK	Output	
Preset16 Button Link	Control	BUTTON_LINK	Output	
Preset17 Button Link	Control	BUTTON_LINK	Output	
Preset18 Button Link	Control	BUTTON_LINK	Output	
Preset19 Button Link	Control	BUTTON_LINK	Output	
Preset20 Button Link	Control	BUTTON_LINK	Output	
Volume Down Button Link	Control	BUTTON_LINK	Output	Keypad 2->Down Button Link
Volume Up Button Link	Control	BUTTON_LINK	Output	Keypad 2->Up Button Link
Room Control				
Room Selection - Output	RoomControl	AUDIO_SELECTION	Output	
Room Selection - Output	RoomControl	AUDIO_VOLUME	Output	

DIGITAL_OPTICAL Input Devices

Device	Name	Location	Connections
Sony Receiver	DVD	MSP2 Desk	
Sony Receiver	SACD/CD	MSP2 Desk	
D7050	Digital Audio Input 1	Node Room	Node Endpoint->Audio Output
D7050	Digital Audio Input 2	Node Room	
Powemode Endpoint	Audio Input	Powemode Room	
Pulse Endpoint	Audio Input	Pulse Room	
Spare Powemode Endpoint	Audio Input	Spare Powemode Room	

● Connected to 10.10.1.27 (SSL)

Note 5 - If a player is the audio endpoint, connect the player's Room Control to room audio endpoint. For example, Pownode has built-in amplifier and its Room Control is connected to Room Audio Endpoint directly.



3.2 Input Connections

Bluesound Player driver provides all possible audio inputs to cover all models: Analog Input 1, Analog Input 2, Optical Input 1, Optical Input 2, Coax Input 1, Coax Input 2, Line 1, Line 2, Phono, AES/EBU, Balanced In, Microphone In, HDMI ARC, HDMI eARC, HDMI MDC A/B, Phono MC, Phono MM, and a special input HDMI ARC**.

3.2.1 General Inputs

All audio inputs except HDMI ARC** are general inputs, mapped to a player's physical inputs. If a player only has one input of one type, use the first input for audio path connection.

Example 1: NODE 2i has 1 combined analog input and optical input. When analog input is used, connect audio source to NODE 2i player driver's Analog Input 1 in Composer. When optical input is used, connect the audio source to NODE 2i player driver's Optical Input 1.

Example 2: POWERNODE 2i has two analog inputs. When analog input 2 is used, connect the audio source to POWERNODE 2i player driver's Analog Input 2 in Composer.

Control & Audio Video Connections			
M10-CD2D Endpoint			
Name	Type	Connection	Input/Output
Audio/Video Inputs			
HDMI ARC	Video	HDMI	Input
Analog Input 1	Audio	STEREO	Input
Optical Input 1	Audio	DIGITAL_OPTICAL	Input
Coaxial Input	Audio	DIGITAL_COAX	Input
Analog Input 2	Audio	STEREO	Input
Optical Input 2	Audio	DIGITAL_OPTICAL	Input

3.2.2 Special Input

HDMI ARC** input is a special input introduced in Bluesound Player driver 4.2. It is one HDMI input with three connection types: HDMI, DIGITAL_OPTICAL, and DIGITAL_COAX. **It can ONLY be used to create audio path for physical HDMI connection.**

If the source driver has HDMI output, connect the output to HDMI input of the existing HDMI ARC or HDMI input of HDMI ARC**. Either HDMI input is good for audio path.

Control & Audio Video Connections				
PULSE 2i-9F:73:48-CI Endpoint				
Name	Type	Connection	Input/Output	Connected To
HDMI 3(MDC B)	Video	HDMI	Input	
HDMI ARC(MDC B)	Video	HDMI	Input	
HDMI ARC	Video	HDMI	Input	
HDMI eARC	Video	HDMI	Input	
Analog Input 1	Audio	STEREO	Input	
Optical Input 1	Audio	DIGITAL_OPTICAL	Input	
Coaxial Input 1	Audio	DIGITAL_COAX	Input	
Analog Input 2	Audio	STEREO	Input	
Optical Input 2	Audio	DIGITAL_OPTICAL	Input	
Coaxial Input 2	Audio	DIGITAL_COAX	Input	
Phono	Audio	STEREO	Input	
Line 1	Audio	STEREO	Input	
Line 2	Audio	STEREO	Input	
AES/EBU	Audio	STEREO	Input	
Balanced In	Audio	STEREO	Input	
Microphone In	Audio	STEREO	Input	
HDMI ARC**	Audio	HDMI	Input	
HDMI ARC**	Audio	DIGITAL_OPTICAL	Input	TV->Output
HDMI ARC**	Audio	DIGITAL_COAX	Input	
Phono MC	Audio	STEREO	Input	
Phono MM	Audio	STEREO	Input	
Local Audio	Audio	RF_BLUESOUND_MU...	Input	PULSE 2i-9F:73:48-CI->Local Audio
Network Audio	Audio	RF_BLUESOUND_NE...	Input	Bluesound Zone Network->Audio 1

However, if the source has physical HDMI ARC/eARC but its driver does not have HDMI output and has Optical or Coax output

instead, connect Optical or Coax output of the source driver to Optical or Coax input of HDMI ARC** of Bluesound Player driver. But in reality, HDMI ARC/eARC of the source device should still be physically connected to BluOS player HDMI ARC/eARC.

For example, majority of TVs has physical HDMI ARC or eARC but the drivers do not have HDMI output. Therefore, there is no way to set up an audio path in Composer from TV HDMI to Bluesound Player driver HDMI. In this case, the connection type DIGITAL_OPTICAL or DIGITAL_COAX can be used as a **workaround** for ARC, where the audio output of the TV in optical or coax format could be connected to DIGITAL_OPTICAL or DIGITAL_COAX of HDMI ARC** to have the audio pathing, but in reality it is still connected through HDMI.

Example: TV driver that does not have HDMI output but has DIGITAL_OPTICAL output.

Control & Audio Video Connections				
TV				
Name	Type	Connection	Input/Output	Connected To
Audio/Video Inputs				
PC	Audio	STEREO	Input	
PC	Video	VGA	Input	
ANTENNA	Video	RF_UHF_VHF	Input	UHF/VHF->UHF/VHF Video Output
CABLE	Video	RF_CABLE	Input	Cable TV->Cable TV Video
VIDEO 1	Audio	STEREO	Input	
VIDEO 1	Video	COMPOSITE	Input	
VIDEO 2	Audio	STEREO	Input	
VIDEO 2	Video	COMPOSITE	Input	
VIDEO 2	Video	COMPONENT	Input	
HDMI 1	Video	HDMI	Input	
HDMI 2	Video	HDMI	Input	
HDMI 3	Video	HDMI	Input	
HDMI 4	Video	HDMI	Input	
Audio/Video Outputs				
Output	Audio	STEREO	Output	
Output	Audio	DIGITAL_OPTICAL	Output	PULSE 2i-9F:73:48-CI Endpoint->HDMI ARC**

Connect the TV's DIGITAL_OPTICAL output to Bluesound Player driver DIGITAL_OPTICAL input of HDMI ARC**. But in reality, TV's HDMI is connected to Bluesound player's HDMI input.

Control & Audio Video Connections				
PULSE 2i-9F:73:48-CI Endpoint				
Name	Type	Connection	Input/Output	Connected To
Phono	Audio	STEREO	Input	
Line 1	Audio	STEREO	Input	
Line 2	Audio	STEREO	Input	
AES/EBU	Audio	STEREO	Input	
Balanced In	Audio	STEREO	Input	
Microphone In	Audio	STEREO	Input	
HDMI ARC**	Audio	HDMI	Input	
HDMI ARC**	Audio	DIGITAL_OPTICAL	Input	TV->Output
HDMI ARC**	Audio	DIGITAL_COAX	Input	
Phono MC	Audio	STEREO	Input	
Phono MM	Audio	STEREO	Input	
Local Audio	Audio	RF_BLUESOUND_MU...	Input	PULSE 2i-9F:73:48-CI->Local Audio
Network Audio	Audio	RF_BLUESOUND_NE...	Input	Bluesound Zone Network->Audio 1

3.3 Button Link Connections

Bluesound Player driver provides the following button links for keypad: 20 presets, preset up, preset down, volume up, volume down, mute toggle, play, pause, play/pause, stop, skip forward, and skip reverse. Connecting these button links to keypad buttons can be convenient for preset loading, player volume control, and playback control.

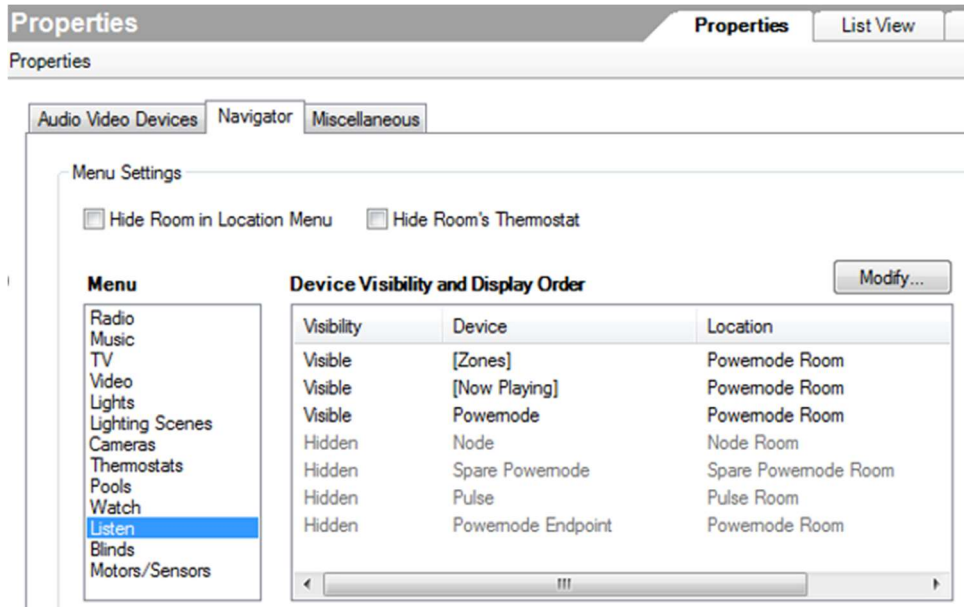
Note: It is normal that “Control Outputs” button links appear in both Player and Player Endpoint because BUTTON_LINK connection doesn’t have proxy binding.

Control & Audio Video Connections				
NODE 2i - 301A Endpoint				
Name	Type	Connection	Input/Output	Connected To
Audio/Video Outputs				
HDMI Output	Video	HDMI	Output	
Audio Output	Audio	DIGITAL_OPTICAL	Output	
Audio Output	Audio	DIGITAL_COAX	Output	
Audio Output	Audio	STEREO	Output	
Audio Output	Audio	SPEAKER	Output	
Control Outputs				
Preset1 Button Link	Control	BUTTON_LINK	Output	
Preset2 Button Link	Control	BUTTON_LINK	Output	
Preset3 Button Link	Control	BUTTON_LINK	Output	
Preset4 Button Link	Control	BUTTON_LINK	Output	
Preset5 Button Link	Control	BUTTON_LINK	Output	
Preset6 Button Link	Control	BUTTON_LINK	Output	
Preset7 Button Link	Control	BUTTON_LINK	Output	
Preset8 Button Link	Control	BUTTON_LINK	Output	
Preset9 Button Link	Control	BUTTON_LINK	Output	
Preset10 Button Link	Control	BUTTON_LINK	Output	
Preset11 Button Link	Control	BUTTON_LINK	Output	
Preset12 Button Link	Control	BUTTON_LINK	Output	
Preset13 Button Link	Control	BUTTON_LINK	Output	
Preset14 Button Link	Control	BUTTON_LINK	Output	
Preset15 Button Link	Control	BUTTON_LINK	Output	
Preset16 Button Link	Control	BUTTON_LINK	Output	
Preset17 Button Link	Control	BUTTON_LINK	Output	
Preset18 Button Link	Control	BUTTON_LINK	Output	
Preset19 Button Link	Control	BUTTON_LINK	Output	
Preset20 Button Link	Control	BUTTON_LINK	Output	
Preset Up Button Link	Control	BUTTON_LINK	Output	Configurable Keypad->Button 1 Button Link
Preset Down Button Link	Control	BUTTON_LINK	Output	Configurable Keypad->Button 2 Button Link
Volume Up Button Link	Control	BUTTON_LINK	Output	
Volume Down Button Link	Control	BUTTON_LINK	Output	
Mute Toggle Button Link	Control	BUTTON_LINK	Output	
Play Button Link	Control	BUTTON_LINK	Output	
Pause Button Link	Control	BUTTON_LINK	Output	
Stop Button Link	Control	BUTTON_LINK	Output	
Skip Fwd Button Link	Control	BUTTON_LINK	Output	
Skip Rev Button Link	Control	BUTTON_LINK	Output	
Play/Pause Toggle Button Link	Control	BUTTON_LINK	Output	

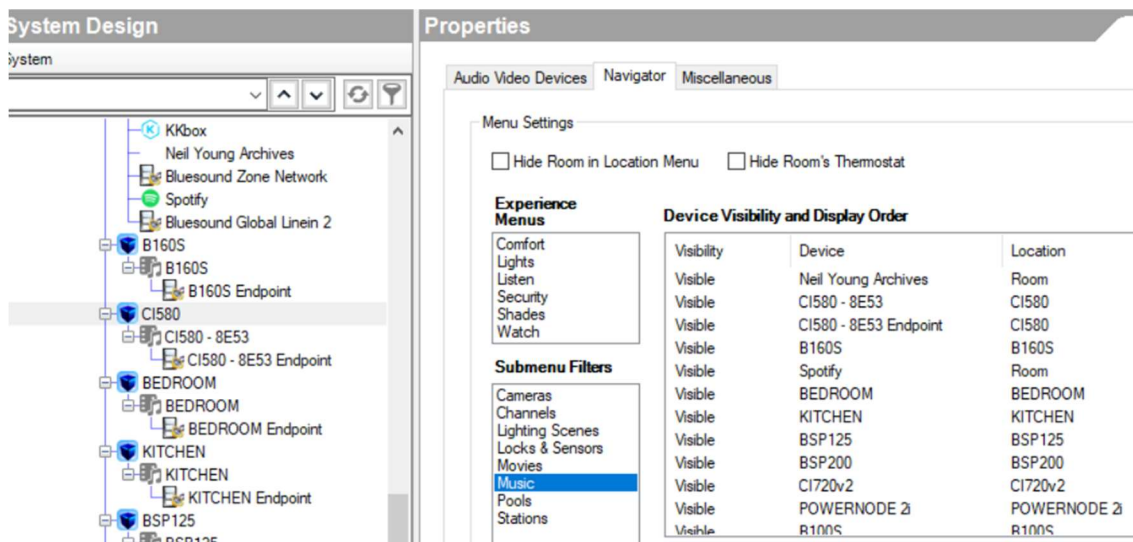
3.4 Hide Sources in Navigator

By default, all Bluesound devices in the network will appear in each room having Bluesound Player driver installed as all the players are in the same network group. In each room you should hide all the Bluesound devices which are not the current room’s devices under “**Listen**” in “Navigator” tab of room’s properties. In addition, the Bluesound Player Endpoint of Bluesound Player driver should always be hidden.

For example, the screenshot below shows the device visibility of Powernode room. The players which are not in the room are hidden. Also, the player’s endpoint is hidden as well.



However, do **not** hide any players under “Music” in “Navigator”. Otherwise, the hidden players under “Music” may not be visible to others for grouping.



3.5 Configure Driver Properties

Bluesound Player driver provides several properties to configure debug level/mode, turn on/off auto power rooms, disable/enable source override, and display network status and driver information.

- To trace/debug the MSP driver in Lua output window, set the property “Debug Mode” to be either “Print” or “Print and Log”. The debug mode “Print” and “Print and Log” has 45 minutes timeout.

- “Auto Power Rooms” gives users an option to turn on Control4 room and select Bluesound players automatically by playing music stream in Bluesound native Apps. **For an unamplified BluOS player, if it is the Only player connected to a receiver or dedicated power amplifier, select the room the receiver/amplifier is in. For an amplified BluOS player, select the room the player is in.**

Note: If Auto Power Rooms is not set up, the zone grouping will not work properly!!!

