

RELEASE NOTES

DENON HEOS MEDIA PLAYER DEMO

Version 7.1.7

KNOWN ISSUES

1. In some occurrences, when a Denon Heos device is power cycled, we will receive the device listing from Denon Heos without the IP address information. As the Simpl modules are associated with the Denon Heos devices via the IP addresses, this will result in the Denon Device reporting as offline on the Crestron UI but reporting as online on the Heos app.

To recover the device on the Crestron side, it needs to be power cycled.

A message will be added to the Error log to make the user aware of this error case.

E.g. Denon Heos: GetPlayers response contains a device with no IP address information, Device Name: [Heos Speaker Name] . Power cycle this device to resolve.

CONTENTS

Overview.....	3
Features	3
Equipment	4
Important Notes.....	5
PRO3, AV3, or CP3N Usage.....	5
Adding Denon Heos Players	5
Add Additional UIs	7
Loading the Program and Project Files	8

OVERVIEW

This sample program demonstrates programming a Smart Graphics Media Player to interact with Denon Heos audio devices. The Denon Heos devices that can be controlled are the Heos 1, Heos 3, Heos 5, Heos 7, Soundbar, Heos Link, Heos Amp and Heos drive.

Denon Heos does not act like a traditional centralized audio distribution source, instead, it can act as both a “source” and the “room”. The Heos user can use the Heos app and play different content in each room if they desire, or they can choose to group rooms together to make the content track. (Grouping is only available via the Heos app)

To integrate with the Denon Heos system the Denon Heos Device Interface modules are used in combination with the Media Player object.

- a. Each Denon Heos Device Interface module represents a Heos zone.
- b. The Media Player object is used to display each zone’s information.
- c. The Media Server Object Router v4.0 module is used to switch between different Heos zones.

FEATURES

- Ability to use Heos transport controls.
- Ability to browse Heos providers and favorites
- Ability to control Volume/Mute on each Heos device.
- Ability to select local discrete inputs
- Returning metadata for the currently playing content

EQUIPMENT

This program is designed to work with the following hardware/software:

ETHERNET DEVICES

Device	IP ID
CPC3 Control System	N/A
CEN-GWEXER	04
Xpanel	05
TSW-1052	06
TSW-1060	07
TSW-752	08
Crestron App	09
TSW-552	0A
TSW-560	0B
TSW-760	0C

RF DEVICES

Device	RF ID
HR-100	10

FIRMWARE AND SOFTWARE

Device	Firmware Version
CP3	1.503.3568.26236 or later
CEN-GWEXER	1.3706.00007 or later
TSW-1052	1.004.0012.001 or later
TSW-752	1.004.0012.001 or later
TSW-1060	2.003.0040.001 or later
HR-100	1.000.0100 or later
TSW-552	1.004.0012.001 or later
TSW-560	2.003.0040.001 or later
TSW-760	2.003.0040.001 or later

Software	Version
Simpl Windows:	4.010.07
Simpl+:	4.04.01
Device Database:	100.02.005.00 or later
Crestron Database:	73.02.001.00 or later
VTPPro-e:	6.2.00.03 or later
Smart Graphics Controls:	2.15.03.04 or later
Toolbox:	3.01.664.00 or later

DENON HEOS CONFIGURATION

To use the sample project the Heos system first need to be configured via the Heos app which is available for IOS and Android.

Open the Heos app and it will automatically detect the Heos units in your system. You will now need to setup your Heos account. To do so, select Music, then the gear icon and then HEOS-account.

Login with your Heos account or create a new one if you don't have one. You will need to input these credentials in the SIMPL program. Input the user name and the password on symbol S-1.2

Next you need to setup the IP addresses for each Heos unit in the SIMPL program. You can retrieve the network information via the Heos app by selecting Music, then the gear icon and then information. You'll now see a list of all Heos units in the system with their network information.

Input the IP address of each unit on the IP Address parameter of each Denon HEOS Device Interface module in the SIMPL program.

