Linn DS

Control4 Driver User Guide

Version 1.45

Introduction

This driver provides the network connectivity for Linn DS series devices. A complete system configuration requires a single instance of this driver and one instance of the DS series driver per DS device in the system. The Linn DS device(s) and this driver should be fully configured before proceeding to install the Linn DS device driver(s).

The following features are supported:

- Automatic discovery
- Playback of music from music servers selectable in the Control4 UI.
- Support for amplified and non-amplified variants
- Support for the Kustom DSM
- Analog line-in inputs for DS-I models
- HDMI inputs/outputs for DSM models
- Room selection
- Transport and volume control
- Play queue management
- Browse and selection of content
- Songcast – accessed via the Control4 Zones page
- Browsing of music services such as Tidal

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Installation Types

This driver supports two alternative usages of the DS product. The DS can either be installed in a room and directly supply its audio/video to that room (standalone room mode, or "room" for short), or it can be installed behind an A/V matrix switch and its output is then supplied to one or more rooms via that switch (matrix switch mode, or "matrix" for short). Note that these two usages cannot be mixed – a DS behind a matrix switch cannot also be used to directly play to a room due to grouping and audio synchronization issues. Where set-up of the driver differs based on the usage, this will be highlighted in the instructions.

Linn Configuration

Please make sure that each Linn device has been configured correctly, and is on the same network as the Control4 processor, prior to configuration of the Control4 drivers. This Control4 Linn Network driver requires an instance of Kazoo Server (**v4.10** or later) to be running on the same network.

The minimum configuration that is required to have a Linn DSM appear correctly in Control4 or Linn's music control app is to set the DSM's Room and set which Sources are in use.

To configure a Linn DSM you will need Linn Konfig, which can be downloaded from https://www.linn.co.uk/software.

In Konfig, under the CONFIGURATION tab, click CHANGE and then select the Linn DSM that you want to configure.

Setting the Room name

Select the DS tab, and then Device from the Linn DSM's configuration page. Enter the desired room name in the Room text box, by default it will be set to "Main Room". It is important to view/change the room names for each device as these room names get discovered in the Control4 drivers. A meaningful name should be used to avoid confusion when associating Linn rooms to Control4 device drivers later on.

Setting up a Source

Select the DS tab, and then Sources from the Linn DSM's configuration page. For each source that is in use on the Linn DSM, expand and enter the source's name and ensure the source's Visible is set to Yes. You must rename the source from the default name for it to register as being configured. It is useful to provide a meaningful name for the source as this is seen later during Control4 configuration. For each source that is not in use on the Linn DSM, expand and ensure the source's Visible field is set to No. Set-up of the login details for any sources that are streaming services is done through the configuration of the Gateway API section of the Kazoo Server using Konfig.

Advanced Configuration

For more advanced configuration, please refer to the [Konfig manual](#).

Driver Installation

Four driver files are included in the release package.

Driver File Name	Description
comms_ip_linn_ds.c4z	This is the network driver and it handles discovery of devices. Only one instance is required.
mediaservice_ip_linn_ds.c4z	This driver is used for control of individual DS or room player devices. One instance is required for each device.
mediaservice_ip_linn_kustom_2x4.c4z	This driver is used for control of Kustom DSM devices that have 2 streamers and 4 output zones. One instance is required for each device.
mediaservice_ip_linn_kustom_4x8.c4z	This driver is used for control of Kustom DSM devices that have 4 streamers and 8 output zones. One instance is required for each device.

Table 1: Driver Descriptions

If you are not installing directly from the Control4 online library, copy the above files from the zip package to your Control4 driver location (by default this is *Documents\Control4\Drivers*). Open Composer and choose the **Search** tab from the **Items** pane.
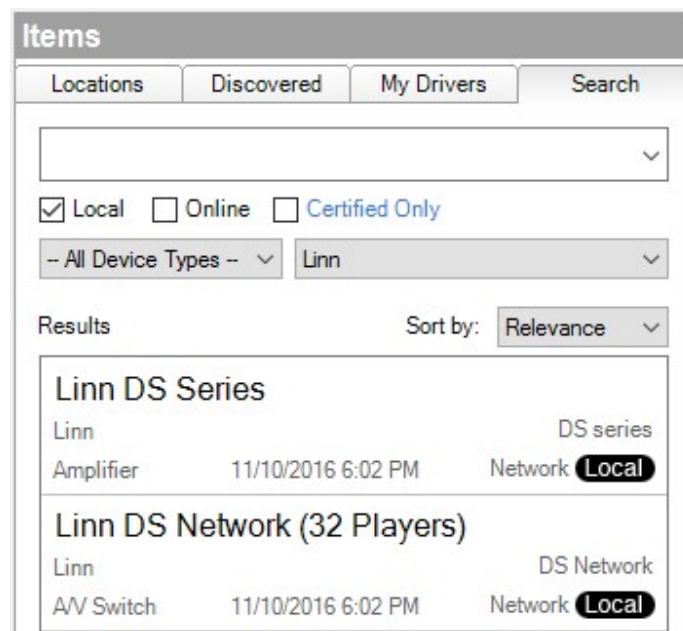

Figure 1: Driver Search

Add one instance of the driver entitled "Linn DS Network (32 Players)" into your project. We recommend installing the driver in a room of its own called "Linn Network" and then hiding the room (room Properties → Navigator tab → Hide Room in Location Menu).

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NOTE: It is important for the smooth installation of media player drivers that the network driver is added prior to the player drivers. The configuration of the player drivers cannot be completed without the network driver being in place and communicating correctly with a Linn gateway.

Once you have established that the network driver has installed and discovered all your Linn devices (see below), add one instance of the appropriate "Linn Kustom DSM" driver for each Linn Kustom DSM and one "Linn DS Series" driver for each Linn DS player that you have in your system to the room in your project which contains the player.
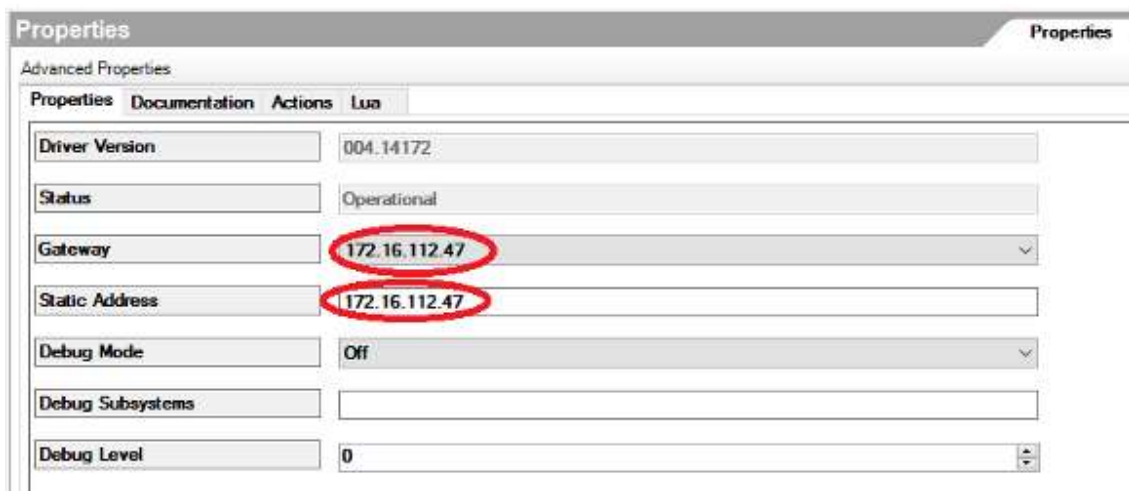
It is possible to directly install Kustom and DS players discovered through SDDP just by dragging them into the appropriate room in the configuration. For Kustom devices, this will automatically set the IP address for the device and for DS players; this will automatically associate the driver with that player, setting the **DS or Player** property appropriately.

If the DS or Kustom zone is providing audio directly to a room (standalone room mode), we recommend naming the driver in a way that indicates the room it is in, e.g. "DS (Lounge)". If it is being routed through a switch (matrix switch mode), we recommend naming it according to its usage, e.g. "Martin's Music DS" (for a dedicated personal player), "Network Music DS" (for a single shared player), or "DS Player 1" (for a player to be selected from a bank of players) and also name the subsidiary Network Stream device to match as this is the device that the user will see in the UI.