- “Auto Power Off When” is visible when “Auto Power Room” is selected. It has “Stop, Pause, Stop/Pause, Never” options. For example, when “Stop” is selected, the room will be off when the player stops playing.
- “Auto Power Off Delay” is visible when “Auto Power Room” is selected and when “Auto Power Off When” is either “Stop”, “Pause”, or “Stop/Pause”. It has several delay options: 10 seconds, 20 seconds, 30 seconds, 1 minute, 2 minutes, 3 minutes, 5 minutes, and 10 minutes. It turns off the room after selected delay time.
- “Override Source Selection” is disabled by default when Auto Power Room is selected. If it’s disabled, Bluesound player starting to play will turn on the room in Control4 and only select the Bluesound player if the room is off or a different Bluesound player is playing. If it’s enabled, Bluesound player starting to play will turn on the room in Control4 and select the Bluesound player if other active sources (media player, TV, DVD, Game Control, etc.) are not external input of the player.

The screenshot shows the Control4 System Design interface. On the left, a hierarchical tree lists various sources and rooms. The 'PULSE ROOM' is selected, showing its sub-items: 'PULSE 2-9F:73:48-CI', 'PULSE 2-9F:73:48-CI Endpoint', 'NODE ROOM', 'NODE-41:8A:24-CI', 'NODE-41:8A:24-CI Endpoint', 'TV', 'Cable TV', 'UHF/VHF', 'AVR ROOM', and 'Routines'. On the right, the 'Properties' panel displays 'Advanced Properties' for the selected room.

Advanced Properties	
Properties	Actions Documentation Lua
Debug Level	4 - Debug
Debug Mode	Off
Auto Power Rooms	PULSE ROOM (81)
Auto Power Off When	Never
Override Source Selection	Disabled
On Room Off	Stop
Auto Rename Driver	Enabled
Assigned Device	PULSE 2-9F:73:48-CI
Fixed Group Role	PRIMARY
Device Name	multi players test
Device Model	P325
Device Model Name	Multi-player Group
Device ID	192.168.7.102:11000
Device MAC Address	90:56:82:9F:73:48
Device BluOS Version	4.15.12
Minimum BluOS Version Required	4.8.0
MSP Driver Version	4.0.2
Network Status	Online

- “On Room Off” has four options “Pause, Stop, Clear Queue, Do Nothing”. It works in the way described below. For ungrouped players, upon room off, it does

- Stop: stop the playing, queue stays same
- Pause: pause the playing, queue stays same
- Clear Queue: clear the current playlist/queue
- Do Nothing: player keeps playing, queue stays same

For temporarily grouped secondary player, upon room off (due to being ungrouped) it does:

- Stop, Pause, Do Nothing: stop the playing (this is part of the firmware feature), queue remains same
- Clear Queue: clear the current playlist/queue

For temporarily grouped secondary player, upon room off (due to room off) it does:

- ungroup the player from primary player, and then take On Room Off actions:
 - Stop, Pause, Do Nothing: stop the playing (this is part of the firmware feature), queue remains same
 - Clear Queue: clear the current playlist/queue

For temporarily grouped primary player, upon room off, it does:

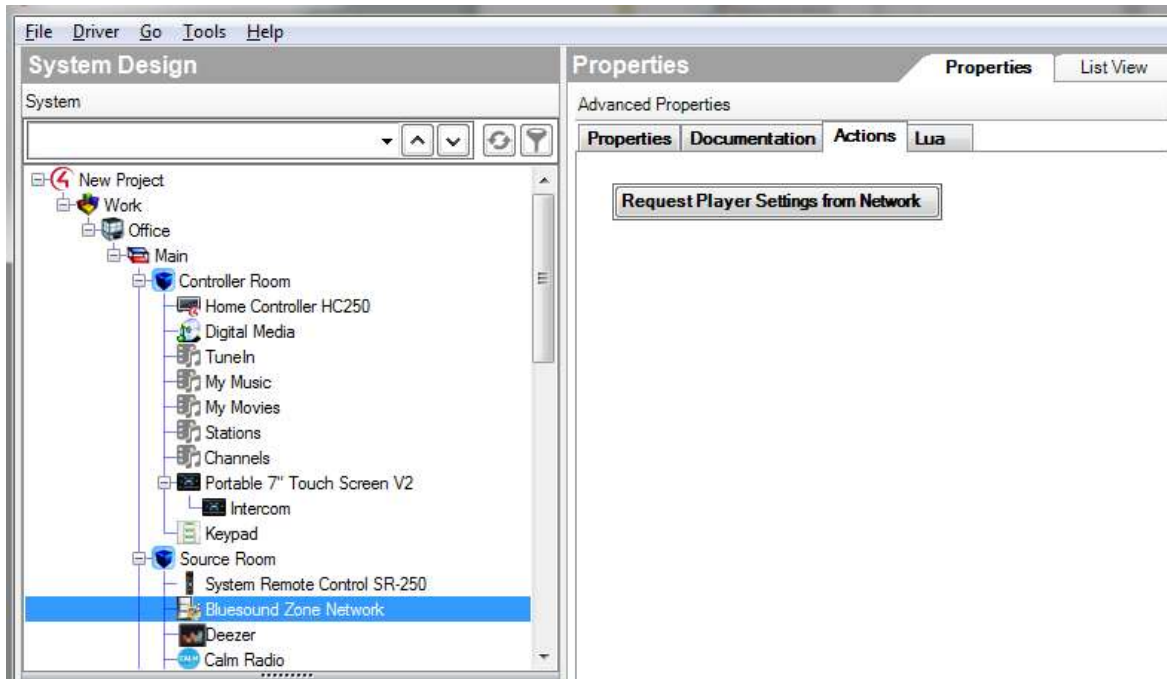
- ungroup all players from the group, and then take On Room Off actions:
 - Stop: stop the playing, queue stays same
 - Pause: pause the playing, queue stays same
 - Clear Queue: clear the current playlist/queue
 - Do Nothing: player keeps playing

- “Auto Rename Driver” has two options: Enabled (default) and Disabled. When Enabled, selecting Assigned Device will automatically rename the player driver to be same as the Assigned Device.
- “Assigned Device” shows a list of players discovered in the network. Select one to be controlled by the player driver in the room.
- “Fixed Group Role” is only visible if a player is in a fixed group. Only “PRIMARY” player is required to be added in Control4 system.

After above steps are complete, refresh navigators by clicking Composer “File” menu and “Refresh Navigators” or simply pressing “Shift + F5” keys. With everything set up properly, Player driver’s “Properties” should show the right versions of BluOS and driver, and Network Status should be Online.

3.6 Retrieve Player Settings

After all configuration work is done, clicking the action “Request Player Settings from Network” in Zone Network driver to retrieve device information of Bluesound devices in the same zone network. Please **remember** to perform the same action every time after driver update.



3.7 Multi-zone Grouping Configuration

It needs proper setup in Composer for BluOS grouping to work.

3.7.1 Fixed Group

A fixed group is treated as an individual player. Users must create or delete a fixed group in BluOS Controller apps. Only the **primary** player of a fixed group should be added in Control4 project. If a player is the primary in a fixed group, its properties "Fixed Group Role" shows PRIMARY, and its "Device Name" is the group name.

Assigned Device	PULSE 2-9F:73:48-CI
Fixed Group Role	PRIMARY
Device Name	multi players test

If a player is the secondary in a fixed group, its properties "Fixed Group Role" shows SECONDARY.

Assigned Device	NODE-41:8A:24-CI
Fixed Group Role	SECONDARY
Device Name	NODE-41:8A:24-CI

3.7.2 Auto Power Rooms

Bluesound Player driver property "Auto Power Rooms" must be set up properly for grouping to work!

If the BluOS player is the **ONLY** player connected to a receiver or a dedicated power amplifier, select the room the receiver/amplifier is in. If the BluOS player is not connected to any receiver or amplifier, select the room the player is in.

System Design

System

- KKbox
- Nugs
- Pandora
- PULSE ROOM
 - PULSE 2-9F:73:48-CI
 - PULSE 2-9F:73:48-CI Endpoint
- NODE ROOM
 - NODE-41:8A:24-CI
 - NODE-41:8A:24-CI Endpoint
- TV
- Cable TV
- UHF/VHF
- AVR ROOM
- Routines

Properties

Advanced Properties

Properties Actions Documentation Lua

Debug Level 1 - Error

Debug Mode Off

Auto Power Rooms **NODE ROOM (82)**

Auto Power Off When Never

Override Source Selection Disabled

On Room Off Stop

Auto Rename Driver Enabled

Assigned Device NODE-41:8A:24-CI

3.7.3 Multi-zone Audio Matrix

If more than one BluOS player is connected to the same multi-zone audio matrix (including receiver and amplifier), BluOS grouping is **NOT** supported due to Control4 limitation. However, “grouping” through the matrix is still available, i.e. multiple zones can have the same BluOS player as the source. Grouping through BluOS devices or “grouping” through matrix use the same method through Control4 UI zone page. From users’ perspective, both have the same sound effect (i.e. “grouped” zones have the same source). The difference is that “grouping” through matrix will only group the zones but not the players.

For “grouping” through matrix to work, make sure the player’s “Network Audio” is disconnected.

Connections

Control/AV Network

- New Project
- Work
 - Office
 - Main Floor
 - MSP2 Desk
 - Source Room
 - Bluesound Zone Network
 - NODE-30CE
 - NODE-30CE Endpoint
 - VAULT 2 - 1FAA
 - VAULT 2 - 1FAA Endpoint
 - NAD T187
 - AM FM Tuner
 - XM Tuner
 - Dock

Control & Audio Video Connections

NODE-30CE

Name	Type	Connection	Input/Output	Connected To
Audio/Video Outputs				
Local Audio	Audio	RF_BLUESOUND_MUSIC	Output	NODE-30CE Endpoint->Local Audio
Network Audio	Audio	RF_BLUESOUND_NET_ZONE	Output	
Control Outputs				
Preset1 Button Link	Control	BUTTON_LINK	Output	
Preset2 Button Link	Control	BUTTON_LINK	Output	
Preset3 Button Link	Control	BUTTON_LINK	Output	
Preset4 Button Link	Control	BUTTON_LINK	Output	
Preset5 Button Link	Control	BUTTON_LINK	Output	
Preset6 Button Link	Control	BUTTON_LINK	Output	
Preset7 Button Link	Control	BUTTON_LINK	Output	
Preset8 Button Link	Control	BUTTON_LINK	Output	
Preset9 Button Link	Control	BUTTON_LINK	Output	
Preset10 Button Link	Control	BUTTON_LINK	Output	

4.0 Events Programming

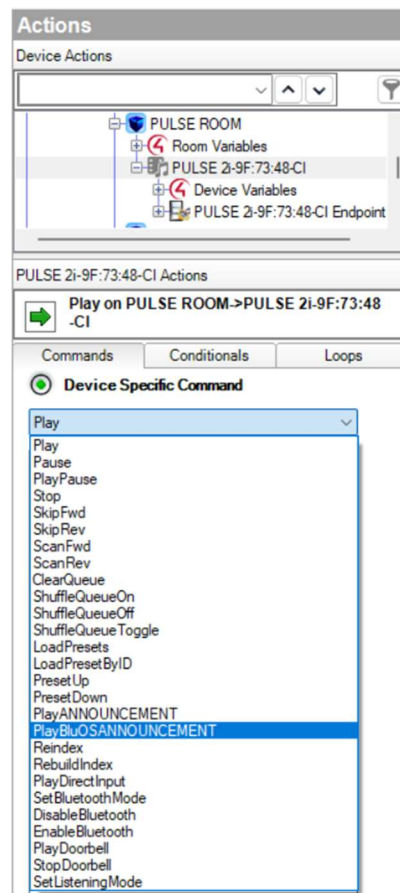
Bluesound drivers support event programming.

4.1 Zone Network and Player Events

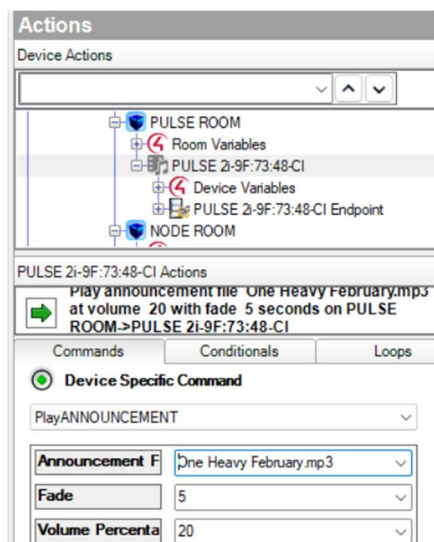
Bluesound Zone Network driver output has “Input Changed” events, and Bluesound Player driver endpoint output supports “Input Changed”, “Volume Level Changed”, “Mute State Changed”, and “Any Audio Settings Changed”. **However**, due to a known Control4 director bug, these events are not working. To program zone network events or player events, please use Room Variables or Device Variables instead.

4.2 Device Specific Commands in Player Driver

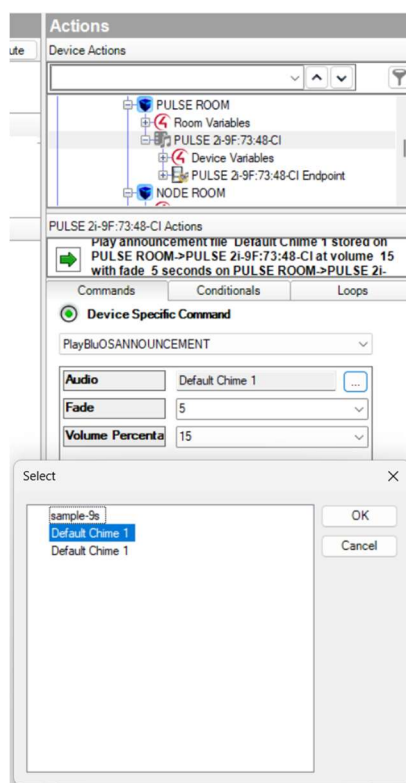
Bluesound Player driver provides few basic device specific commands for event programming. They are Play, Pause, PlayPause, Stop, SkipFwd, SkipRev, ScanFwd, ScanRev, ClearQueue, ShuffleQueueOn, ShuffleQueueOff, ShuffleQueueToggle, LoadPresets, LoadPresetsByID, PresetUp, PresetDown, PlayANNOUNCEMENT, PlayBluOSANNOUNCEMENT, Reindex, RebuildIndex, PlayDirectInput, SetBluetoothMode, DisableBluetooth, EnableBluetooth, PlayDoorbell, StopDoorbell, and SetListeningMode.



PlayANNOUNCEMENT: “Announcement File” is the announcement audio source which could be a file with extension or an audio URL. Announcement audio source is created in Agent => Announcement in Composer and stored at <http://ControllerIP/media/announcements/> by Control4 system. For example, Announcement File could be audio file “One Heavy February.mp3” stored on Control4 server or an audio URL <https://samplelib.com/mp3/sample-6s.mp3>.

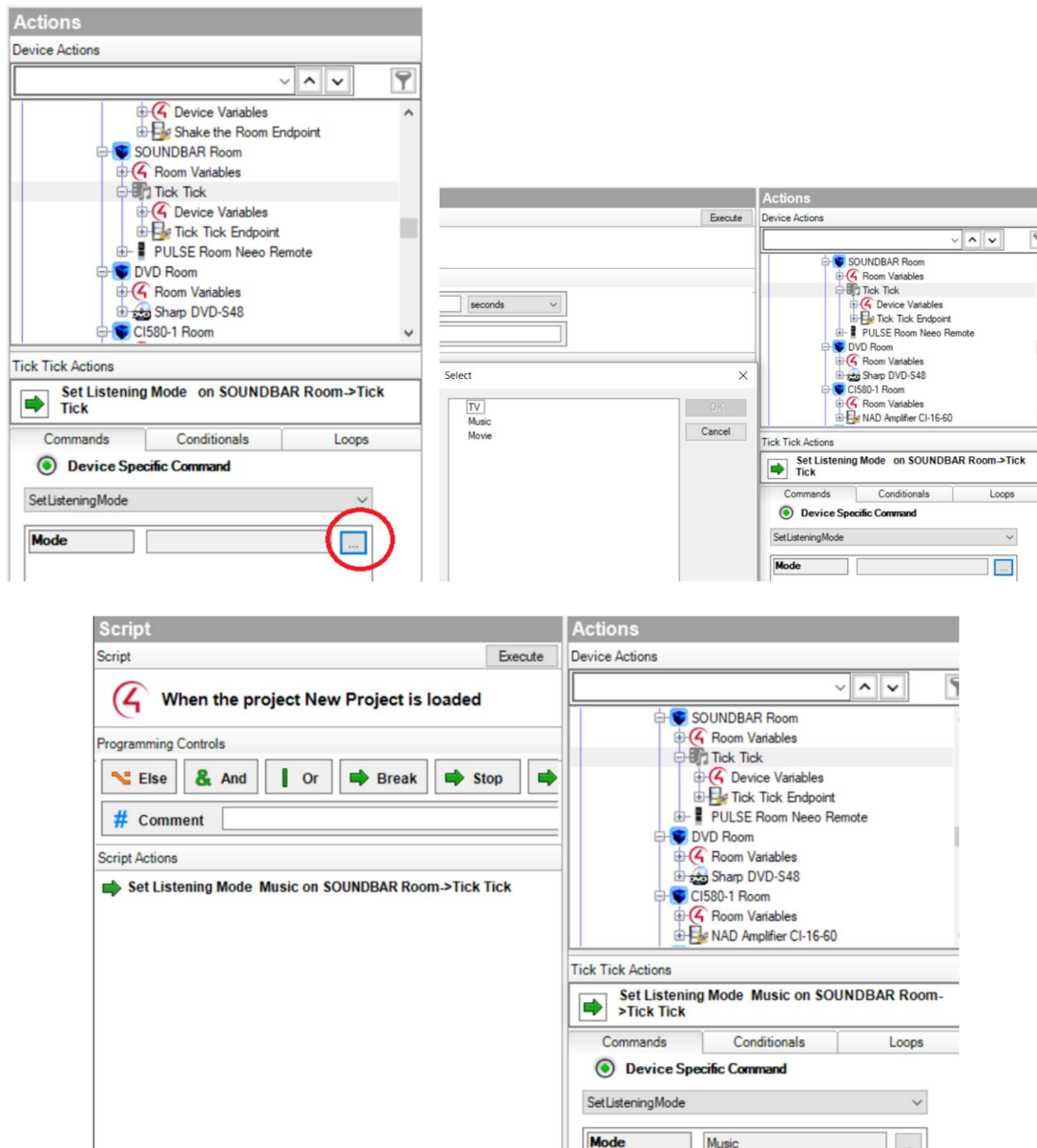


PlayBluOSANNOUNCEMENT: This is to play the audio notification stored on BluOS players via BluOS Configuration Utility. Click on the browse button of the “Audio” will pop up a list of available audio notifications stored on the BluOS player.