Next we need to set the IP address that will be used for system commands. Choose the IP addresses of one of the Heos units and input it on symbol S-1.2 in SIMPL.

Now recompile the SIMPL program and upload to your Crestron processor

IMPORTANT NOTES

Please read each note thoroughly for successful configuring of a Crestron and Denon Heos system.

The Touch screens and Heos devices cannot reside a control subnet.

PRO3, AV3, OR CP3N USAGE

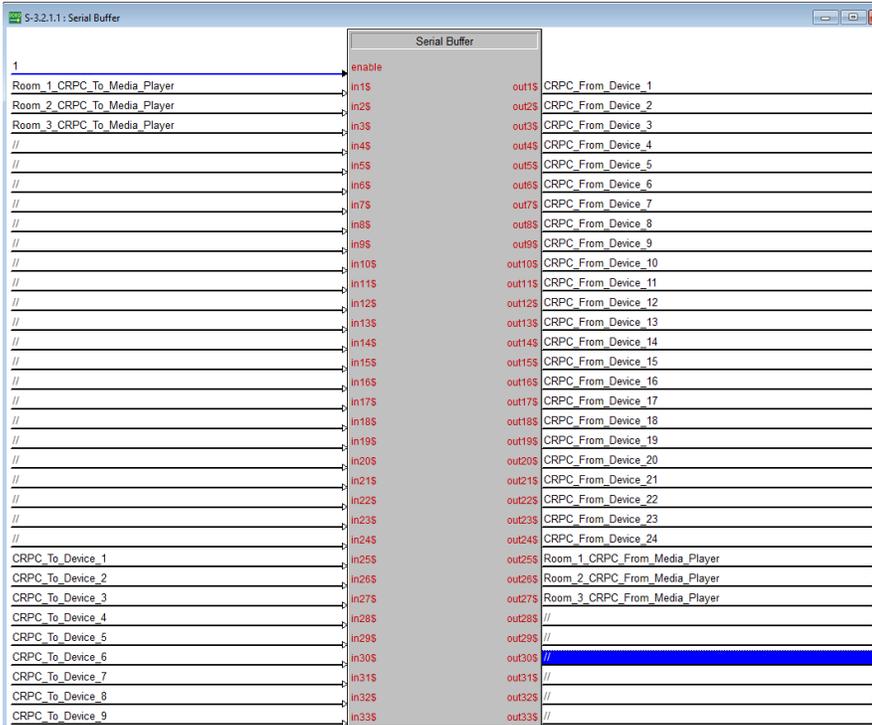
If the program is to be modified to use a PRO3, AV3, or CP3N, the IP Port Number and Ethernet Adapter Type may need to be specified to accommodate a custom installation. For details, refer to Page 14 of the Smart Graphics Media Player Programming Guide.

ADDING DENON HEOS PLAYERS

To accurately add Heos devices to your Crestron system, use the following guidelines:

1. Start with all Heos speakers ungrouped.
 - a. This can be done via the Heos mobile app.
2. Add a **Denon HEOS Device Interface v7.1.0** to represent each physical Heos device. This is required when using the Smart Graphics Media Player integration.
3. Set the **IP Address** parameter to the correct Heos IP address.
4. Copy the signals from an existing Denon HEOS Device Interface Module and rename the Room_x prefix.
5. Connect the CRPC signals of the added Denon Heos Device Interface v7.1.0 to the common media player logic. This is done by adding the new CRPC signals to the serial buffer(S-3.2.1.1) in the common media

player logic folder.