Driver Configuration

The network driver is used for discovery of Linn gateways connected to the network. Only one instance of this driver is required, even if multiple Linn devices are in use. Once it is installed, it initiates a discovery process that will result in all the available Linn gateway devices being found.

In the **System Design** view, select the Linn **Network** device and choose the **Properties** tab from **Advanced Properties.** Select a gateway address from the **Gateway** dropdown box. If for some reason the gateway is not discoverable on the local network (for instance, it is over a VPN) then the gateway address can be manually entered in the **Static Address** field:

Figure 2: Gateway Selection

In the **System Design** view, select the **Linn Network** device and choose the **Actions** tab from **Advanced Properties.** Four buttons are displayed:

Figure 3: Driver Actions

Discovery happens automatically on installation of the driver, however if for some reason the driver has not correctly picked up all the devices you expect, or if it has previously discovered some devices that have now been removed, you can manually restart discovery. **Clear and Restart Discovery** throws away all information about previously discovered devices and starts again from scratch. This is appropriate if devices have been removed. **Restart Discovery** triggers

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another round of discovery but adds to the already know devices. This could be used if new devices have been added or if devices were missed by a previous round of discovery. You can check that all your configured room devices have been found by clicking on **List Drivers**, which lists the discovered devices along with the Control4 drivers that have been installed to manage them. Select the **Lua** tab to see the results of the listing:

```
-- Gateways discovered on the network:
  1 172.16.112.201 (cbc9e79f9cf2b1587185beb126f540a9)
-- Linn devices discovered on the network:
  1 172.16.112.37 (4c494e4e-0026-0f21-d437-01328592013f)
  2 172.16.112.203 (TestDs-2981)
  3 172.16.112.204 (4c494e4e-0000-0000-0001-Kustom-0009)
  4 172.16.112.204 (4c494e4e-0000-0000-0002-Kustom-0001)
...
```

Figure 4: Discovery

Finally, **List Rooms Found** shows the Linn room names that are known to the gateway that the network driver is using to interact with the Linn network.

For Linn Kustom DSM devices, install an appropriate **Linn Kustom 2x4** or **Linn Kustom 4x8** driver to manage the device. The simplest way to do this is to use SDDP and drag and drop the discovered device into the project. If for some reason SDDP is not available, the driver can be installed manually. Once installed, refer to the embedded documentation for additional details on this driver.

All other Linn DS products are managed by a **Linn DS Series** driver. Again, this can be installed using SDDP or manually. It is necessary to ensure that each DS driver in your project is controlling the correct Linn device (known as a "room" in Linn terminology). Select the **System Design** view and one-by-one; choose each instance of a player device driver. The **DS or Player** drop-down in the **Properties** window may be used to check and select the correct Linn room name to use as the player in each Control4 room. If you have installed or associated the driver with a DS device using SDDP, the **DS or Player** property will change its name to **DS or Player (SDDP)** and will be read-only, as SDDP has already been used to make the correct choice of Linn room name.

Figure 5: Room Selection

The driver has a "My Music" service associated with it. This allows the installer to configure a single UPnP or OpenHome server as the preferred source for music. The server is chosen through the **My Music Server** property of the driver. The alternative is the "Servers" service, which lists all the discoverable UPnP and OpenHome servers and then allows the user to browse through their content. The installer can choose to hide either of these sources in Navigator (see below) if they are not needed.

Control4 Connection Configuration

As per standard Control4 practice, it is necessary to establish audio end-point connections for each device. You do not need to manually configure any of the connections between the device driver and the Linn Network driver (classes RF_LINN_ROOM, RF_LINN_SONGCAST and LINN_NETWORK_COMMS); these are all managed automatically.

Choose the **Connections** view, and select the **Control/AV** tab. Select the Linn device driver to reveal its connections.

Figure 6: Driver Connections 1

Standalone Room Mode devices only

In the **Control & Audio Video Connections** window, select the **Audio End-Point** with the **Connection** type

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"AUDIO_SELECTION" and drag it onto an available **Audio End-Point** in the appropriate room. If the DS device supports video output and it is being used for this purpose, choose the **Video End-Point** with the **Connection** type "VIDEO_SELECTION" and drag it onto an available **Video End-Point** input in the appropriate room.
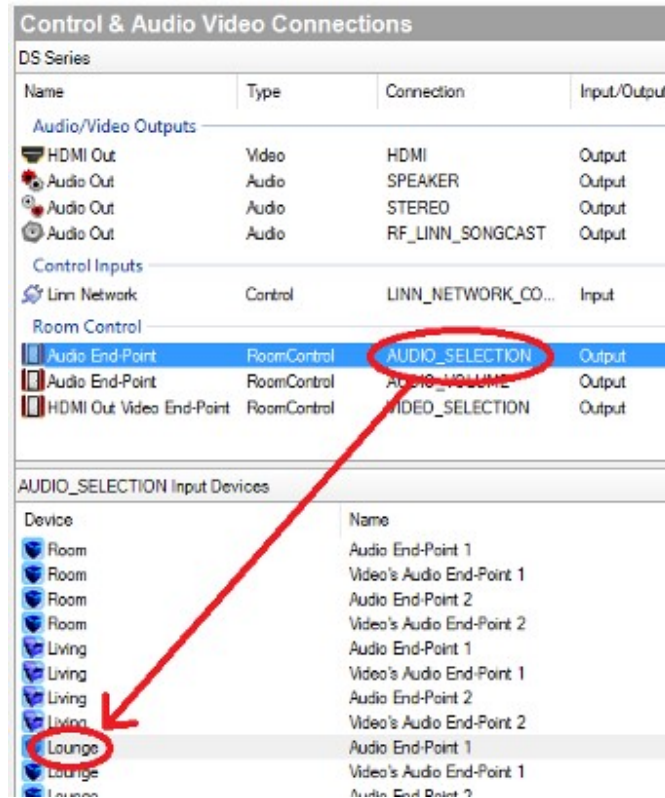

Figure 7: Driver Connections 2

Depending on the model, DS players can be used to supply audio output directly through a built-in amplifier, by pairing them with a Linn pre-amp, or by pairing with a third-party alternative. If a Linn pre-amp is used then the inputs, outputs and audio control features of the pre-amp are seamlessly integrated into the control of the DS.

If using a built-in amplifier or a Linn pre-amp, drag the Audio End-Point with the Connection type "AUDIO_VOLUME" onto an available Audio Volume input in the appropriate room to indicate that the Linn device is in control of the volume. If integrating with a third-party pre-amp that has a corresponding Control4 driver, connect the STEREO Audio Out connection to the appropriate input of the pre-amp driver. You can then either use Konfig to disable volume control on the DS and connect the pre-amp driver to the room's AUDIO_VOLUME connection to have the pre-amp control volume, or fix the pre-amp's volume level and control volume through the DS, in which case the DS should be connected to the AUDIO_VOLUME end point.

For more details about pre-amp configuration, consult the [Konfig manual](#).

Matrix Switch Mode devices only

Connect the STEREO Audio Out connection and, if appropriate, the HDMI Out connection to the appropriate input(s) on the A/V switch driver(s) that represent the switch(es) to which the DS is connected.

All devices

If you are using a player with input connections, then you can also make connections to the relevant line-in connections on the driver. The properties of the driver will tell you which Control4 input each available Linn input is mapped onto, giving you the Control4 input number and the Linn name:

Figure 8: Driver Connections 3

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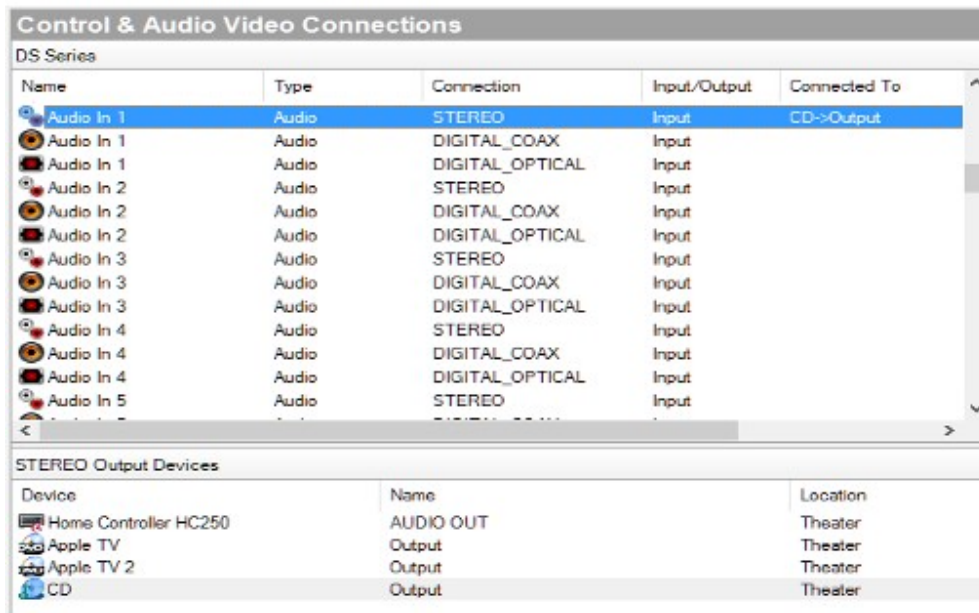then the connections might look as follows:

Figure 9: Driver Connections 4

Note that for devices that are connected to Linn pre-amps, the pre-amp inputs will also appear in the list of inputs on the driver properties page and should be connected up in a similar way to the DS's own inputs.