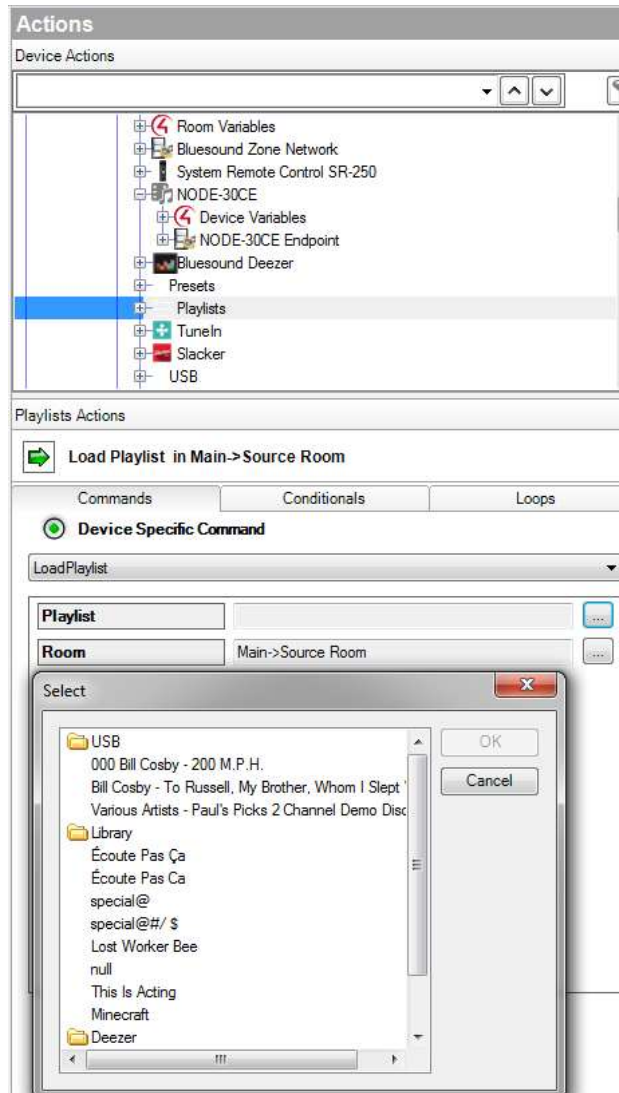
PlayDoorbell and **StopDoorbell:** only work for the players with doorbell.

SetListeningMode: only works for the players having Listening Modes. Click on the red circled button below and select one of the listening modes from the pop-up for programming.



4.3 Device Specific Commands in My Playlists Driver

Bluesound My Playlists driver provides Load Playlist command for event programming. Choose a playlist and room to load the playlist.



4.4 Keypad Events

Bluesound Player driver only supports **Single Click** of Control4 keypad. When programming Control4 keypad in Composer, please make sure to check "Single Click" for button command.

Actions

Device Actions

My Music

My Movies

Stations

Channels

Portable 7" Touch Screen V2

Device Variables

Intercom

Keypad

Source Room

Room Variables

Bluesound Zone Network

System Remote Control SR-250

Keypad Actions

Click the Button 1 button on the Controller Room->Keypad

Commands

Conditionals

LED Commands

Use On Color

Use Off Color

Set LED On

Set All LED On

Set LED Off

Set All LED Off

Set LED Current

Set All LED Current

Button Commands

Button 1

Single Click

Double Click

Triple Click

Press

Release

Misc. Commands

Set Backlight Color

4.5 Player State Variables

Bluesound **Player** driver has four customized variables for event programming, three Boolean variables "PLAYING", "PAUSED", and "STOPPED", and one string variable "PLAY_STATUS" (three states: PLAYING, PAUSED, STOPPED).

Programming

Device Events

- POWERNODE Room
 - Room Variables
 - POWERNODE - 0A6A
 - Device Variables
 - POWERNODE - 0A6A Endpoint
- PULSE Room
 - Room Variables
 - Shake the Room
 - Device Variables
 - Shake the Room Endpoint
 - PULSE Room Neeo Remote
- NODE 2i Room
 - Room Variables
 - NODE 2i - 301A
 - Device Variables
 - OUTPUT_MUTE
 - OUTPUT_VOLUME_LEVEL
 - PAUSED
 - PLAY_STATUS
 - PLAYING**
 - STOPPED
 - NODE 2i - 301A Endpoint
- AVR Room
- AMP Room
- BluOS Card Room
- DVD Room
- T778 Room
- Second
 - Advanced Lighting

Script

Script

When the variable NODE 2i Room->NODE 2i - 301A->PLAYING changes

Programming Controls

Else
 And
 Or
 Break
 Stop
 Delay 5 seconds

Comment

Script Actions

PLAYING Events

☒ When PLAYING changes

.....

System Design

Connections

Media

Agents

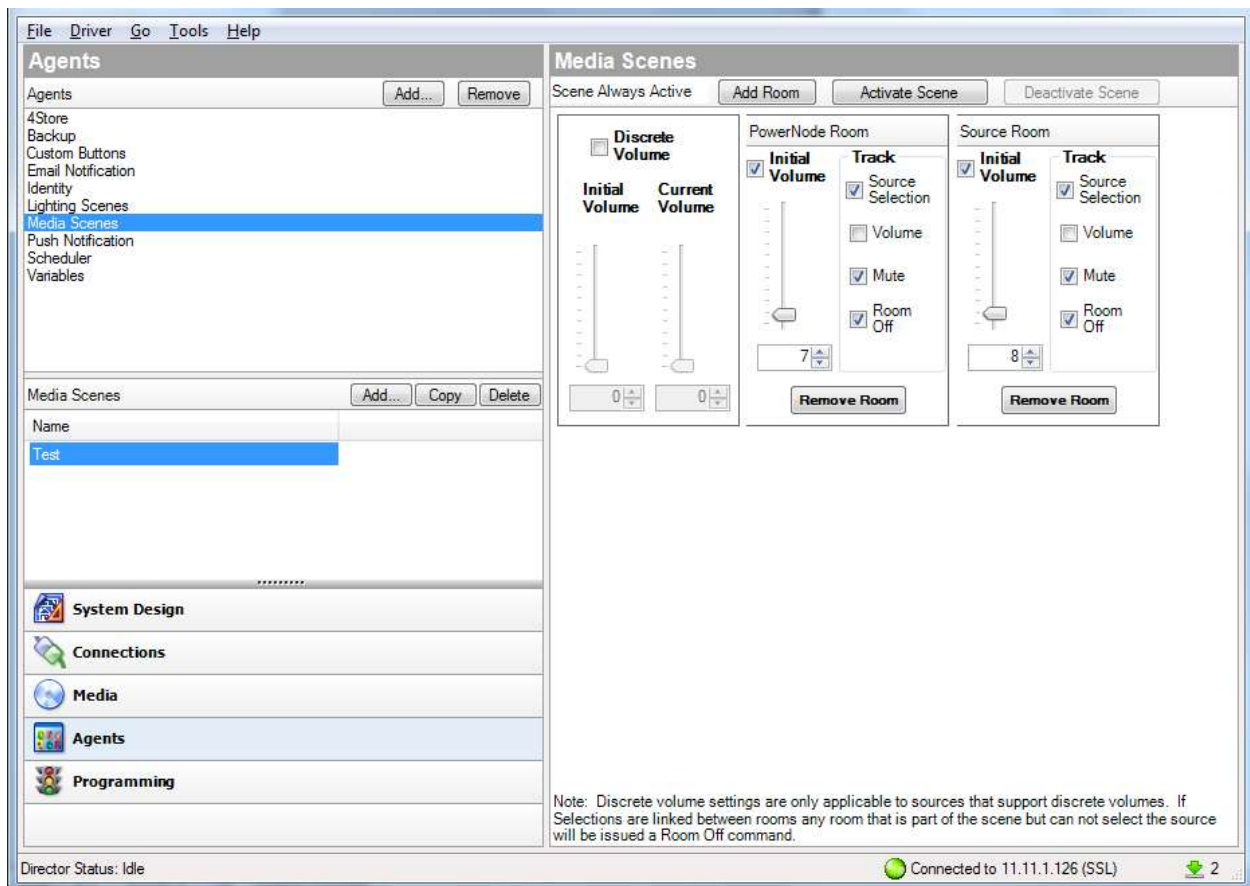
Programming

5.0 Media Scenes

Bluesound drivers support Media Scenes. The Media Scenes in Control4 is an agent-based implementation. When a media scene is activated, all the rooms participating in the scene will have the same source and driver considers the zones grouped.

5.1 Media Scene Agent

A Media Scene agent can be created like below. The media scene below means PowerNode Room and Source Room will have the same source when it is activated.

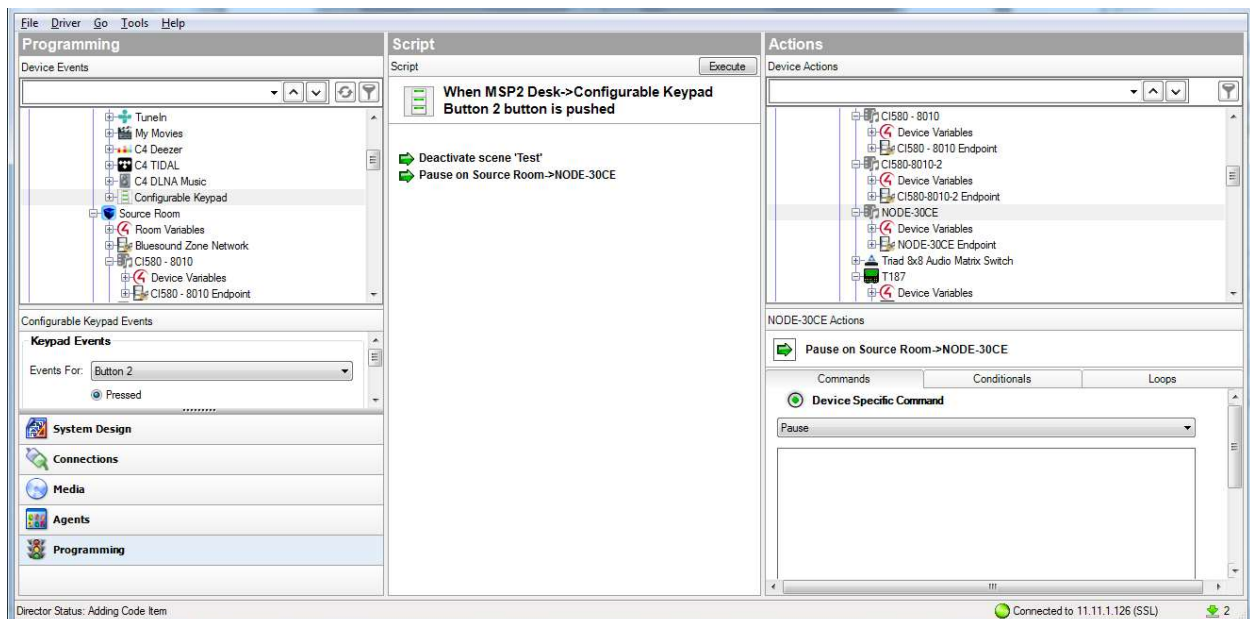
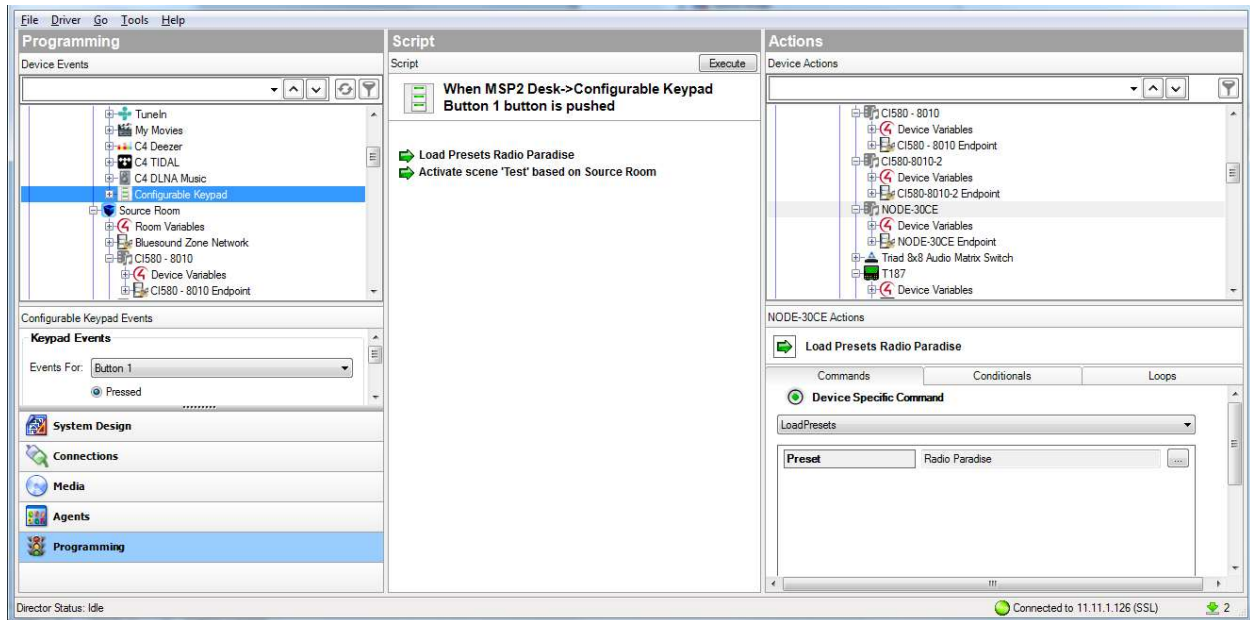


5.2 Event Programming To Control Media Scenes

A Media Scene can be controlled by keypad event programming or others. It's up to integrators how to control media scene. An example below shows:

Keypad button 1 press to load preset “Radio Paradise” of Source Room and then deactivate the media scene – the result of this action would load preset “Radio Paradise” of Source Room player NODE-30CE and group PowerNode Room player to Source Room player.

Keypad button 2 press to deactivate the media scene, and stop playing – the result of this action would deactivate the media scene and stop the play on both rooms. Grouping of the two rooms stays grouped. It is up to integrators what to do after the media scene is deactivated.