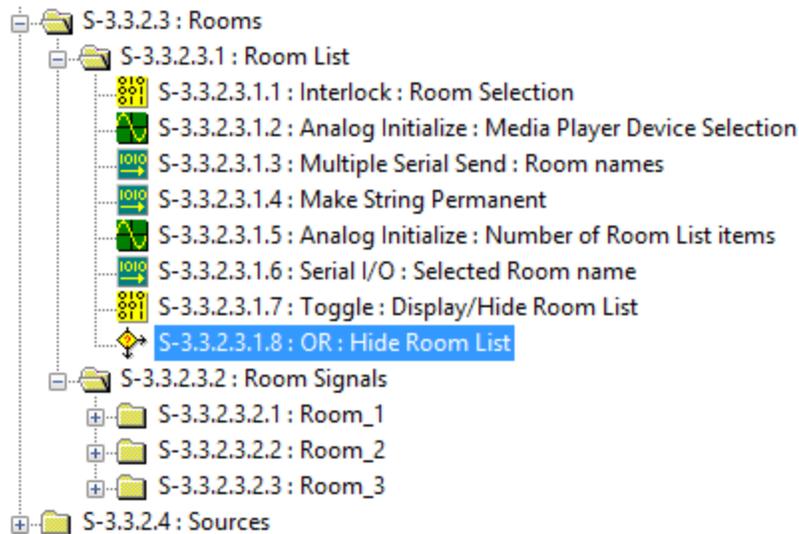


6. Make the new player available to User Interfaces by updating the logic in the “Rooms” Signal folder to route the UI signals to the newly added player when it is selected on the UI.
 - a. Add the room signals buffers to route the signals from the new player to a UI.
 - i. This can be achieved by copying one of the folders for an existing room and then rename the Room_x prefix. (s-3.3.2.3.2.1 in screenshot below)

Note: The room logic signals are different for an xpanel and touch panel. A touch panel has extra signals to route the hard button signals.

When adding a touch panel, you should copy signals from an existing touch panel.

When adding an xpanel, you should copy signals from an existing xpanel.
 - b. Add the new player to the room list by updating the logic symbols in the Room List folder (S3.3.2.3.1).



- i. Room Selection Interlock (S-3.3.2.3.1.1)
Expand the interlock for the rooms you want to control with this UI.
Connect the inputs of the interlock with the Press digital outputs on the Room Selection list extender for this UI.
- ii. Media Player Device Selection (S3.3.2.3.1.2)
Expand the Analog Initialize symbol for the rooms you want to control with this UI.
The values are the indexes for the devices on the Media Server Router symbol.
- iii. Room Names (S3.3.2.3.1.3)
Expand the Multiple Serial Send symbol with the room names you want to control for this UI.
Connect the outputs with the Make String Permanent symbol (s3.3.2.3.1.4) and the serial inputs on the UI hardware symbol.
- iv. Number of room list items.
Set the number of rooms you want to display in the room list as the value on the Analog Initialize symbol (s-3.3.2.3.1.5).
- v. Selected Room Name.
Expand the Serial I/O symbol (s-3.3.2.3.1.6) with the room name that can be selected for this UI.
- vi. Hide room list
Expand the OR symbol (s-3.3.2.3.1.8) with the room selection signals for the rooms that are available for this UI.

ADD ADDITIONAL UI S

Adding additional Media Player UIs is detailed in the Media Server Object Router v4.0.cmc module's help file. This can be accessed in SIMPL by selecting the module and press **F1**.

Note: The room logic signals are different for an xpanel and touch panel. A touch panel has extra signals to route the hard button signals.

When adding a touch panel, you should copy signals from an existing touch panel.

When adding an xpanel, you should copy signals from an existing xpanel.

Adding Media Player Logic:

1. Add the touch screen to the control system program and import the .CED file from the sample program zip file. For details, refer to Page 4 of the Smart Graphics Media Player Programming Guide.
2. Copy all the signals and smart graphics programming from the TSW-1052 on IP ID 6 to the added panel. Then rename the signals for the newly added panel. E.g. Rename UI_2 to UI_5.
3. In the logic section: Copy the TSW-1052 folder (S-3.3.2) and do the same signal rename as in step 2.
4. Delete the added Media Server Object Router v4.0 module that was added when the smart graphics extenders were loaded for the newly added touch panel.

LOADING THE PROGRAM AND PROJECT FILES

Load the compiled program and project files in the following order:

1. Smart Graphics Media Player program to the control system.
2. Each touch screen project to the corresponding touch screen hardware.