Repeat these steps for all Linn device drivers added to your project.

Control4 Navigator Configuration

By default, Control4 Navigators will automatically display all Linn device drivers in the project in every room (as well as unnecessarily exposing end-points). To change this, choose the **System Design** view, select a **Room** and display the **Navigator** tab.
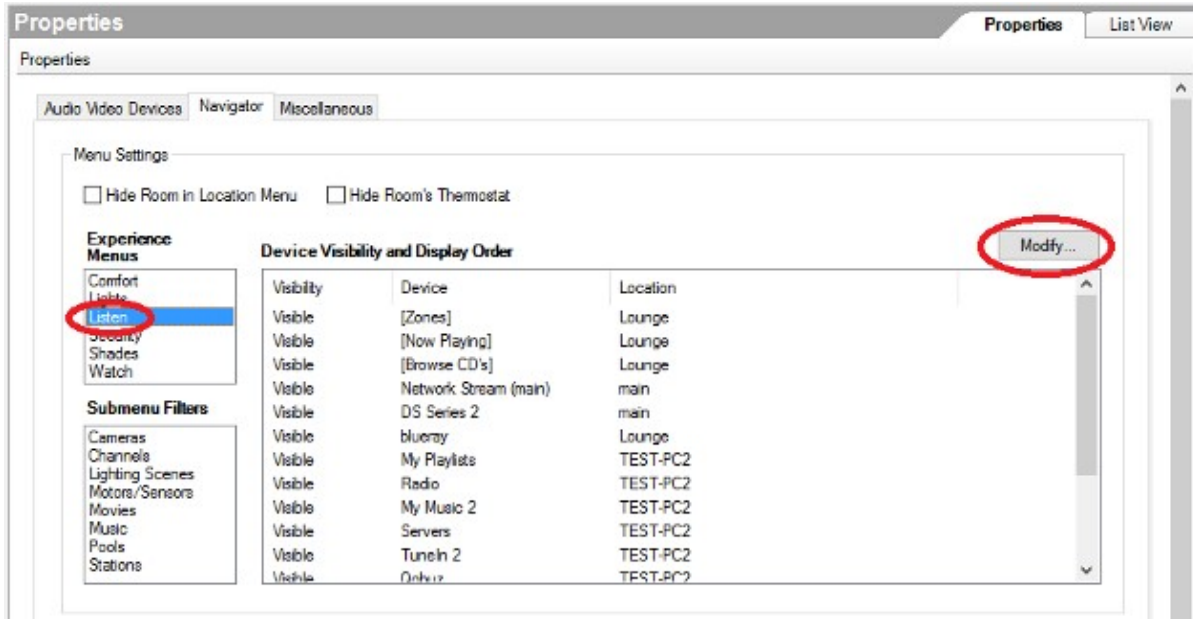

Figure 10: Device Visibility

Choose **Listen** from the **Menu** list and click on **Modify** to change the device display visibility.
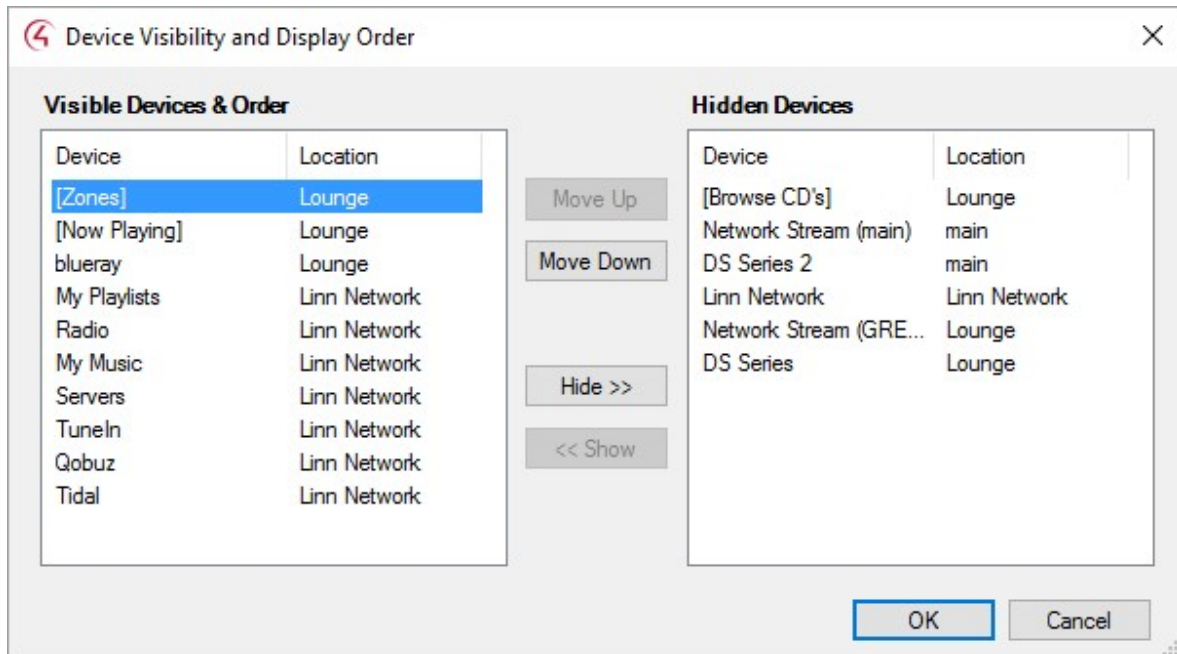

Figure 11: Modify Device Visibility

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For rooms that have a DS in the room itself (Standalone Room Mode), you will see devices corresponding to:

- The Linn Network

- All DS devices that are in Standalone Room Mode

- The streaming media players built into these DS devices

- All the individual streaming services available (e.g. Tidal, My Music)

- Any devices connected to the inputs of the DS's

In the **Visibility and Display Order** window, choose the devices you do not want to display from the **Visible Devices & Order** and click **Hide>>** to move them to the **Hidden Devices** list. Click **OK** once all devices not relevant to the room are removed. You are advised to hide all of the above except the streaming services and the connected input devices that you wish to use in that room. Note that the **My Music** service browses directly to the **My Music Server** chosen in the driver properties for the DS in that room, while **Servers** lists all the available UPnP and OpenHome servers. If you do not have a particular preferred server, you can hide **My Music**, while if you have only one music server in the system it would make sense to select that as the **My Music Server** and hide the **Servers** service.

For rooms that have one or more DS devices available through a matrix (Matrix Switch Mode), you will see devices corresponding to:

- All DS devices that connect to the room via the matrix

- The streaming media players built into these DS devices

- Any devices connected to the inputs of the DS devices

You are advised to hide the DS devices as selecting these serves no purpose. The streaming media players are items that the user will choose to browse and select content to play.

NOTE: Changes made in Composer will only be reflected on Navigators if you choose **File** > **Refresh Navigators**.

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Properties Summary

The Linn Network driver has the following properties (see the documentation tab of the player driver for its properties):

Property	Purpose
Property	**Purpose**
Driver Version	The version of the driver
Status	The connection status of the driver, which can be:
	Created — Just created. If stuck in this status there is a fault with the driver.
	Not connected — Not yet connected to a gateway device.
	Connecting — Establishing a connection with a gateway device.
	Connected — Connected to the device and querying initial status.
	Operational — Working correctly.
Gateway	The IP address of the gateway to which the driver has connected. One will be selected automatically but this can be overridden by selecting an alternative from the drop-down menu.
Static Address	If the desired gateway is not discoverable for some reason (such as being on a VPN) then its IP address can be entered manually here. This overrides anything in the Gateway property.
Locale	Used to select the locale for localising any messages and text strings returned by the network driver.
Debug Mode	Used to show debug output in the Director logs and/or Lua debug window.
Debug Subsystems	For use as directed by technical support. Usually leave blank.
Debug Level	Level of debug output detail. 0 is errors only, 1 is errors and other important warning or status messages. Other levels give increasing detail but are usually only used under direction by support.