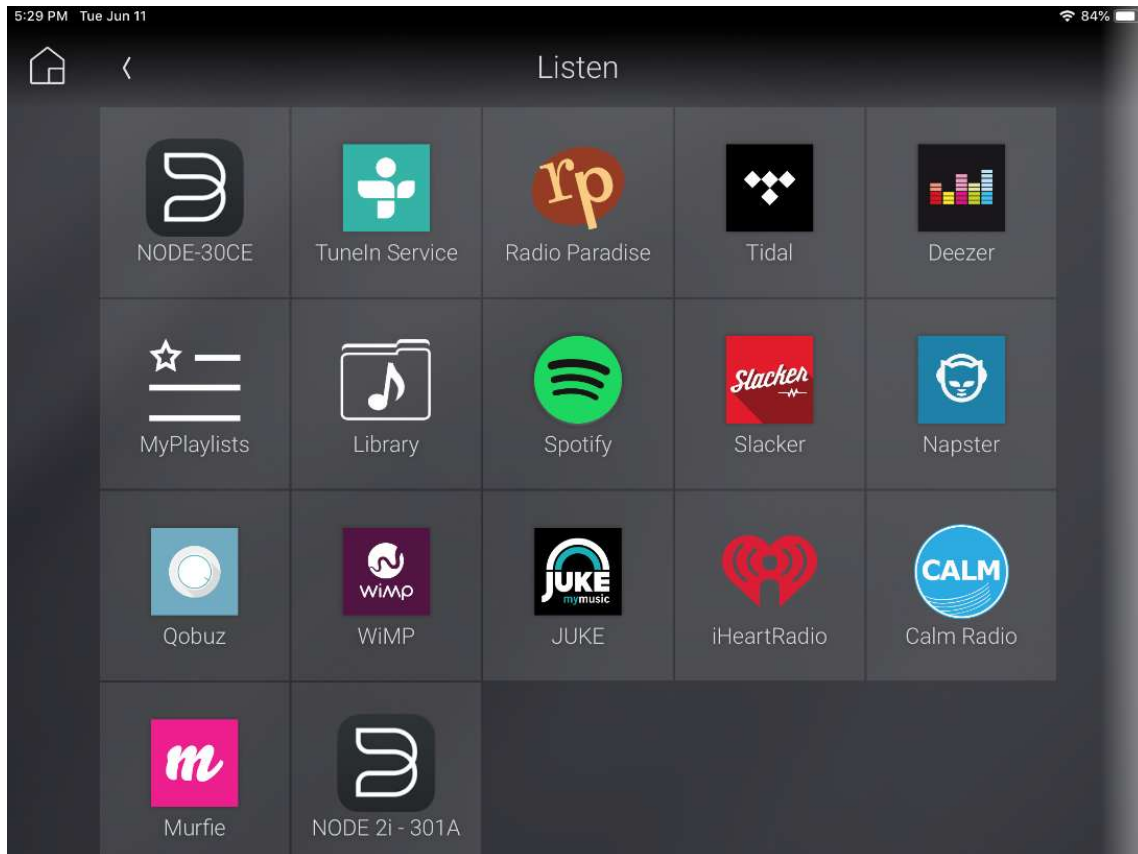


6.0 Using Bluesound

Bluesound players and individual services are available through the Control4 Navigators.

6.1 Launching Bluesound

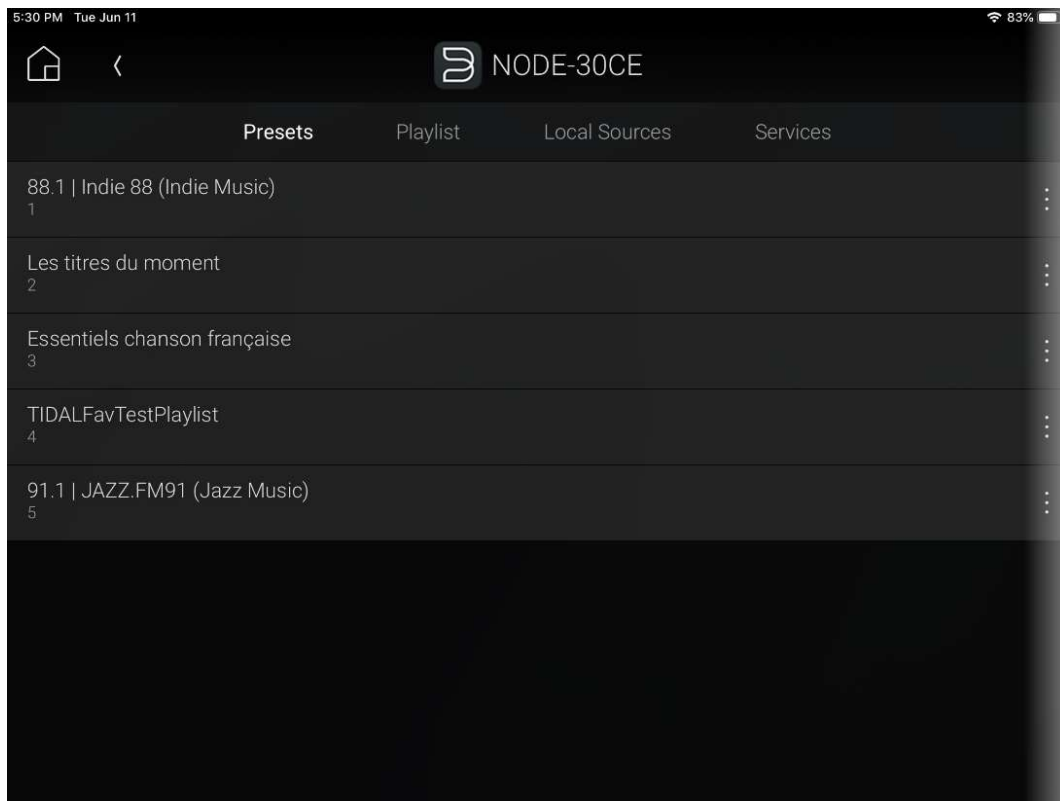
Choose a room with Bluesound player in and locate the player (e.g. NODE-30CE) or the service (i.e. Bluesound Deezer) from the “Listen” menu. Click on “NODE-30CE” to launch the driver for all music services or on “Bluesound Deezer” for Deezer.



6.2 Presets

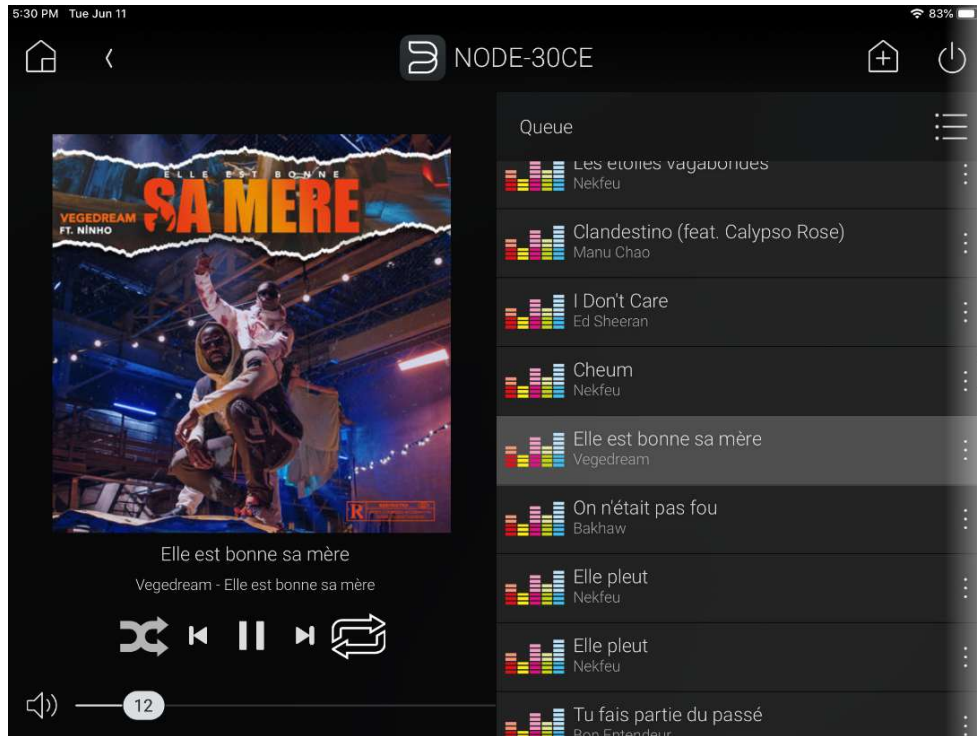
The “Presets” tab displays a list of the presets created for the device. If a Control4 keypad is connected to the driver, you may press any preset key to load the preset directly.

The preset may be a radio service or a playlist. Click on any preset will pop up the options to Load Preset and Delete Preset.

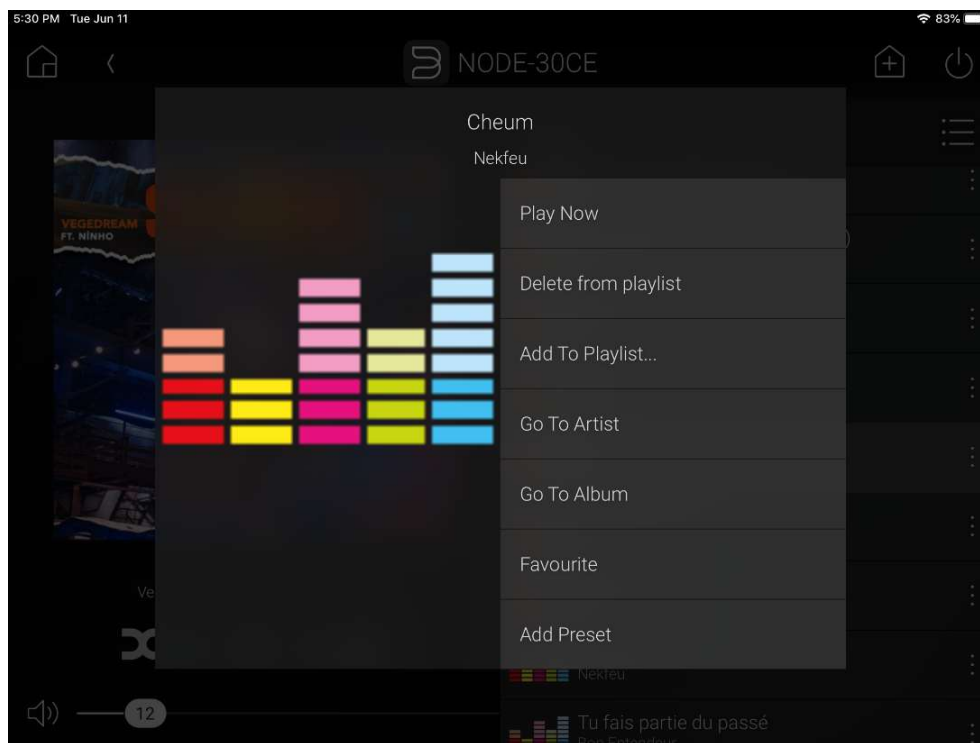


6.3 Now Playing

The Now Playing screen is shown below. Volume and mute controls are at the bottom left.

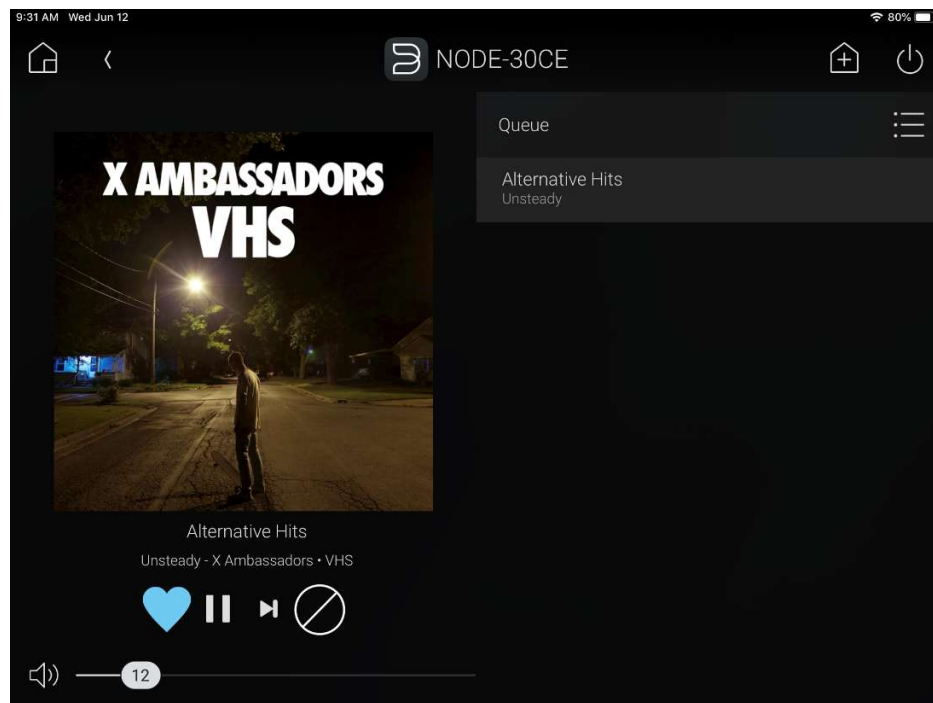
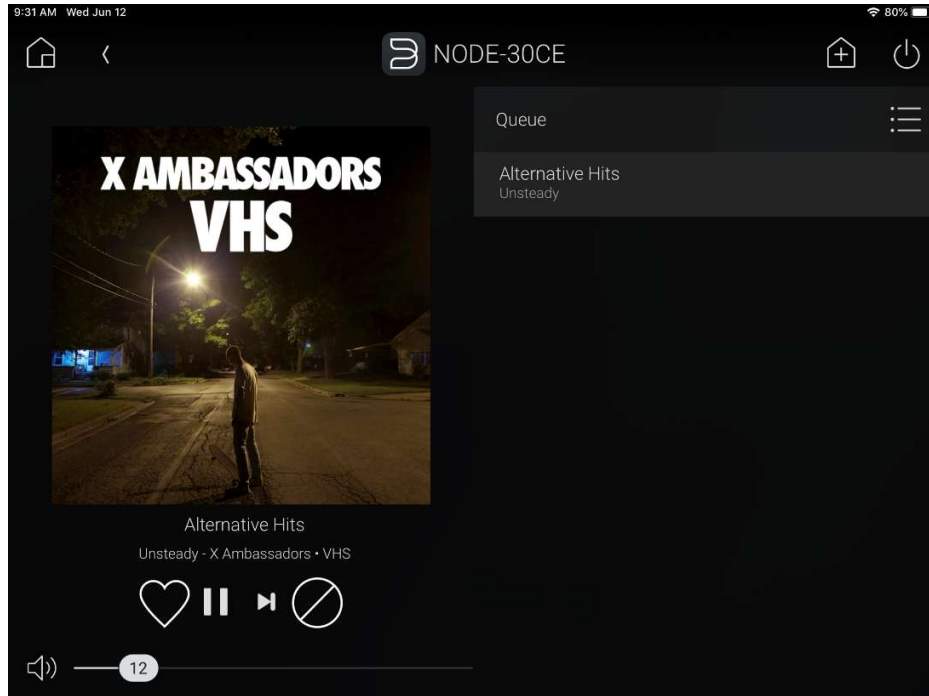


- Clicking on any of the tracks on the Now Playing screen will pop up a list of actions.



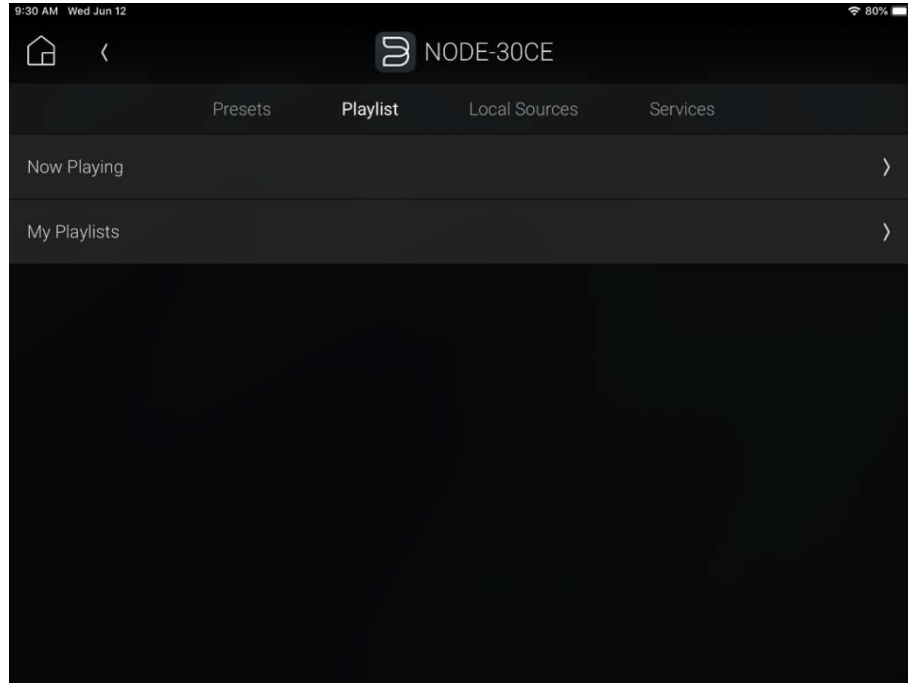
- Some music services provide “Shuffle” and “Repeat” capabilities. Clicking on the “Shuffle” or “Repeat” icons can shuffle the playlist tracks, and repeat the playlist, cancel repeat, or repeat the current track.

