

# SpeakerCraft Integration Guide

Manufacturer:	Denon
Model Number(s):	1613, 1713, 1912CI, 1913, 2112CI, 2113CI, 2311CI, 2312CI, 2313CI, 3310CI, 3311CI, 3312CI, 3313CI, 4311CI, 4520CI, 4810CI; AVP-A1HDCI X1000, 2000, 3000, 4000 (US & Int'l)
SpeakerCraft App Version:	1.2 and above
Document Revision Date:	8/10/2015

## OVERVIEW AND SUPPORTED FEATURES

Denon receivers include an Ethernet port which is connected to a Local Area Network (LAN), allowing the **SpeakerCraft App** system to provide full two-way communication; enabling reliable control and providing feedback to the **SpeakerCraft App** system when changes occur at the receiver.

### DENON RECEIVERS SUPPORT THE FOLLOWING FEATURES:

**Basic Source and Volume Control:** Select any available source and control volume with two-way feedback. Changes made at the receiver (turning the volume control, changing source) are immediately reflected in the **SpeakerCraft App** interface.

**Onboard AM/FM, AM/FM HD, or FM Tuner:** Supported Denon receivers often include a built-in AM/FM, AM/FM HD, or FM-Only tuner, which can play music in the main zone. The tuner can be controlled from the standard AM/FM tuner interface in the **SpeakerCraft App** system.

**Satellite Tuners:** Some Denon models support XM/Sirius satellite radio. These tuners may require external tuner boxes for full function. These tuners can be controlled through built-in interfaces.

**Some Models: Limited Support of iPod Dock + NET/USB Music:** Digital audio source control is limited to source selection and volume control.

**Tone/Listening Mode Control:** Most Denon models provide control for Bass/Treble and Listening Modes through a custom settings page. Note that two-way feedback of Listening Modes/tones may not be available or be consistent on all models.

### DENON RECEIVERS DO NOT SUPPORT THE FOLLOWING FEATURES:

**Ethernet Port (Older Models):** The **SpeakerCraft App** does not support Ethernet control on models prior to the **XX10CI** series.

**Integration of iPod Dock and NET/USB Sources:** Digital audio source control is limited to source selection and volume control.

**Multiple AVR Zones:** The **SpeakerCraft App** supports the functionality of **ONE AVR Zone**. When using supported A/V Receivers with Zone 2 (or Zone 3) outputs, these additional zones will not function through the **SpeakerCraft App** system and are NOT supported.

**Additional Features:** Many units include additional features such as trigger outputs, IR Inputs and Outputs, etc. Unless specifically listed above, the **SpeakerCraft App** does not integrate with these features.

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**IMPORTANT!** On some models the iPod may appear as a separate source input, when in actuality the iPod dock audio is routed to one of the standard source inputs. On these receivers, do not use the iPod source input. Use the correct audio input instead. For example, the Denon 3808ci typically routes the iPod audio to the VCR input. Use the VCR input for any control interface, and leave the iPod source blank. If used, the iPod source will flash to the VCR input.

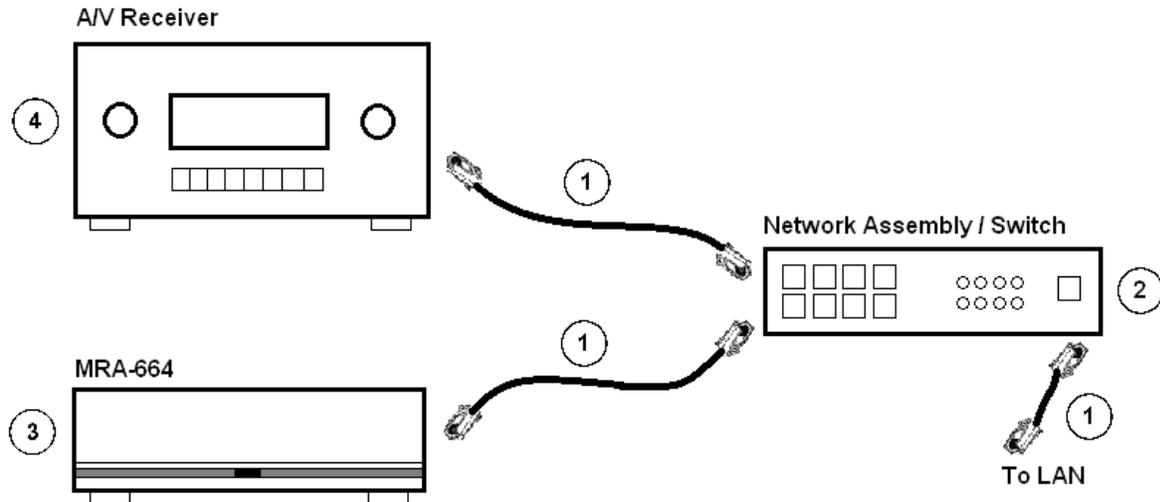
Any feature not specifically noted as “supported” is not supported.