Table 2: Driver Properties

Driver Installation

Once you have established that the Linn DS Network driver has installed and discovered all your Linn devices (see documentation included with that driver), add one instance of a player driver "Linn DS Series" for each Linn DS player that you have in your system to the room in your project, which contains the player.

It is possible to directly install DS players discovered through SDDP just by dragging them into the appropriate room in the configuration. This will also automatically associate the driver with that player, setting the **DS or Player** property appropriately.

If the DS is providing audio directly to a room (standalone room mode), we recommend naming the driver in a way that indicates the room it is in, e.g. "DS (Lounge)". If the DS is being routed through a switch (matrix switch mode), we recommend naming it according to its usage, e.g. "Martin's Music DS" (for a dedicated personal player), "Network Music DS" (for a single shared player), or "DS Player 1" (for a player to be selected from a bank of players) and also name the subsidiary Network Stream device to match as this is the device that the user will see in the UI.

Driver Configuration

It is necessary to ensure that this device driver is controlling the correct Linn device (known as a "room" in Linn terminology). The **DS or Player** drop-down in the **Properties** window may be used to check and select the correct Linn room name to use as the player in each Control4 room. If you have installed or associated the driver with a DS device using SDDP, the **DS or Player** property will change its name to **DS or Player (SDDP)** and will be read-only, as SDDP has already been used to make the correct choice of Linn room name.

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Figure 1: Room Selection

The driver has a "My Music" service associated with it. This allows the installer to configure a single UPnP or OpenHome server as the preferred source for music. The server is chosen through the **My Music Server** property of the driver. The alternative is the "Servers" service, which lists all the discoverable UPnP and OpenHome servers and then allows the user to browse through their content. The installer can choose to hide either of these sources in Navigator (see below) if they are not needed.

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Control4 Connection Configuration

As per standard Control4 practice, it is necessary to establish audio end-point connections for the device.

You do not need to manually configure any of the other connections between the device driver and the Linn DS Network driver (classes RF_LINN_SONGCAST and LINN_NETWORK_COMMS); these are all managed automatically.

Choose the **Connections** view, and select the **Control/AV** tab. Select the Linn device driver to reveal its connections. Note that the input connections are on the main device and the outputs are on the amp sub-device.

Figure 2: Driver Connections 1

Standalone Room Mode devices only

In the **Control & Audio Video Connections** window, select the **Audio End-Point** with the **Connection** type "AUDIO_SELECTION" and drag it onto an available **Audio End-Point** in the appropriate room. If the Linn device is also providing the audio for video services in the room (either directly or through an HDMI ARC connection) then connect this to an available **Video's Audio End-Point** in the room. If the DS device supports video output and it is being used for this purpose, choose the **Video End-Point** with the **Connection** type "VIDEO_SELECTION" and drag it onto an available **Video End-Point** input in the appropriate room.

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Figure 3: Driver Connections 2

Depending on the model, DS players can be used to supply audio output directly through a built-in amplifier, by pairing them with a Linn pre-amp, or by pairing with a third-party alternative. If a Linn pre-amp is used then the inputs, outputs and audio control features of the pre-amp are seamlessly integrated into the control of the DS.

If using a built-in amplifier or a Linn pre-amp, drag the **Audio End-Point** with the **Connection** type "AUDIO_VOLUME" onto an available **Audio Volume** input in the appropriate room to indicate that the Linn device is in control of the volume. If (as described above) the Linn device is also in control of audio for video services in the room, connect this end-point to an available **Video Volume** input in the room.

If integrating with a third-party pre-amp that has a corresponding Control4 driver, connect the STEREO Room Audio connection to the appropriate input of the pre-amp driver. You can then either use Konfig to disable volume control on the DS and connect the pre-amp driver to the room's AUDIO_VOLUME connection to have the pre-amp control volume, or fix the pre-amp's volume level and control volume through the DS, in which case the DS should be connected to the AUDIO_VOLUME end point.

For more details about pre-amp configuration, consult the [Konfig manual](#).

Matrix Switch Mode devices only

Connect the STEREO Audio Out connection and, if appropriate, the HDMI Out connection to the appropriate input(s) on the A/V switch driver(s) that represent the switch(es) to which the DS is connected.

All devices – Input connections

If you are using a player with input connections, then you can also make connections to the relevant line-in connections on the driver. The properties of the driver will tell you which Control4 input each available Linn input is mapped onto, giving you the Control4 input number and the Linn name:

Figure 4: Driver Connections 3

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If the inputs were as shown in the properties above, then the connections might look as follows:

Figure 5: Driver Connections 4

For devices connected to Linn pre-amps, the pre-amp inputs will also appear in the list of inputs on the driver properties page and should be connected up in a similar way to the DS's own inputs. Control4 does not have an HDMI ARC connection class at the moment, so for an HMDI ARC input use one of the alternative audio input classes instead (not the HDMI video input) on the appropriate input number.

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All Drivers – Satellite configuration

If the player is a satellite of another player, connect the Songcast Audio In connection (at the bottom of the long list of audio inputs) to the Audio Out connection of the master player, as shown below.

Figure 6: Satellite connection

Control4 Navigator Configuration

By default, Control4 Navigators will automatically display all Linn device drivers in the project in every room (as well as unnecessarily exposing end-points). To change this, choose the **System Design** view, select the **Room** (or rooms, if distributed via a matrix) for the device and display the **Navigator** tab.
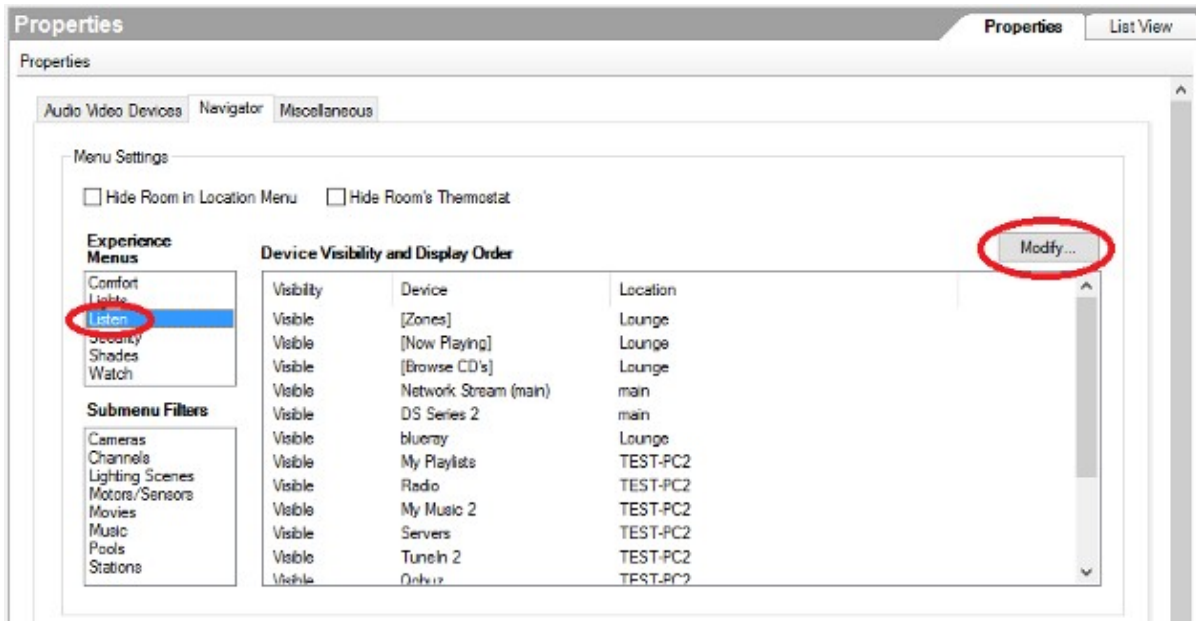
Figure 7: Device Visibility

Choose **Listen** from the **Menu** list and click on **Modify** to change the device display visibility.