- Some streaming services such as “Slacker” has “ban” and “love” capabilities. Clicking on the “heart” icon under cover art can mark the current track as a favorite track; or clicking on the “ban” icon to block the current track. Note: if the track is marked as favorite it can’t be banned (the “Ban” icon will be greyed out). If “ban” is clicked, the current track will be skipped and next available track will start.

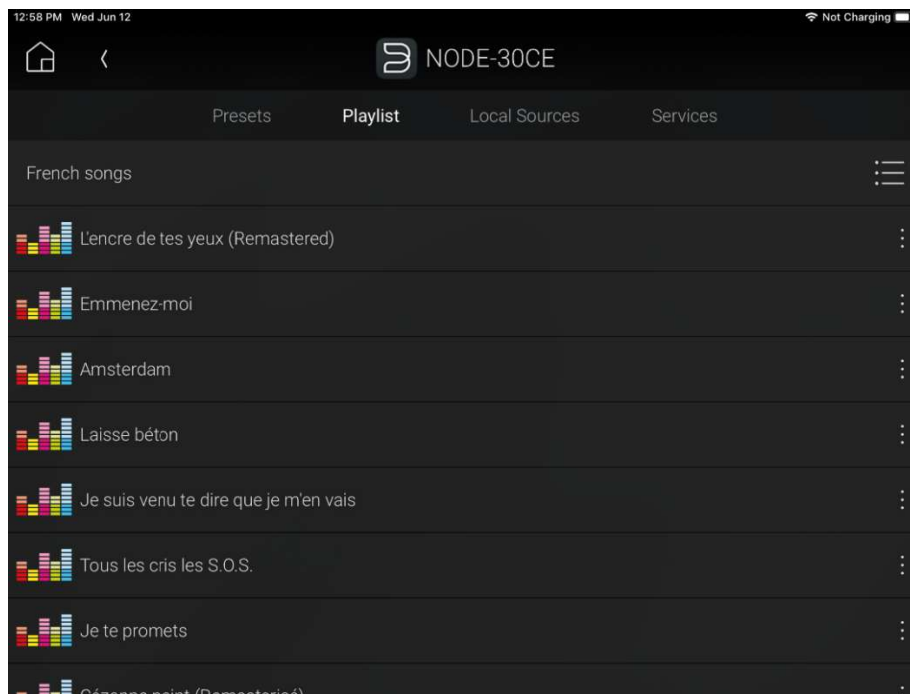


6.4 Playlist

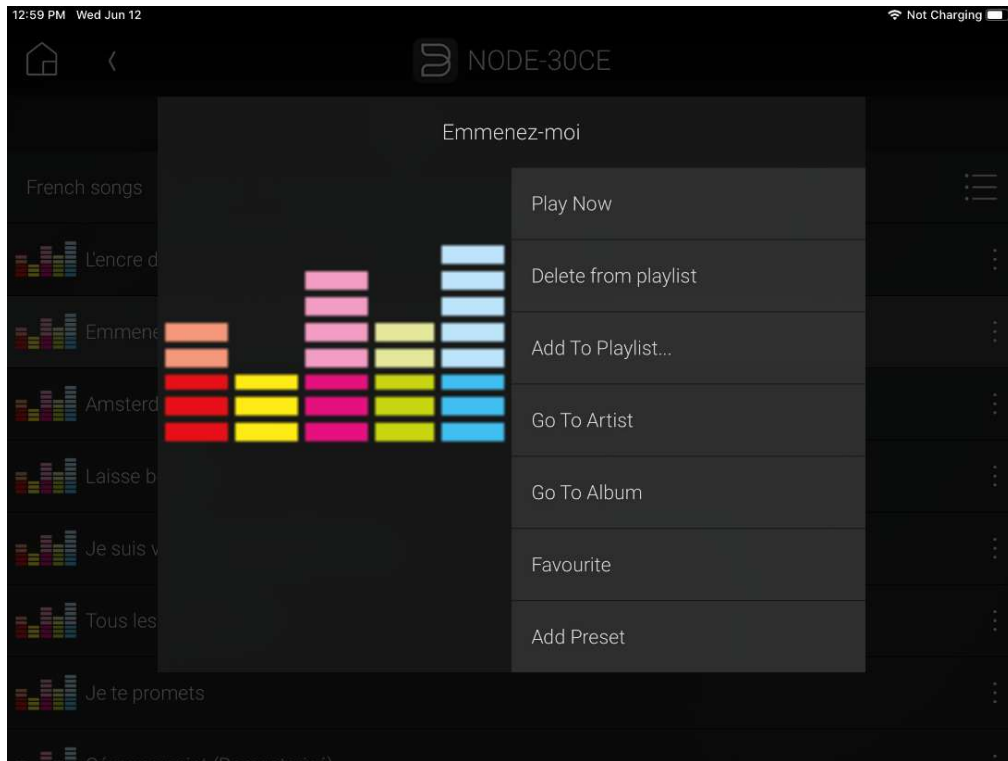
“Playlist” tab lists the current playlist and playlist and the actions available for them. Selecting the “Playlist” will show items of current playlist (“Now Playing”) and all playlists (“My Playlists”) in the library.



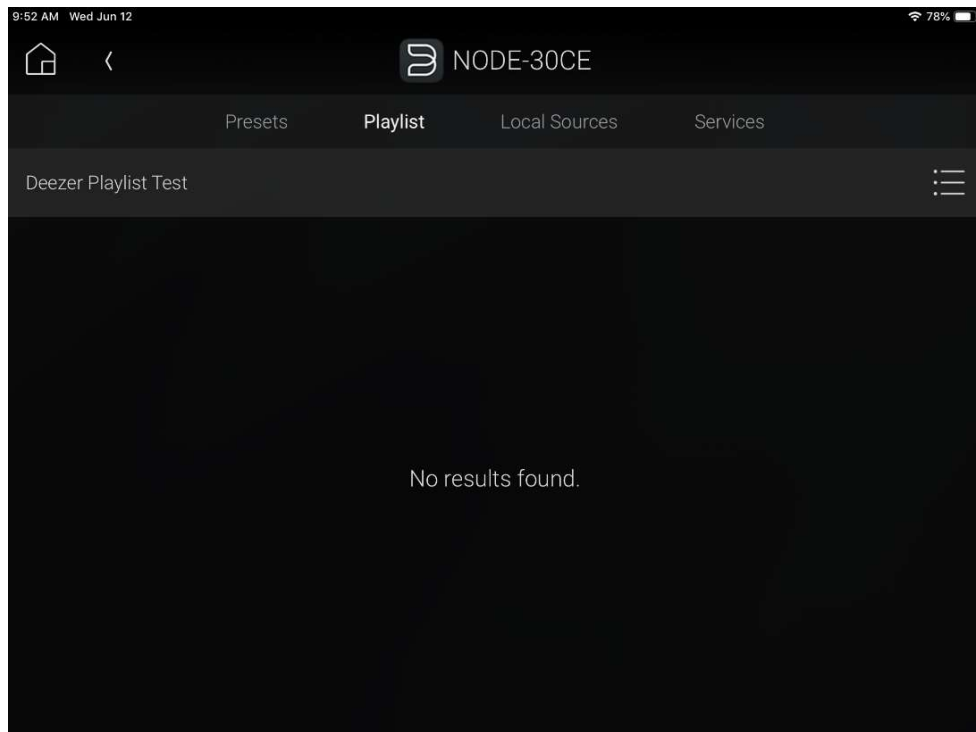
- Click on “Now Playing” to bring up all tracks of the current playlist.



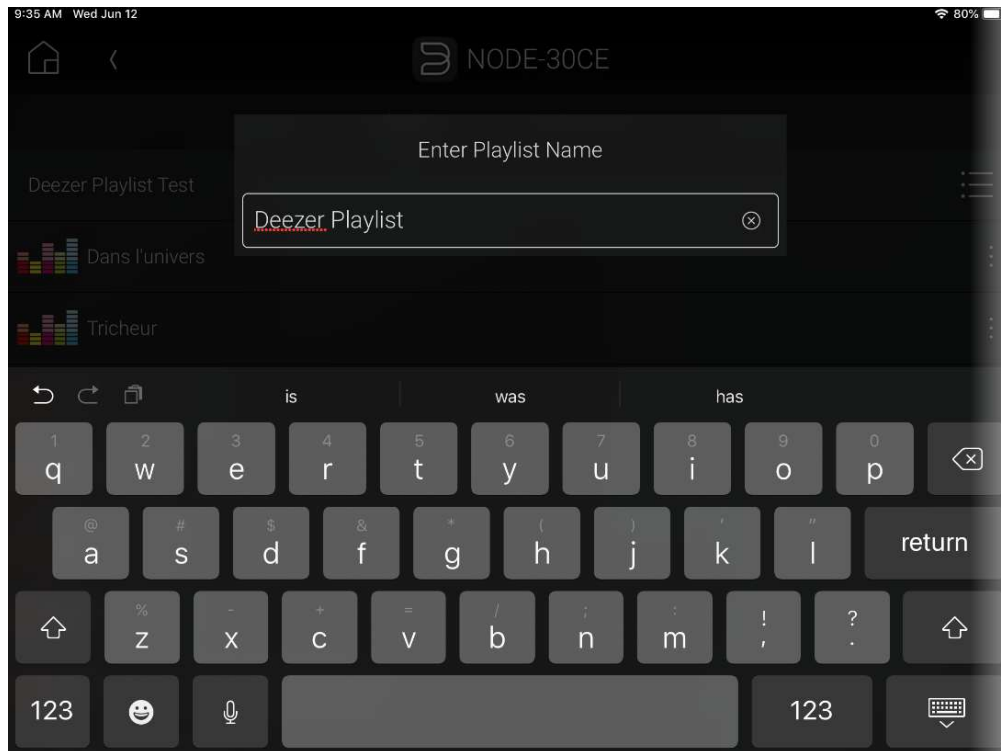
- Click on any track of the playlist and a list of the actions for the track will appear.



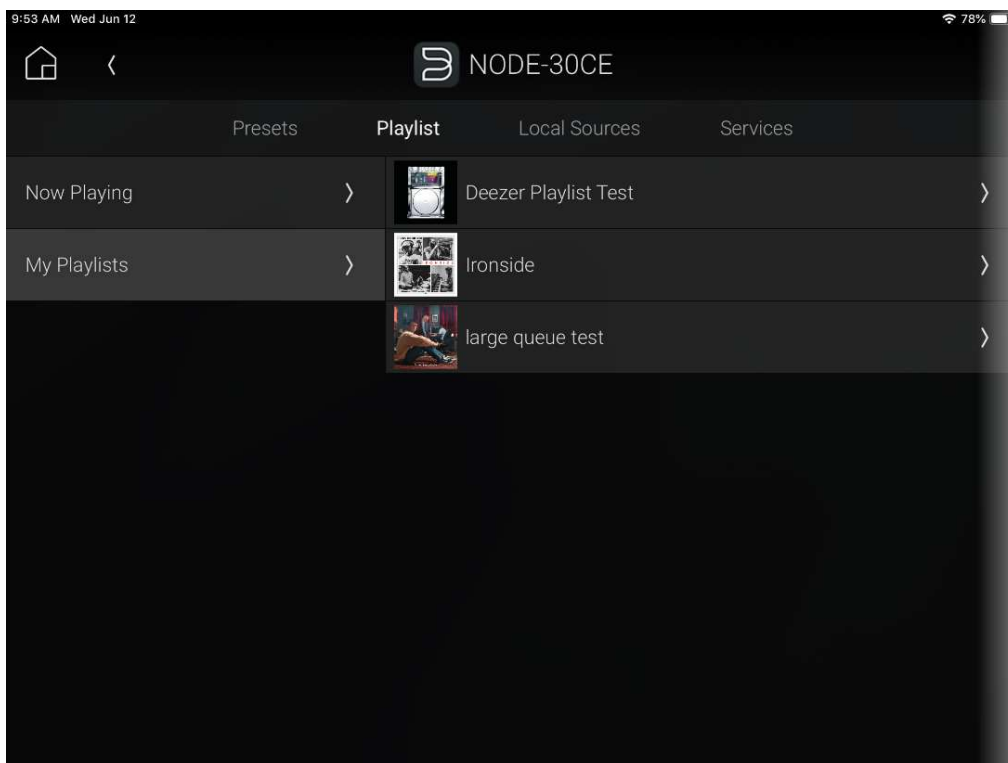
- Click on the list icon on top right will pop up two options for current queue “Save Queue” and “Clear Queue”. Click on “Clear Queue” to clear the tracks from the current queue.



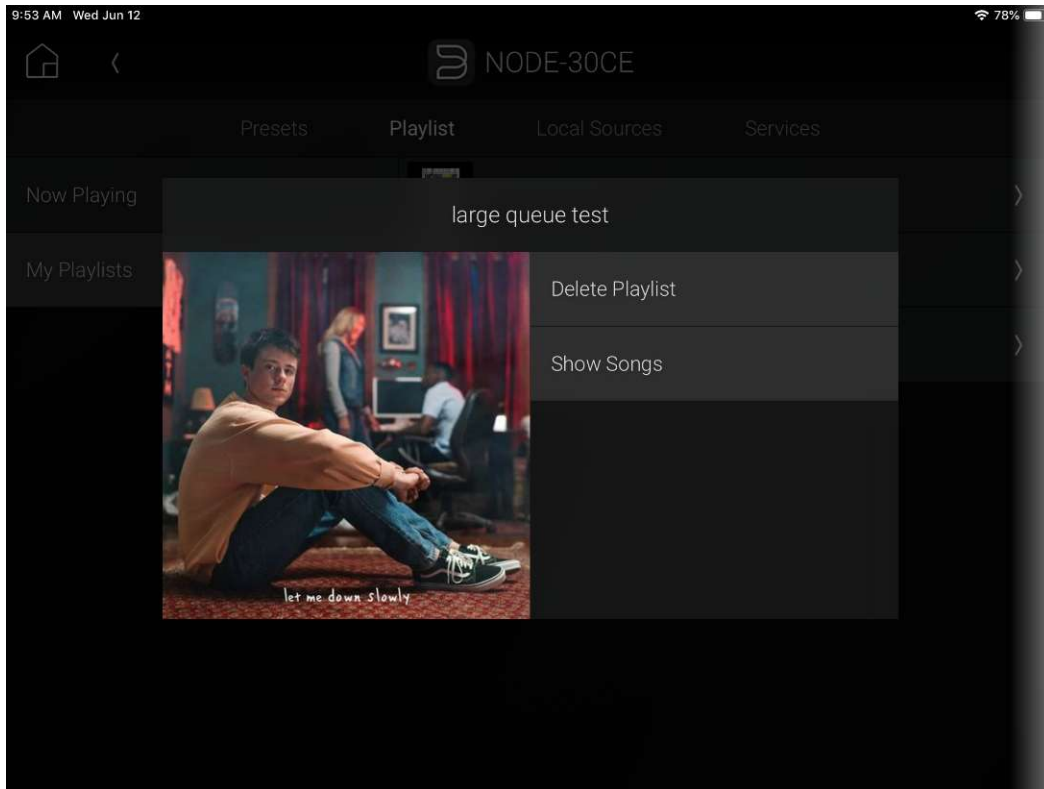
- Click on the “save” icon to save/rename the current playlist



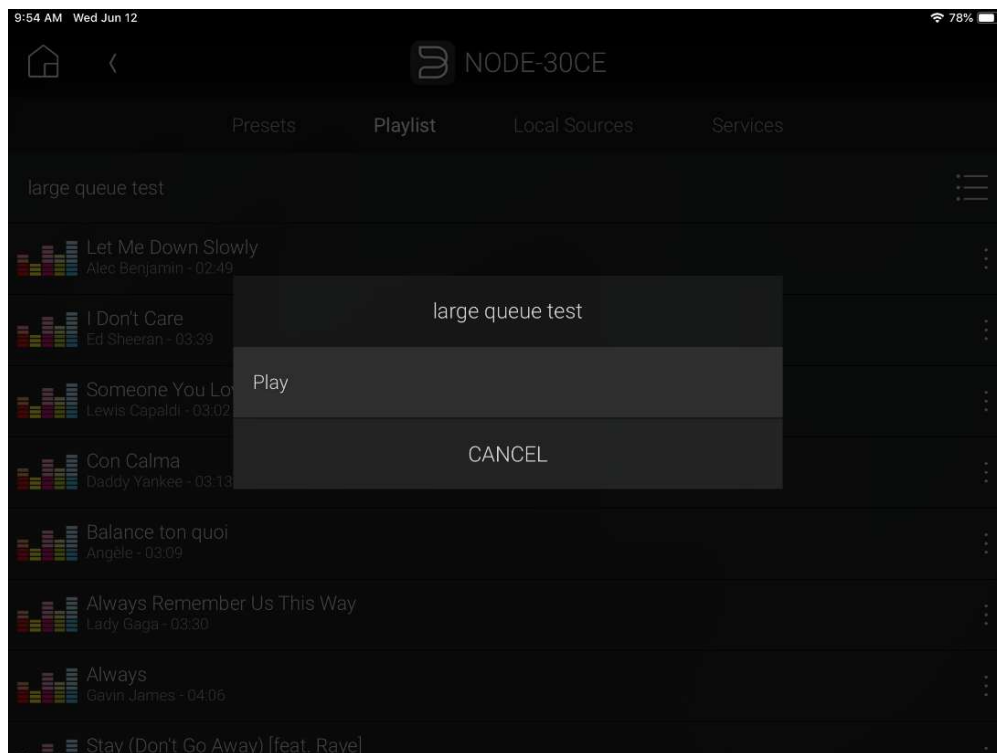
- Click on “My Playlists” under the Playlist tab to list all the Bluesound playlists. Bluesound playlists are stored locally on your Bluesound players, and can be made up of local library content and streaming service content.