## INSTALLATION OVERVIEW

1. During the rough-in phase, install the necessary speaker and video cabling for the theater installation.
2. Also during the rough-in phase, run a Cat-5 wire from the location of the receiver back to the network switch location to provide the Ethernet connection needed to control the receiver. The **SpeakerCraft MRA-664** should already be connected to the same LAN.
3. Install the speakers, display and other theater components.
4. Program the receiver according to the manufacturer’s documentation.
5. Test the receiver to ensure that the sources play correctly and that the audio and video operate as expected.
6. Configure the **SpeakerCraft App** system for the receiver and confirm communication between the receiver and the Controller.
7. Test the **SpeakerCraft App** system by changing sources and volume to confirm that the correct source plays.

## CONNECTION DIAGRAMS

### DENON CONNECTIONS: ETHERNET



### BILL OF MATERIALS

#	Device	Manufacturer	Part #	Protocol	Connector Type	Notes
1	Cat-5 Cable	Installer	N/A	TCP/IP	RJ-45 Male to RJ-45 Male	Must terminate all 8 conductors
2	Network Assembly/Switch	Installer	N/A	TCP/IP	RJ-45 Female	
3	MRA-664 System Controller	SpeakerCraft	MRA-664	TCP/IP	RJ-45 Female	
4	Denon A/V Receiver	Denon	See <b>Notes</b>	TCP/IP	RJ-45 Female	See <b>Model Number(s)</b> above

### DENON ETHERNET CONFIGURATION

For reliable control and feedback, the Denon must be set to a static IP address. To configure the Network Settings, enter the OSD and use the **Arrow** and **Enter** keys to configure a Static IP:

1. Enter **Manual Setup**
2. Enter **Network Setup**
3. Enter **Other** and set **Network Standby** to **ON**. (some models) **Note:** ON **xx13/4520CI** models, the name has been changed to **IP Control** and should be set to **Always On**.
4. Return back to **Network Setup**.
5. **Disable DHCP and enter network settings as follows:** (on some models you must enter the **Network Connection** sub-menu)

<b>IP Address:</b> (default) <b>192.168.0.50</b>	We recommended setting the 1 <sup>st</sup> Ethernet controlled Zone Controller to 192.168.0.50, the second to 192.168.0.51, and so on.
<b>Subnet Mask:</b> <b>255.255.255.0</b>	(Typical Setting)
<b>Gateway and DNS:</b> (default) <b>192.168.0.1</b>	Set to Router LAN IP Address

## COMMON MISTAKES

1. Attempting to use the iPod input instead of the input it redirects to. For example, the iPod dock uses VCR audio input. Set Source to VCR input...not iPod.
2. Incorrect Network Standby mode. Network Standby must be set to allow the network port to remain active even when the unit is turned off for reliable control. If this is set incorrectly, the unit will not be able to be turned on from Standby (all other control will function).
3. If multiple Denon models (3+) in one network are being used with Ethernet control and there are control reliability issues, ensure that the latest Denon firmware is installed. **XX12** models appear to have had issues on earlier firmware versions.
4. Attempting to configure multiple AVR zones. Even when using supported models that have second and/or third zones, only ONE AVR zone will work correctly with the **SpeakerCraft App**.