Figure 8: Modify Device Visibility

For rooms that have a DS in the room itself (Standalone Room Mode), you will see devices corresponding to:

- The Linn Network

- All DS devices and Kustom zones that are in Standalone Room Mode

- The streaming media players, switches and amps built into these devices

- All the individual streaming services available (e.g. Tidal, My Music)

- Any devices connected to the inputs of the DS and Kustom devices.

In the **Visibility and Display Order** window, choose the devices you do not want to display from the **Visible Devices & Order** and click **Hide>>** to move them to the **Hidden Devices** list. Click **OK** once all devices not relevant to the room are removed. You are advised to hide all of the above except the streaming services and the connected input devices that you wish to use in that room. Note that the **My Music** service browses directly to the **My Music Server** chosen in the driver properties for the DS in that room, while **Servers** lists all the available UPnP and OpenHome servers. If you do not have a particular preferred server, you can hide **My Music**, while if you have only one music server in the system it

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would make sense to select that as the **My Music Server** and hide the **Servers** service.

For rooms that have one or more DS devices available through a matrix (Matrix Switch Mode), you will see devices corresponding to:

- All DS devices that connect to the room via the matrix

- The streaming media players built into these DS devices

- Any devices connected to the inputs of the DS devices

You are advised to hide the DS devices as selecting these serves no purpose. The streaming media players are items that the user will choose to browse and select content to play.

NOTE: Changes made in Composer will only be reflected on Navigators if you choose **File** > **Refresh Navigators**.

Driver Operation

To initiate playback on a Linn device, using a Navigator, select a room to control and choose the **Listen** option. The inputs available for the room (the device's streaming services plus any other devices connected to any external inputs it has) will be displayed. Choose the desired input.

Figure 9: Sources Screen

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Note that for DS devices behind a matrix, only the root "network stream" service will be shown; selecting that will bring up a browse menu containing the available services. Choosing an external input will bring up the appropriate Control4 user interface for that device. Choosing a local service (Tidal, Qobuz, My Playlists etc.) will bring up a browse screen appropriate to that service.
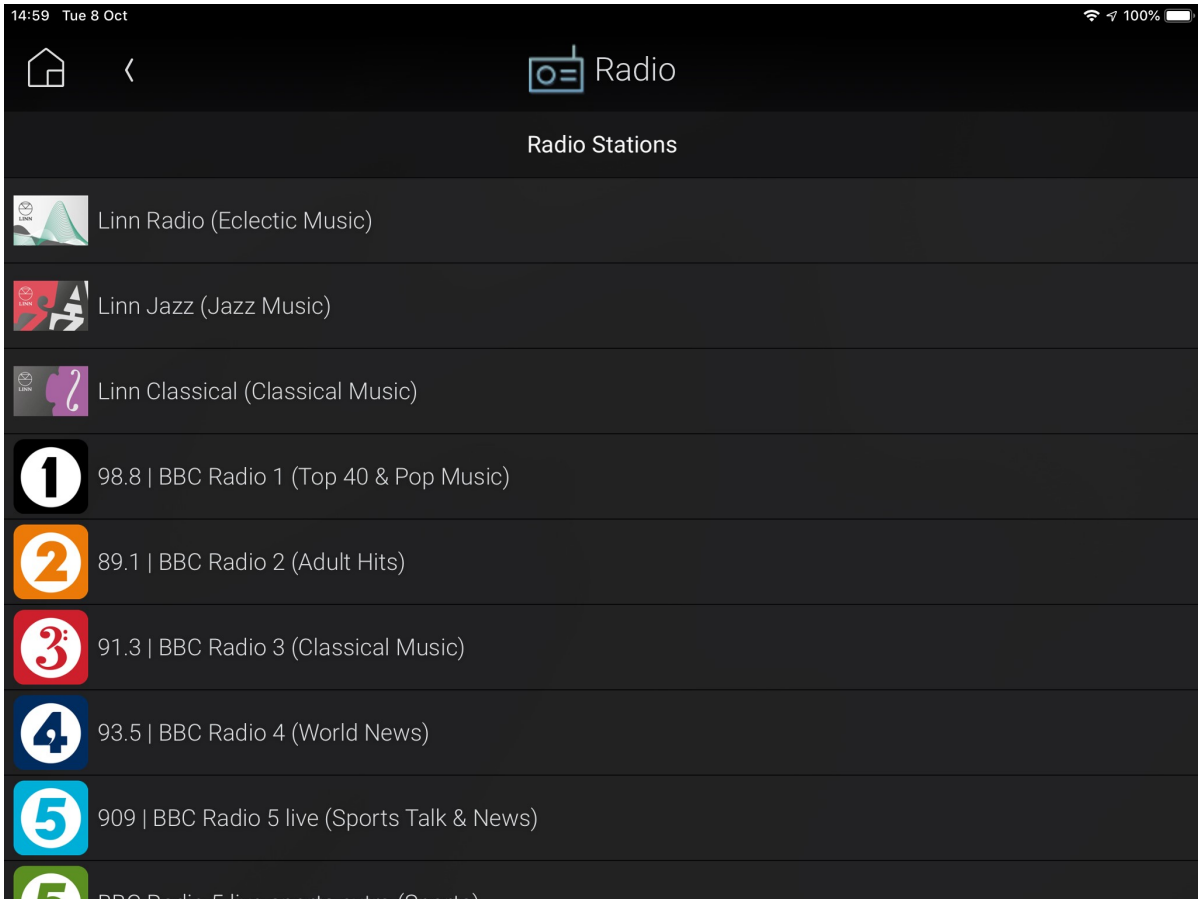
Figure 10: Browse Screen

The browse screen will show the available items for that service, which may be a flat list (e.g. radio pre-sets or playlists) or a browse able hierarchy (e.g. TuneIn, Tidal). For more complex services, there may also be tabs available to provide direct access to features of the service (e.g. for Tidal: New, Genres, Playlists, My Tidal):
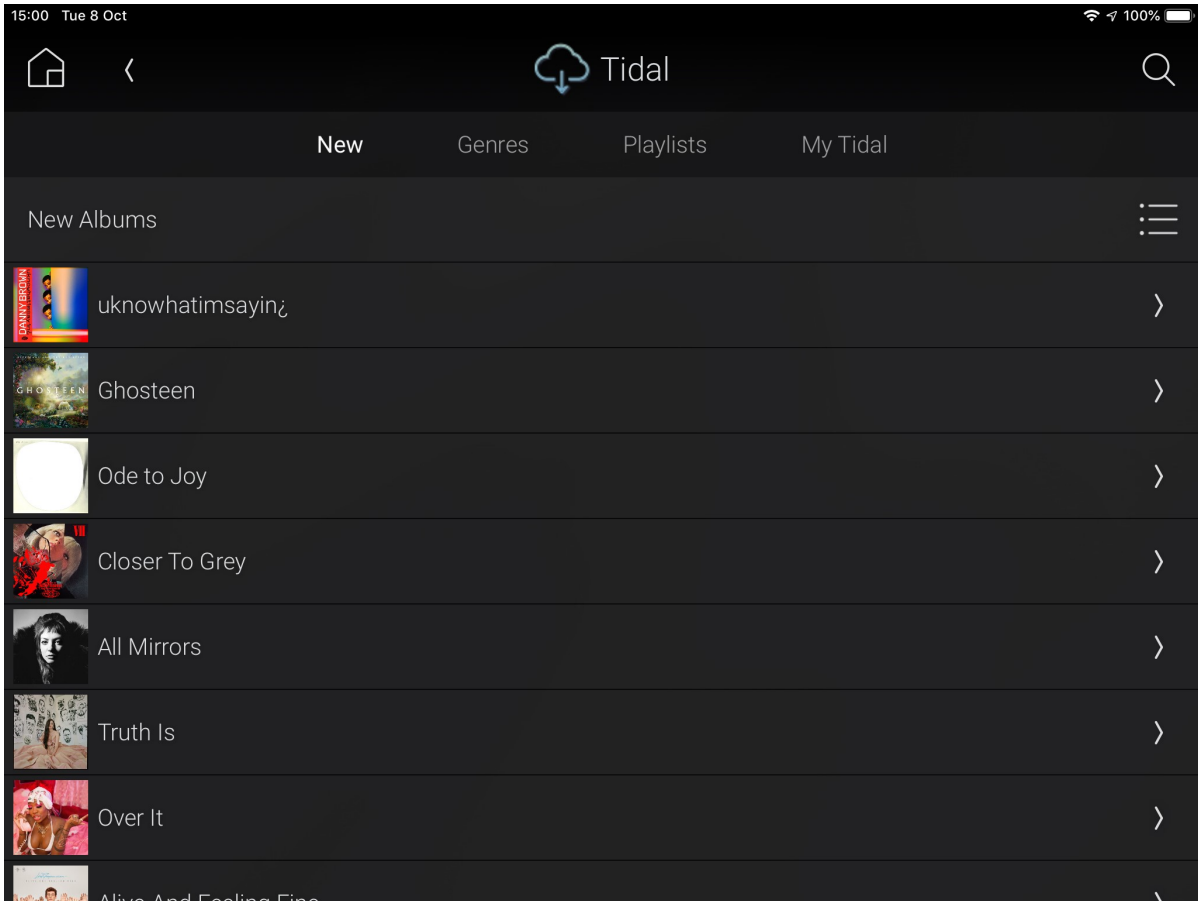
Figure 11: Browse New Albums