- Click on any playlist to delete or display (show the tracks) or load (play) the playlist

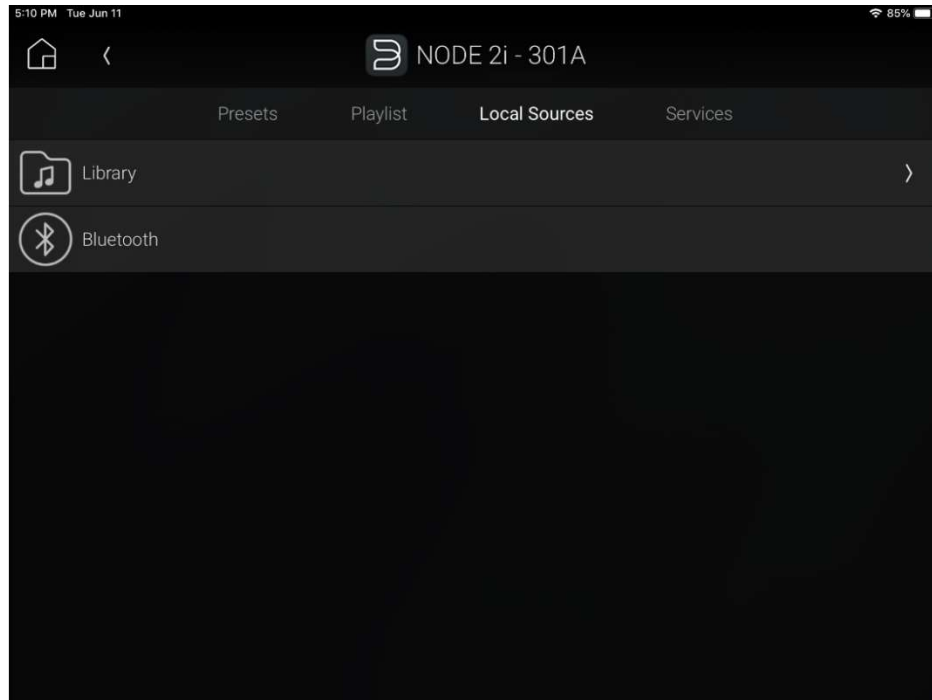


- When a playlist is showing a list of tracks, click on the top right list icon to load and play the whole playlist.

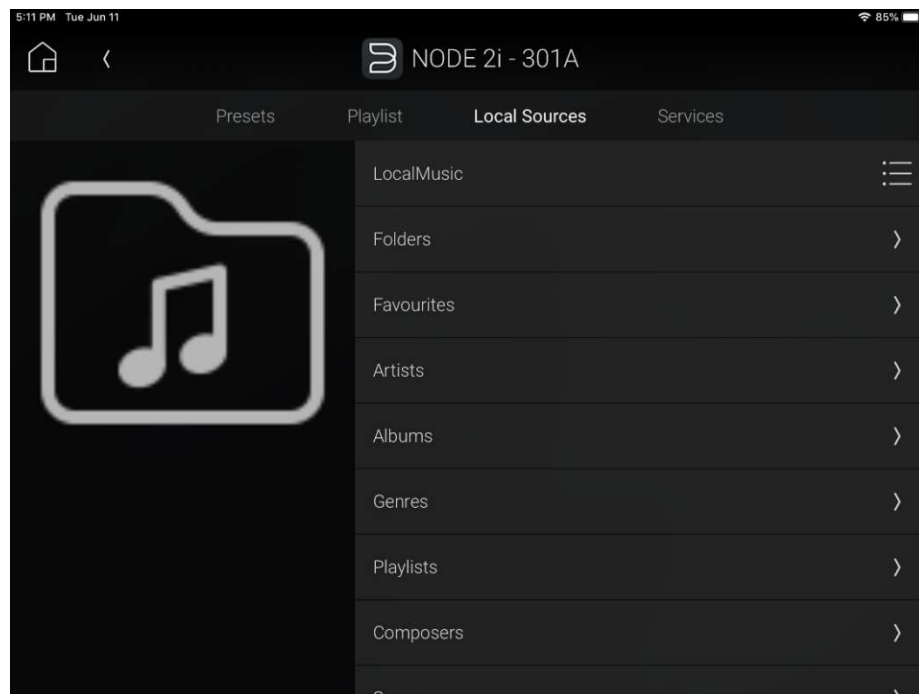


6.5 Local Sources

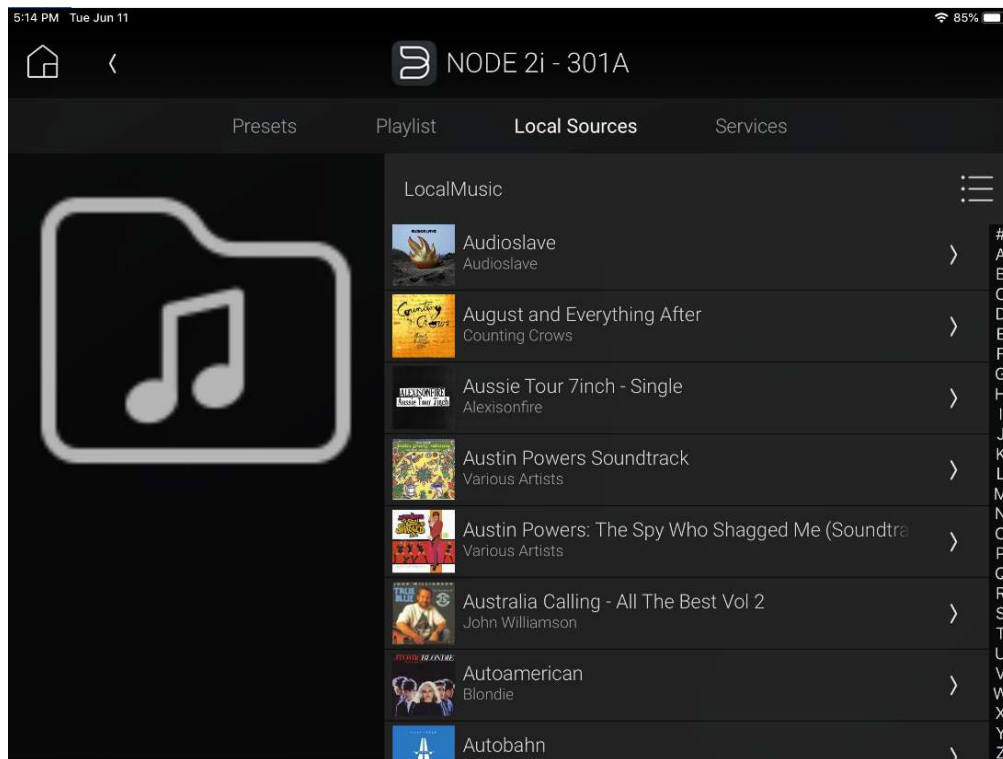
“Local Sources” provides music sources of local library, external USB, or “Optical Input” (Pulse only). Click on the tab “Local Sources” to browse music sources on the Bluesound player.



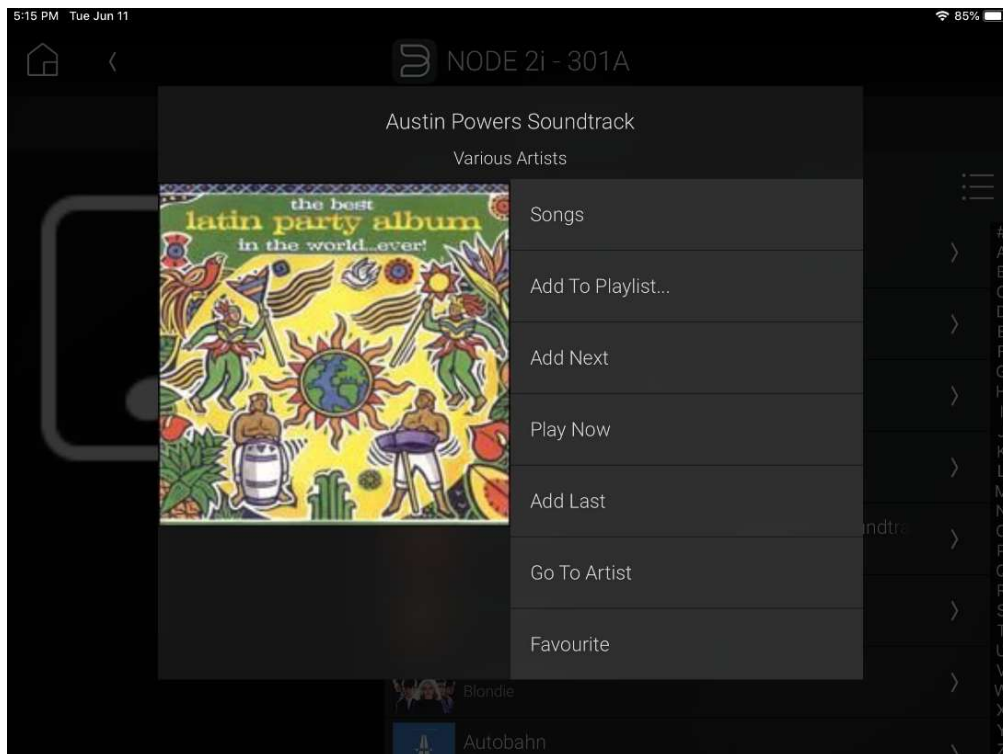
- Click on “Library” to browse local content. This will show a list of the categories.



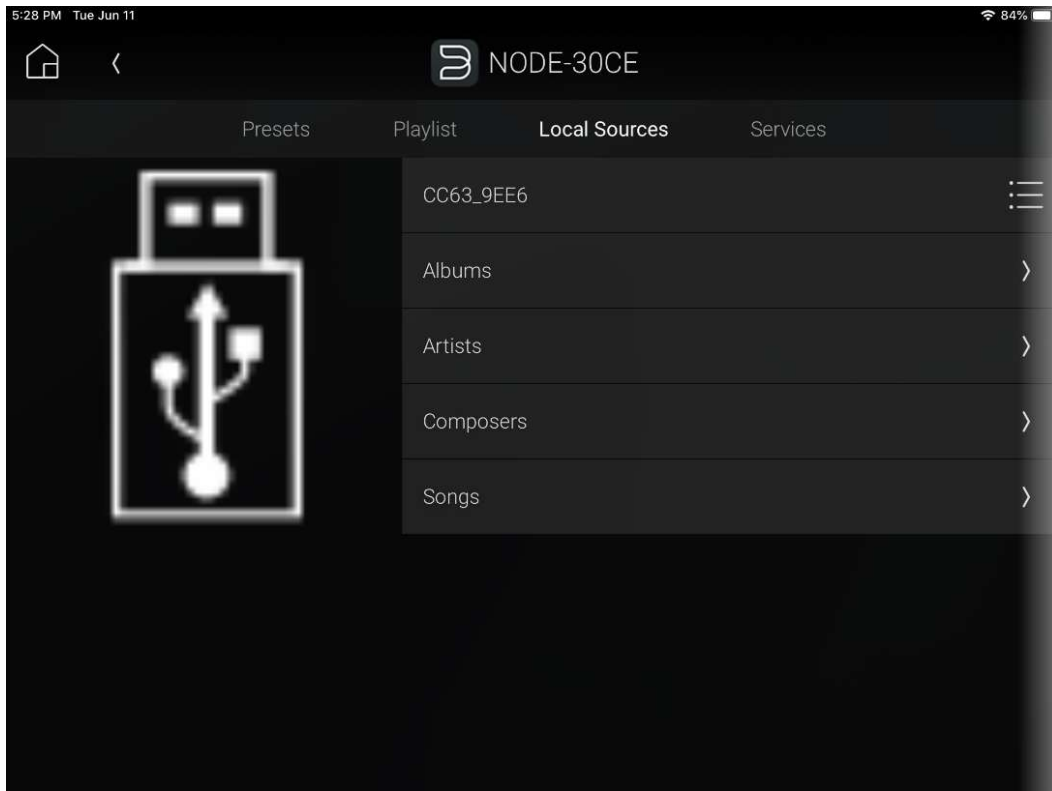
- Click on any sub-category to browse further.



- Clicking on any item will pop up a list of actions for the item. Here is an example of actions for a song.



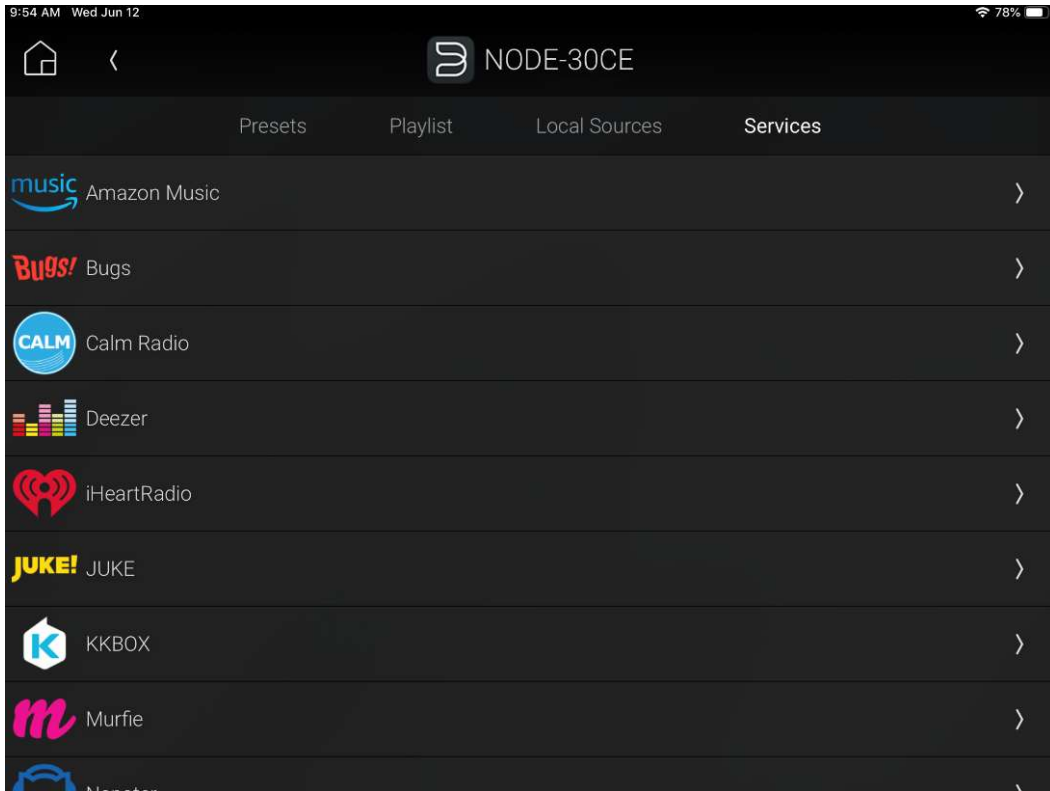
- Click on the top right list icon to pop up “Search Service” option. Then enter keyword to search in the pop-up keyboard. The search result will be sorted as categories Songs, Artists, Albums, and/or Playlists. Clicking on any category will show the search result for that category.