If you choose to search for an item, a keyboard pop-up will appear allowing you to enter a text string to search for and a set of buttons allows choice of the type of search if different sorts are available:
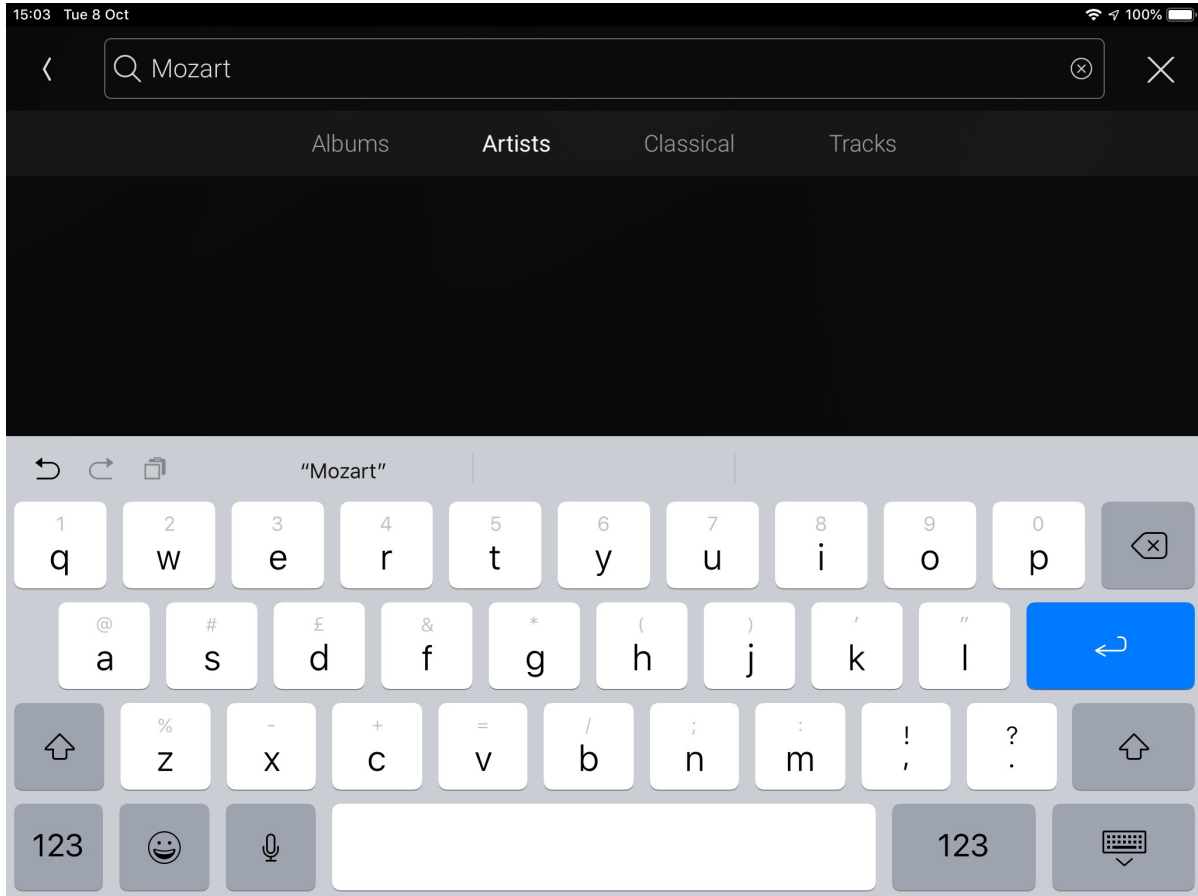
Figure 12: Search

Search results are displayed as a list that, if appropriate, can be browsed further.
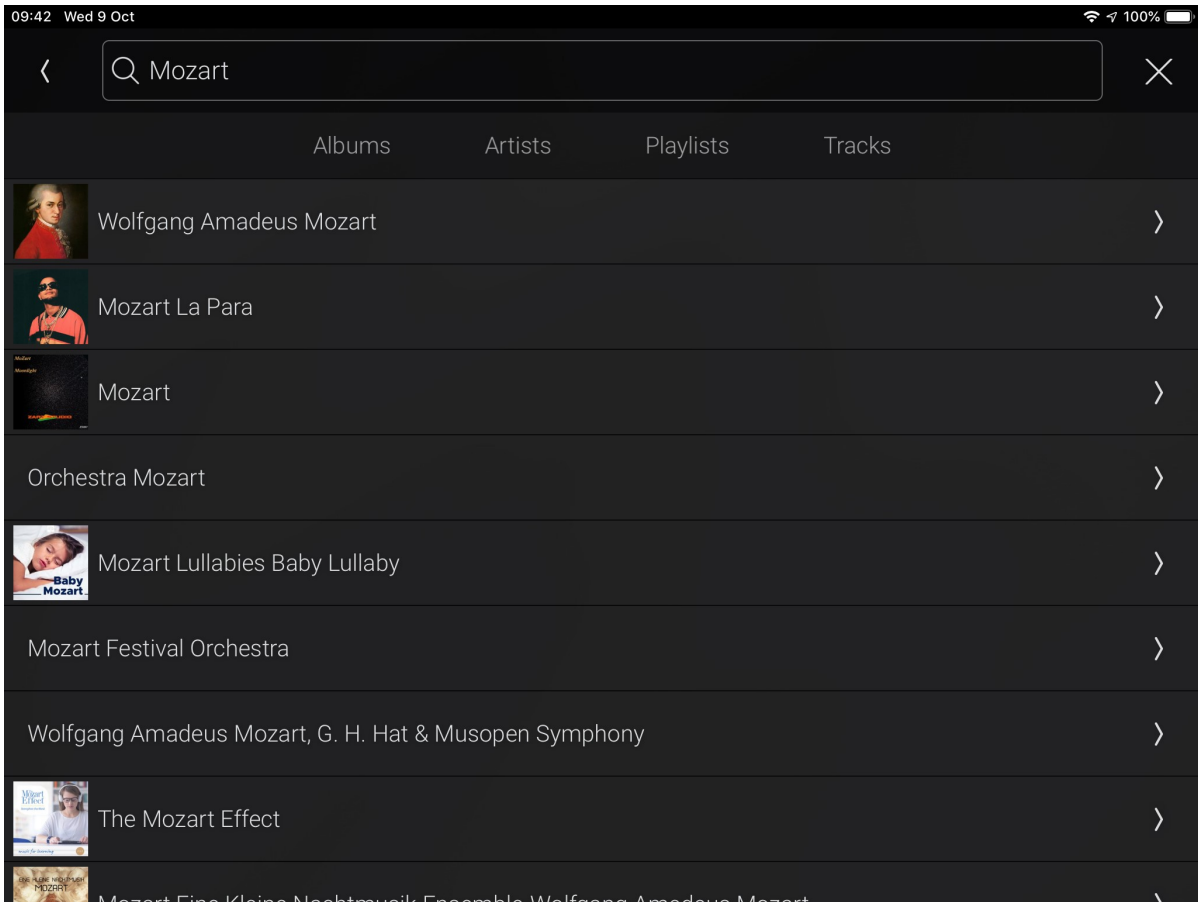
Figure 13: Search Results