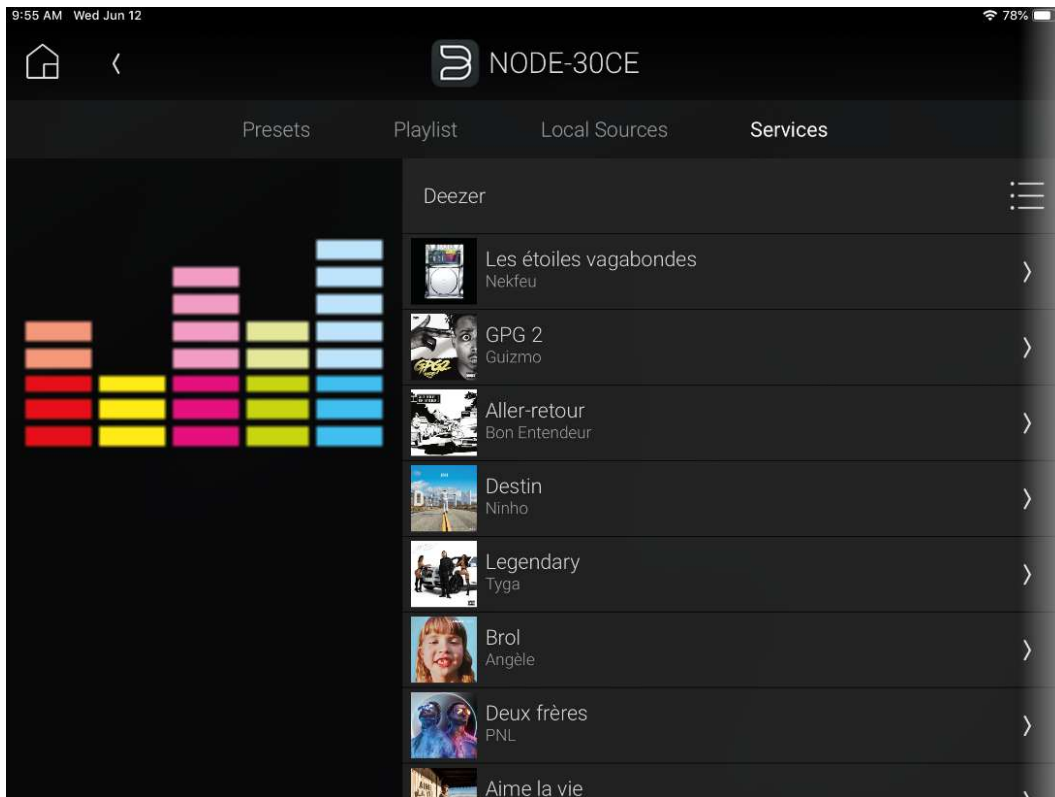
6.6 Music Services Within Player Driver

Bluesound Player driver provides all music services users registered for the player. Clicking on the tab “Services” will load all available music services on the player.

- Browse any service by clicking the service and its categories.



- Click on any service and its categories. Choose any category (e.g. Deezer => What's Hot => Popular Playlists).

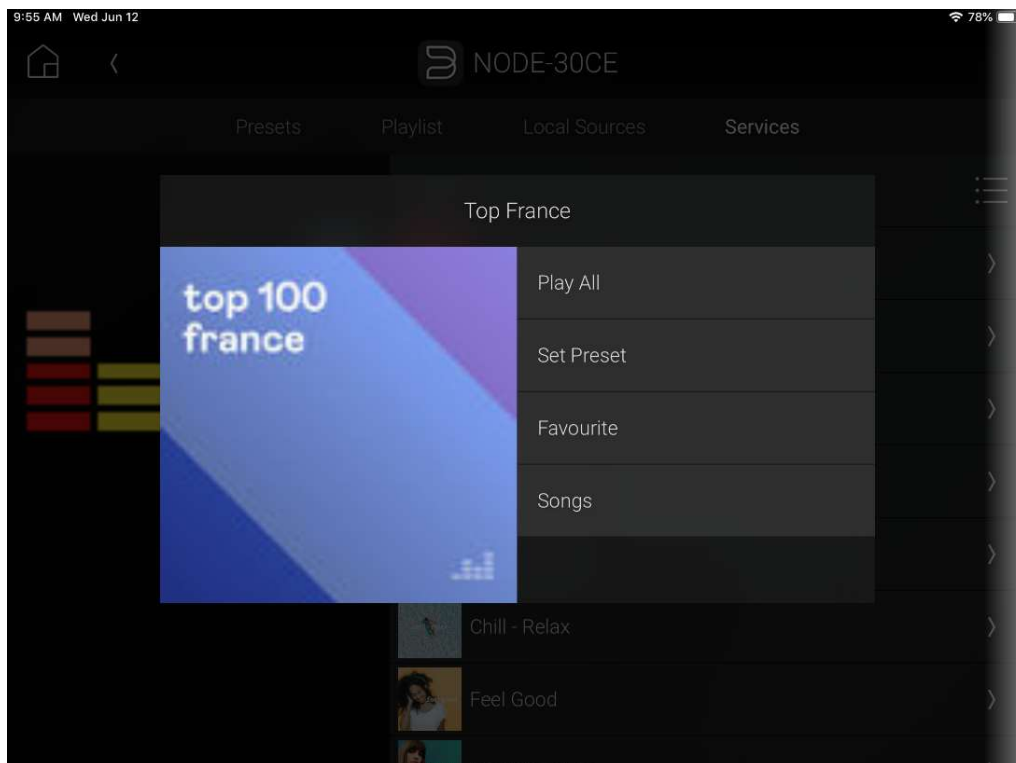


- Click on any item (e.g. album) pops up a list of the tracks of the album.
- Press and Hold any item pops up a list of actions of the item.

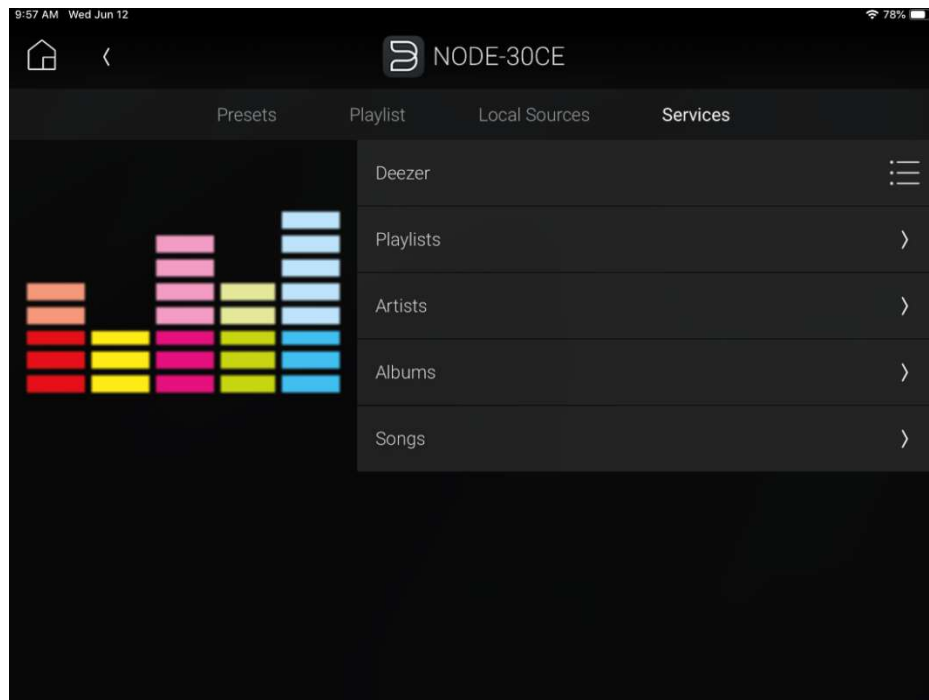
Note 1): Actions may differ between different services. Supported actions are defined by the specific service. Every effort has been made to maintain compatibility across all content sources.

Note 2): If the current playlist is empty, action “Play” or “Play All” adds the track/tracks to current playlist and starts to play from the beginning of the list; if the current playlist is not empty, action “Play” or “Play All” only appends the track/tracks to the current playlist cursor.

Note 3): “Play All” of a **playlist** replaces the current playlist with the selected playlist and starts to play the first track of the playlist, regardless of whether the now playing was a stream or non-stream. Action “Play All” of an album has same behavior as action “Play” in note 2).

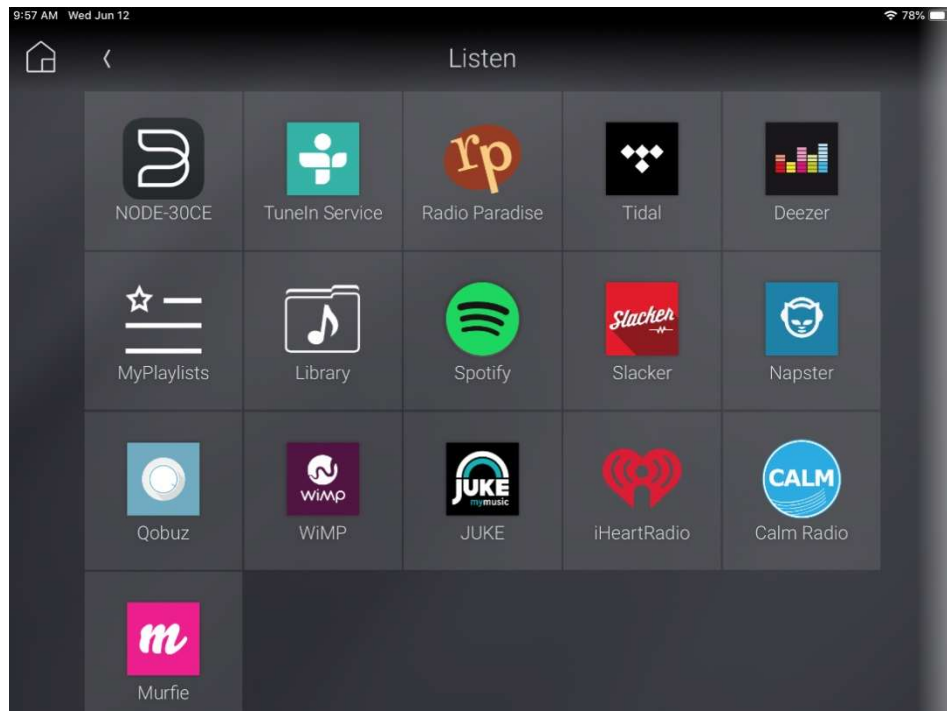


- Click on the list icon on top right brings up “Search Service” option, type in the keyword for search, and click on “Submit” button on the keyboard. The search result appears on the screen under categories Songs, Playlists, Artists, and/or Albums (e.g. search for “Ariana Grande”). Click on any category will show the detailed search result for that category.



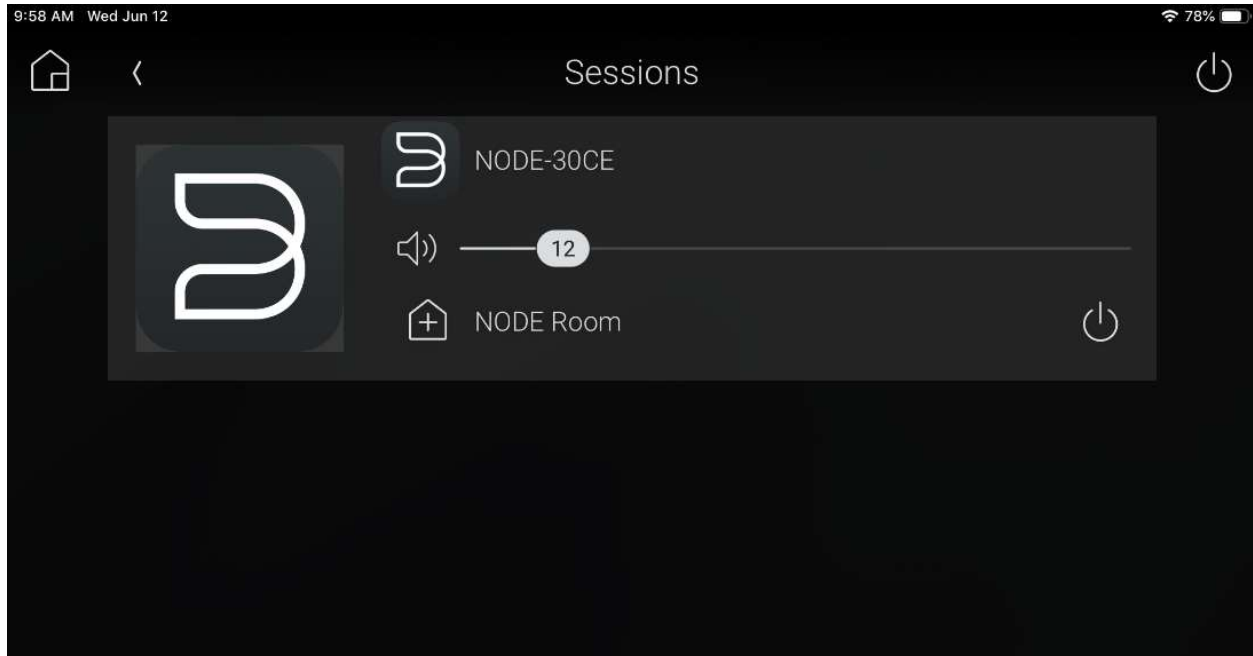
6.7 Direct Accessed Music Services

With mini drivers available, accessing music service is more direct and easy. As long as its mini driver is installed, the music service can be accessed directly under “Listen” page.