Once an item is selected for playback, a pop-up will offer the available play options.
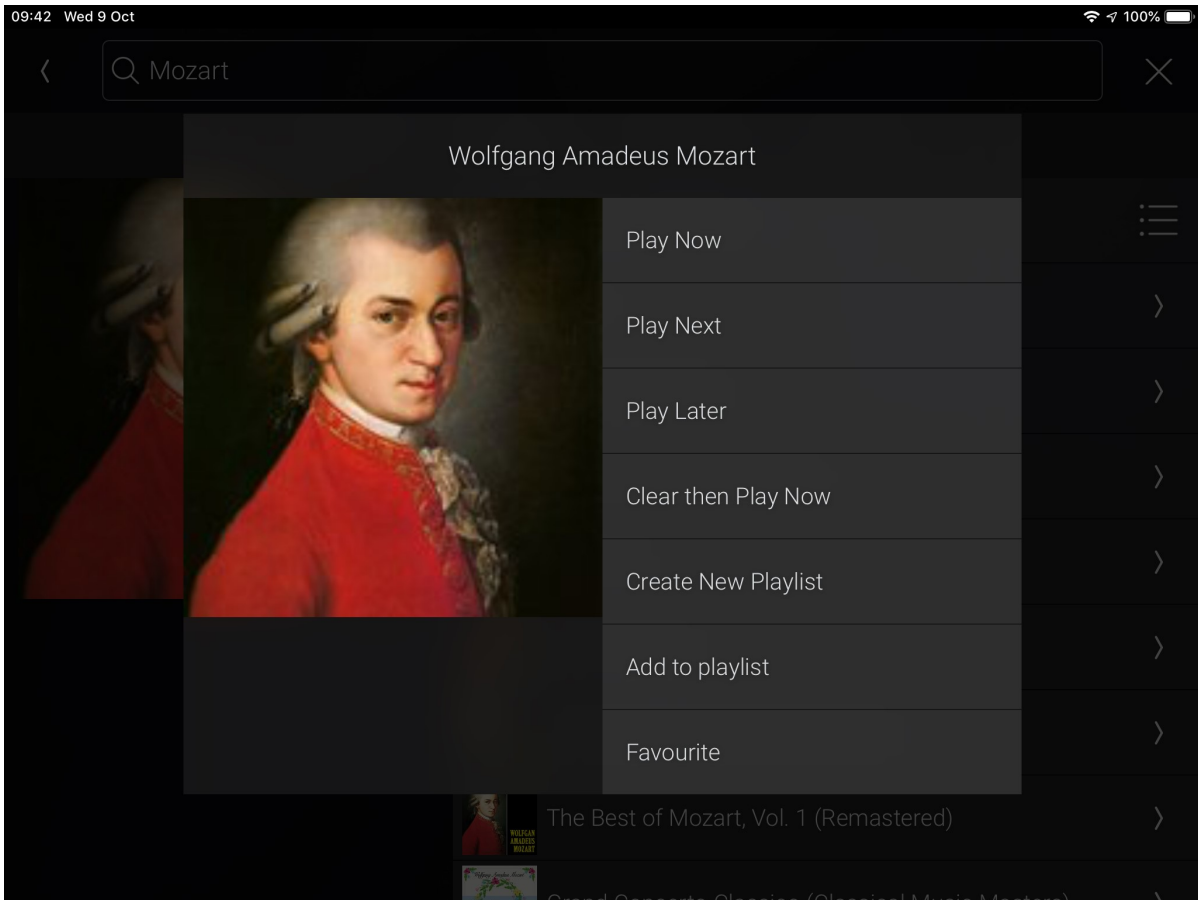
Figure 14: Play Options

The **Now Playing** screen displays information about the currently playing selection, transport and volume controls and the play queue.

Figure 15: Now Playing Screen

Note: The play controls automatically adjust so that only the relevant controls are shown, for example, Play is only shown if playback is currently paused or stopped. However if using a remote control such as the SR-260, pressing Play when already playing will reset playback to the beginning of the track.

The button highlighted in the image above, is used to access the grouping pop-up. From here, other rooms can be grouped with the current one so that the same source plays in all rooms within the group.
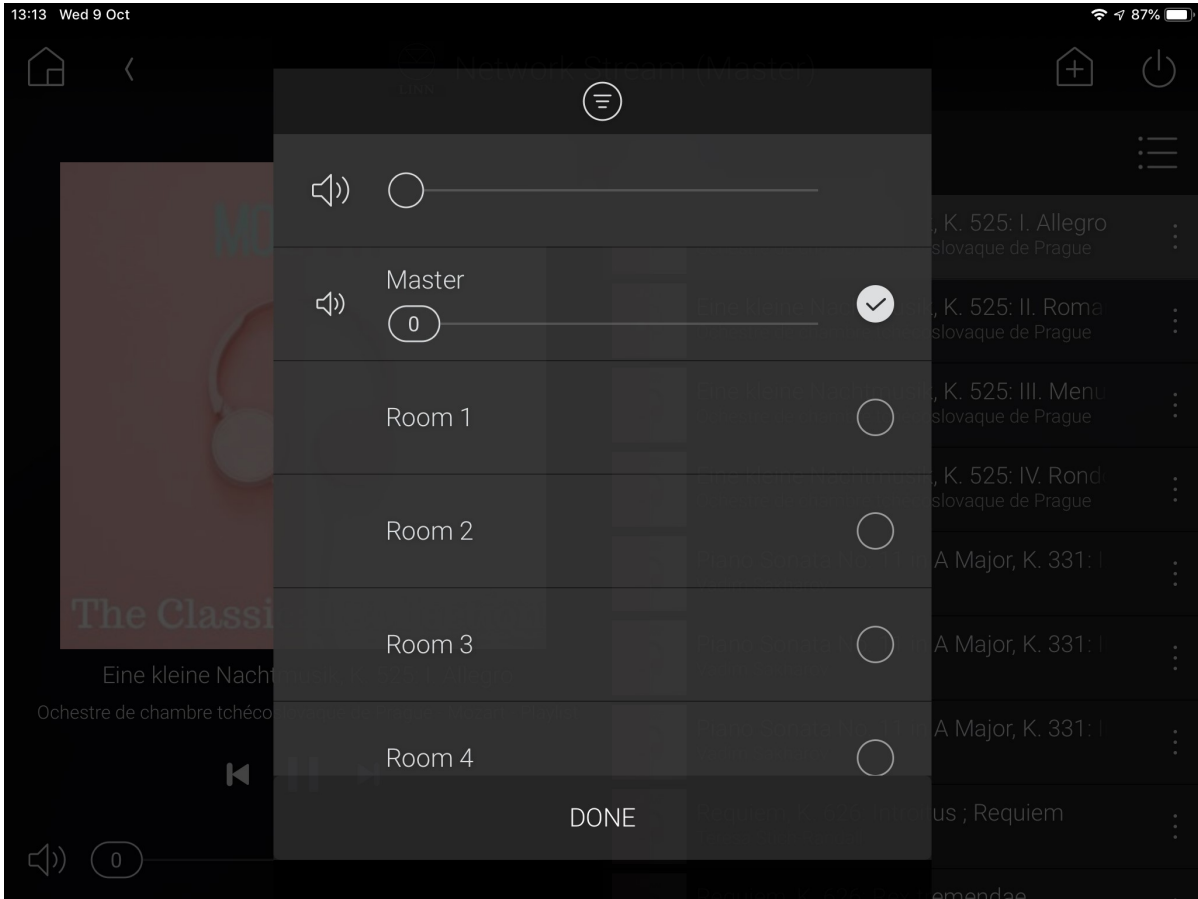
Figure 16: Grouping Pop-Up