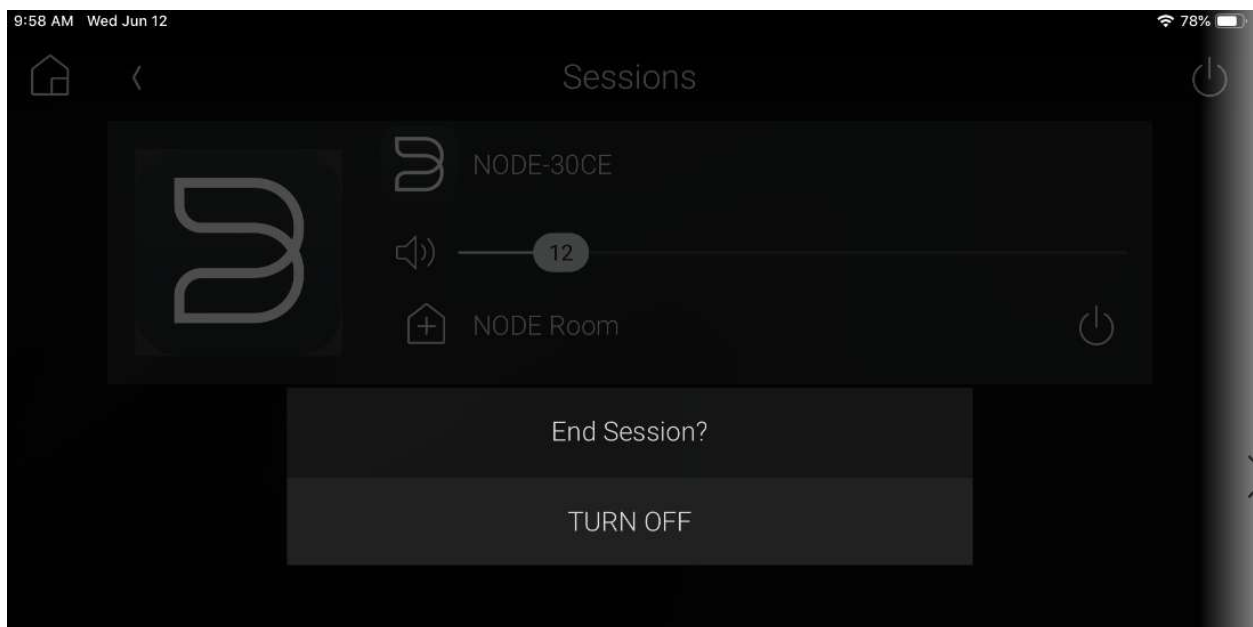


6.8 Media Zones and Multi-zone Grouping

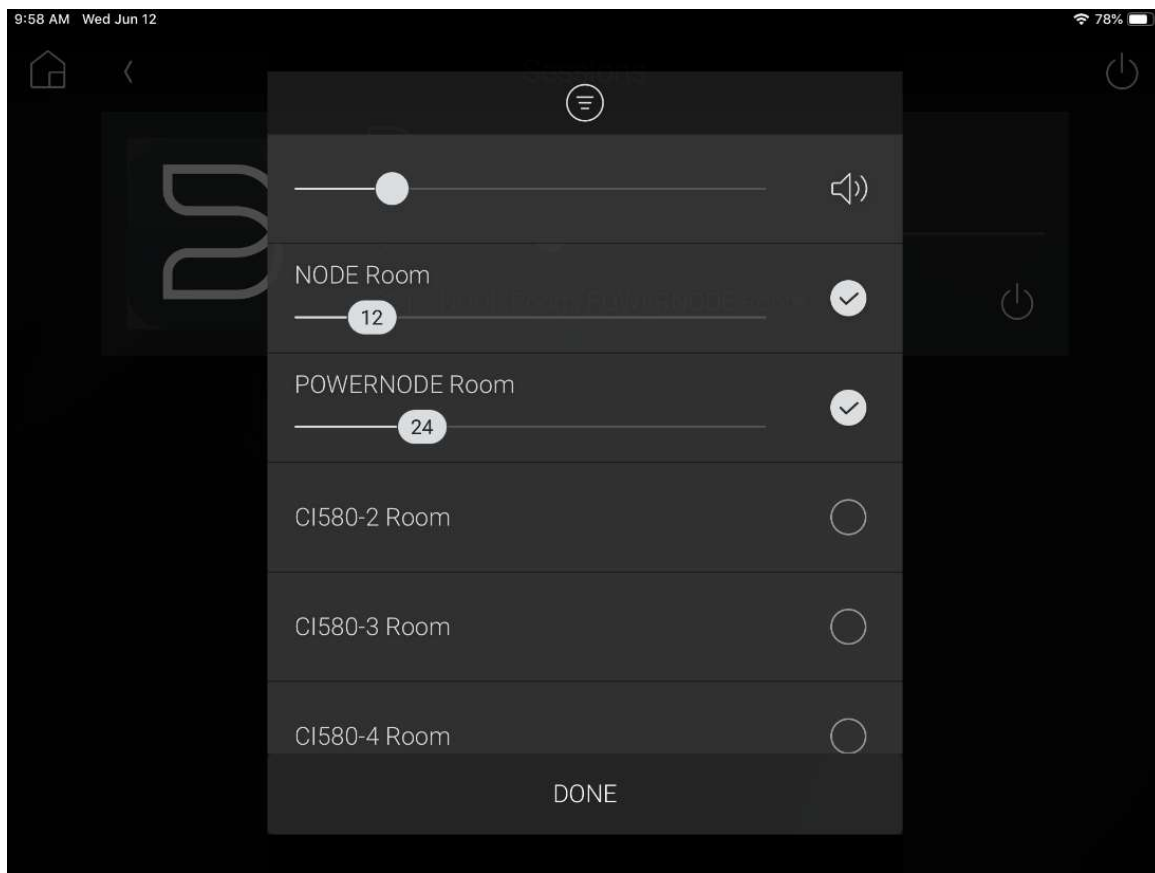
On top right of the Home page, click on the house icon can enter Media Zone. In Media Zones users can control the zone/room volume, turn off zone / room, and group / ungroup players in different rooms.



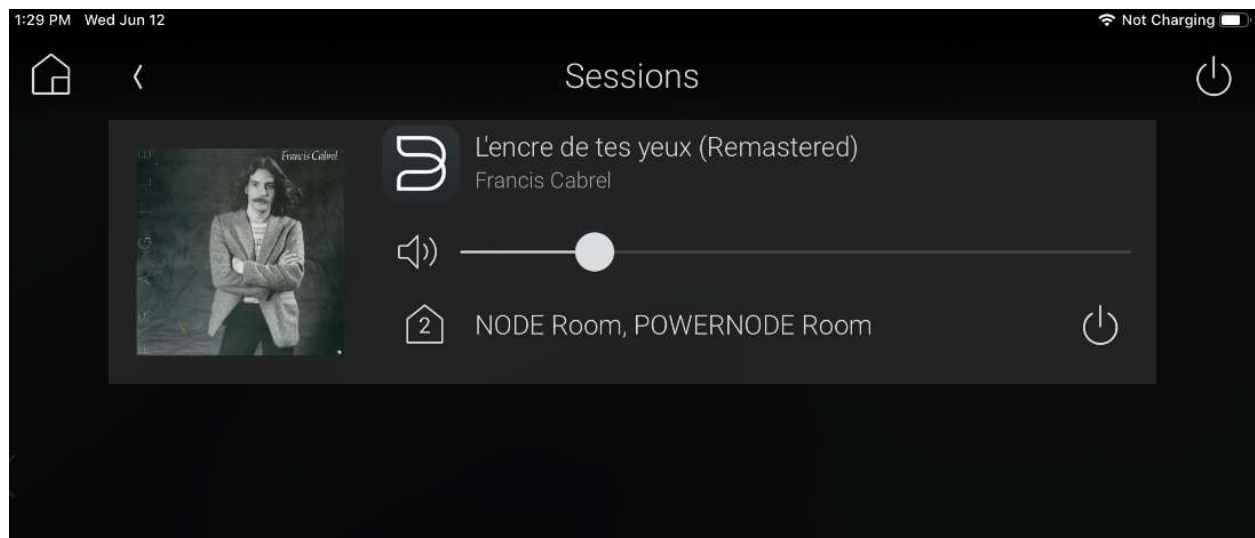
- Click on the “power” button for the room or zone will turn off a room.



- Click Add icon to add a slave player(s) to be grouped with by checking the rooms the player(s) is located in.



- Here is the result after players grouping. Clicking on "Add Rooms" to uncheck the room where a player is in will ungroup the player.



- Multi-zone grouping

The driver supports regular temporary grouping and ungrouping.

A permanent group (i.e. fixed group) is treated as a single player. Ungrouping a permanent group from Control4 UI does not do anything. Users must create and delete a permanent group from BluOS Controller apps.

If a group has more than two players, ungrouping the primary player or turning off the main zone will turn off the main zone and ungroup all players in the group. This is required by Control4 certification.

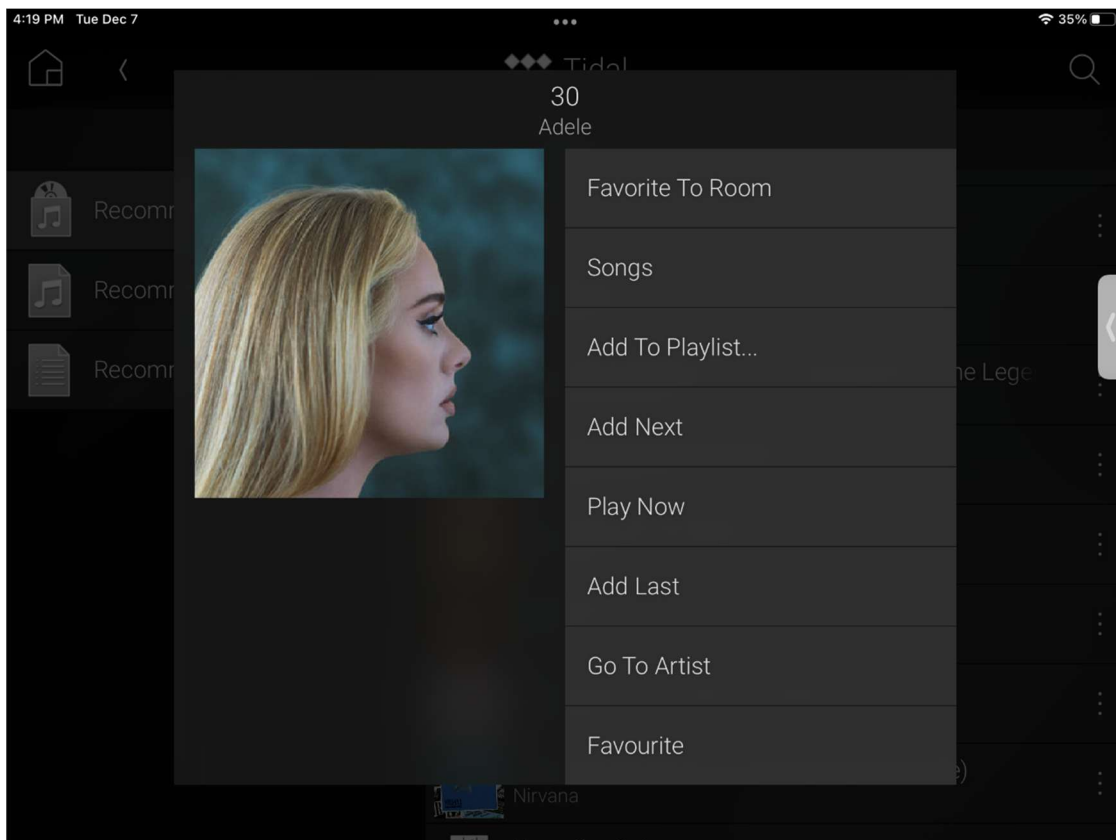
If a player does not have “Auto Power Rooms” set up, its zone grouping will not work properly!

Note: Grouping multiple devices on an audio switch with stand-alone amplified device is not supported.

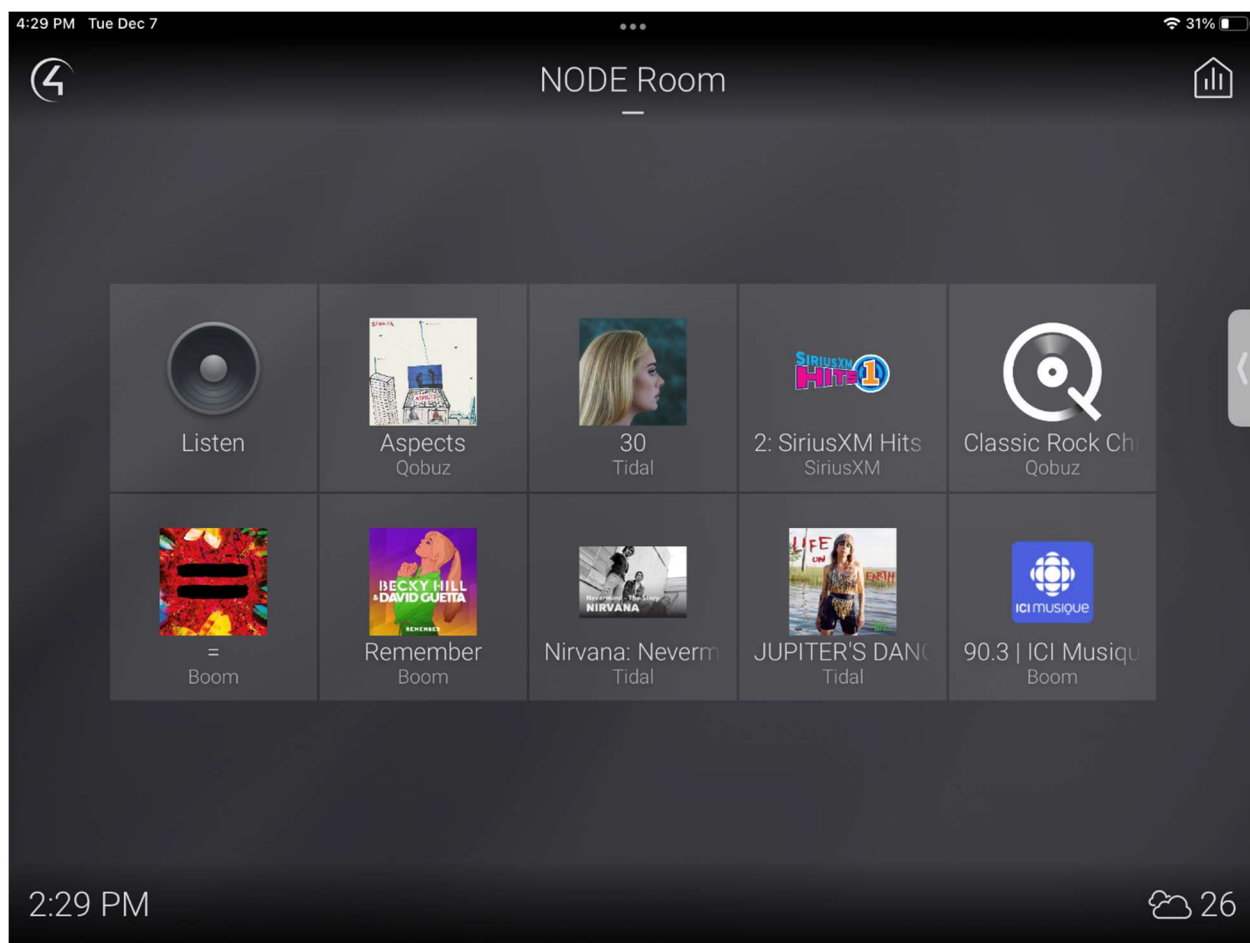
6.9 Favoriting Media To Room

Player driver and mini drivers provides “Favorite To Room” feature for playlists, albums, stations, and tracks.

For example, when browsing Tidal “Recommended Albums”, press & hold or tap the 3 dots of album “30”. It brings up a list of options for the album. The top option is “Favorite To Room”. Tap it will add the album to the current room.



From the room, tap the favored album “30” will go to Now Playing screen and starts to play the album.



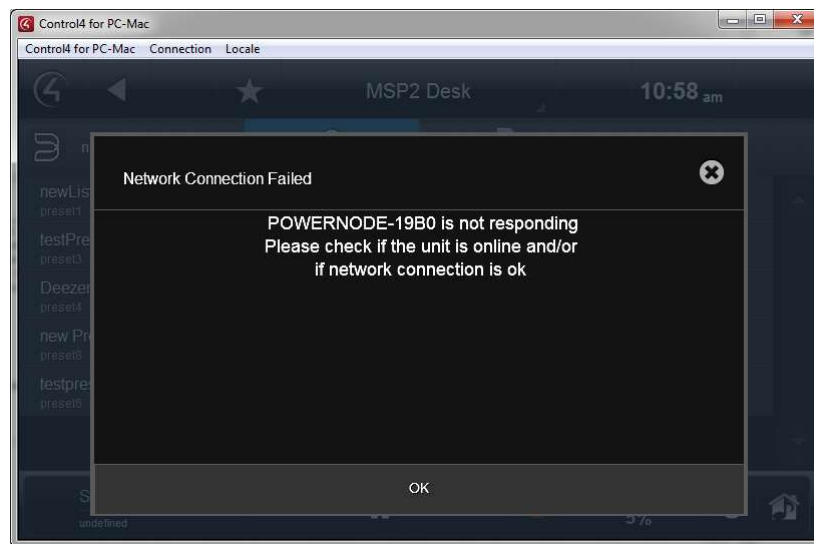
7.0 Troubleshooting

7.1 Notifications

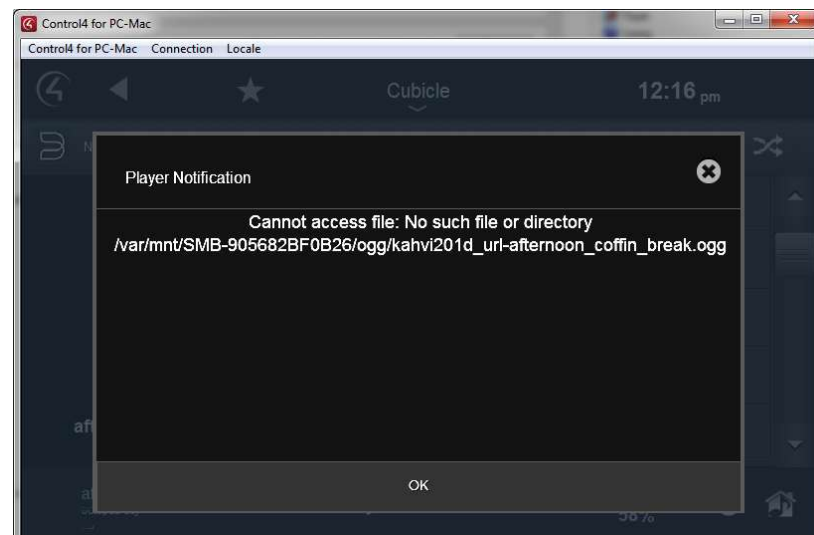
The driver supports notifications from the player. These are helpful for troubleshooting issues.

Note that many notifications are delivered by the streaming music services.

- The driver uses long polling mechanism. When there is no response from Bluesound device for more than 200 seconds, it's considered disconnected from Control4 system, and a failure notification window will pop up in the user interface. Click "OK" button to close the notification.



- When there is any player notification such as player upgrade or source unavailable, a screen pops up to show the notification.



8.0 Support

For technical support issues, contact Bluesound technical support at <http://support.bluesound.com> or email support@bluesound.com.

9.0 Known Issues

The following issues are known to exist.

Driver Version	Issue	Workaround
All	Not all Spotify functions are available (e.g. browse, search). This is because Spotify only supports the Spotify Connect connectivity model.	You must use the Spotify app for browsing and searching.
All	Available events in Zone Network Driver and Player Endpoint output do not work.	None. It's a known bug of C4 director.