To group rooms with the current room, click on the selection buttons. The source playing in the current room will now begin playing in all the other selected rooms.
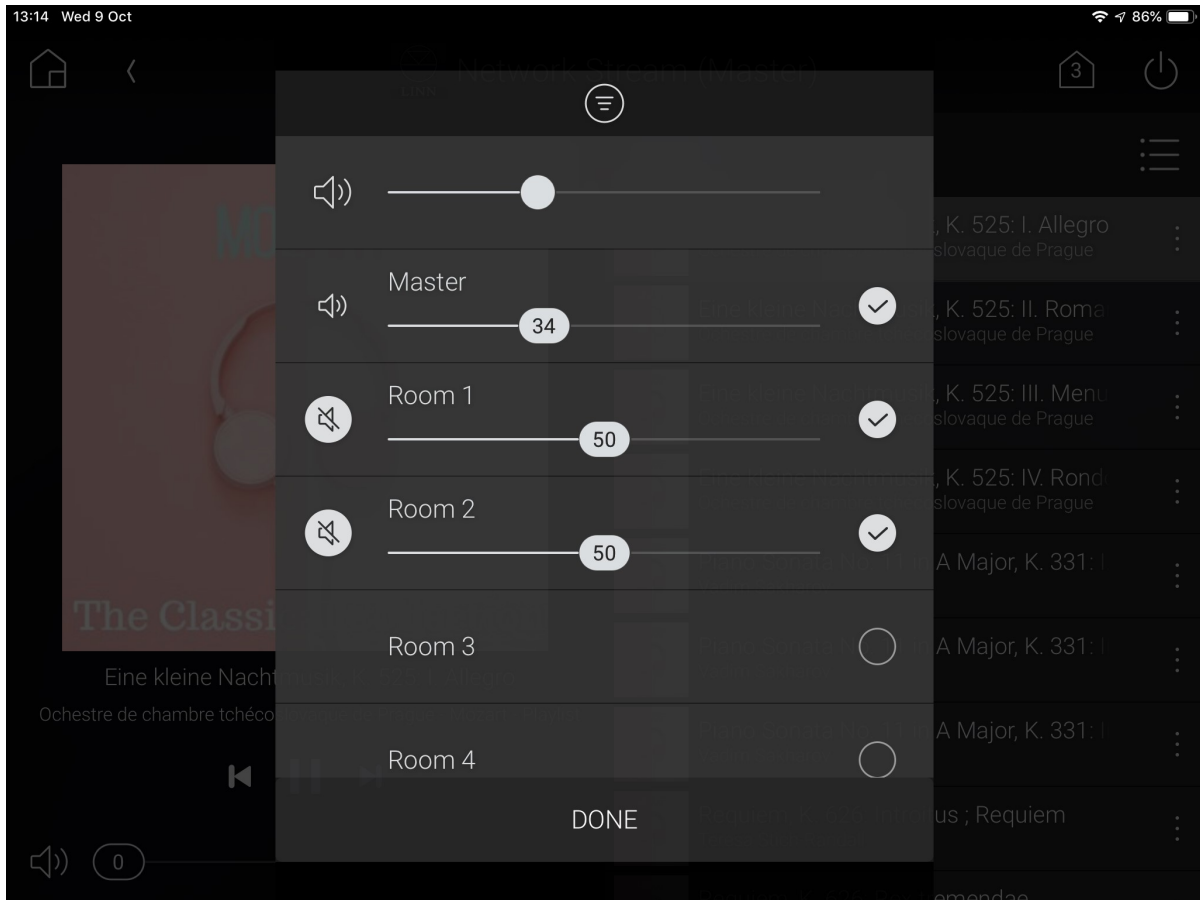
Figure 17: Grouping Pop-Up II

The pop-up now displays all rooms currently in the group, with a master volume control for the group, as well as independent volume controls for each room. The pop-up may also be used to remove rooms from a group. Note that when devices are removed from a group, they automatically power off.

Properties Summary

The driver has the following properties:

Property	Purpose
Property	**Purpose**
Driver Version	The version of the driver
Status	The connection status of the driver, which can be:

	Created	Just created. If stuck in this status there is a fault with the driver.
	Disconnected	Not connected to the Linn Network driver. Configuration is faulty; see Troubleshooting in the Linn Network documentation.
	DS/Player not selected	Driver has not been associated with a device yet.
	Offline	Driver cannot find the associated device on the network.
	Connecting	Connecting to the device.
	Connected	Connected to the device and operational.

For all these statuses, there will be a suffix of "(room)" to show that the player is in standalone room mode or "(matrix if it is in matrix switch mode.

Property	Purpose
DS or Player	Name of the DS or OpenHome Player associated with this driver. This is the "room name" attribute configured on the player. If the driver has been associated through SDDP, this will say **DS or Player (SDDP)** and will be read-only. Otherwise, it will be a drop-down list of discovered room names.
My Music Server	The UPnP or OpenHome server chosen to be the destination for the My Music shortcut.
Input 1 … 32	The name of the input on the DS that has been mapped to the given input number of the driver. So if Input 1 says "DVD" this means that the DVD connected to the DS has been mapped to input 1 and the driver for the DVD should be connected to the Audio In 1 and/or HDMI In 1 input of this driver.
Auto Power Rooms	Select whether a room is automatically switched off when the player switches off. If enabled, the room will only be switched off if the player is playing a network stream (if it is playing an external input, that device may still be in use via some other route).
Locale	Used to select the locale for localising any messages and text strings returned by the network driver.
Debug Mode	Used to show debug output in the Director logs and/or Lua debug window.
Debug Subsystems	For use as directed by technical support. Usually leave blank.
Debug Level	Level of debug output detail. 0 is errors only, 1 is errors and other important warning or status messages. Other levels give increasing detail but are usually only used under direction by support.

Table 1: Driver Properties

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Limitations

Pressing the Play button on a remote control while a track is playing will restart the playback of the track from the beginning.

The Input Changed, Volume Level Changed, Mute State Changed, and Any Audio Setting Changed events on the Audio Out output of the player proxy are not being raised. Programming should not rely on these events.

If changes are made to the currently selected source, including grouping and ungrouping operations, by any means other than through Control4 (e.g. Linn Kazoo or buttons on the physical device) then these are not guaranteed to be reflected correctly in the Control4 UI. For the Control4 UI to remain consistent with the devices, all source selection, and grouping must be done through Control4.

A corollary of this is that Control4 only thinks zones are powered on if a source for that zone was selected through the Control4 UI. So, even when the "all off" button on the top right of the Sessions screen is selected, "off" commands will only be sent to those zones that Control4 thinks are currently on.

The browse screens for third-party music servers have a search interface; however, search will only return results if the server makes corresponding search features available to the Linn gateway through an appropriate UPnP interface.

Troubleshooting

Discovery isn't working

This is likely due to missing bindings between the network driver and the device drivers (one cause of which, is adding the network driver to the project after adding the device drivers). To check this, open Composer and display the Connections view, selecting the Control/AV tab. Choose the Linn Network driver and scroll down to the Control Outputs:
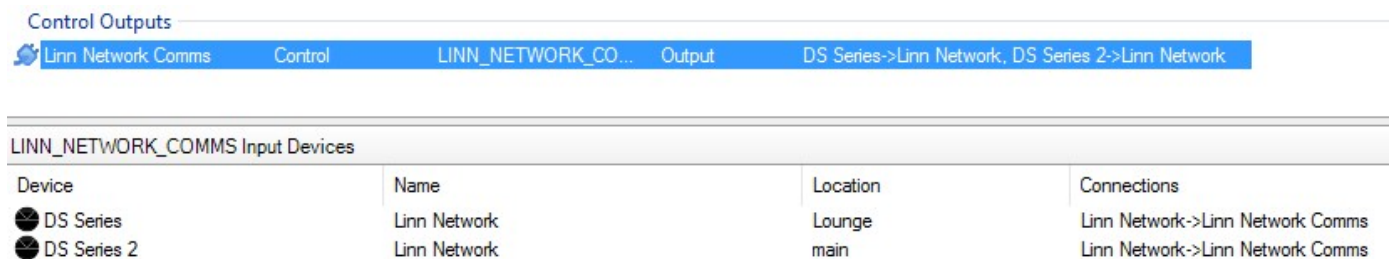

Figure 22: Driver Bindings

The control bindings should be established (as highlighted in the above image). If they are not, drag the Linn Network Comms control output onto each device in turn.

Communication lost with an individual player

Check that the player is still visible on the network and operating correctly. If it is, check whether the Linn Gateway has discovered the device (use the List Rooms Found action on the Linn Network driver). If it has not, press the Restart Discovery action button to prompt it to rediscover the device.

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Communication lost with all players

Check that the gateway device being used by the Linn Network driver is still visible on the network and operating correctly. If it is, but the driver is not showing its status as "Operational" then press the Restart Discovery action button to prompt it to rediscover the device.

Adding new devices to the system

If you add new devices to the system (either players or a new Kazoo Server that you want to use as a gateway), you will need to run device discovery again to have the drivers recognise them correctly. Press the Restart Discovery button on the Actions page of the Linn Network driver. Allow a couple of minutes for the system to settle and then you should be able to install drivers for the new devices.

Other problems

To get an idea of what the driver is doing, set the Debug Mode property to Print and the Debug Level property to 1 on either or both of the network and player drivers and then look at the output in the Lua window. This will show any errors, warnings, and connectivity messages from the driver.

Technical Support

For further technical support, please contact service@linn.co.uk.

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