Yamaha MusicCast

This driver was written using version 1.2 of the Yamaha YXC Protocol. It controls all MusicCast enabled devices, including standalone speakers, soundbars and receivers. The driver only works via ethernet.

If SiriusXM channel icons render incorrectly you must update your panels to the most recent firmware.

Release History

1.0: The initial release of the driver

NOTE: Version 1.0 of the driver does not control tuners. If you need to use the tuner you will need to continue to use the AVENTAGE driver which uses the older YNCA protocol.

Device Types

Because the driver supports multi-zone receivers it contains two types of sources. First is Zones, which contain all the audio functionality of the system: power, volume, sound fields, source selection, etc. and Network/USB which is the media player portion of the devices with transport control, browsing, presets, etc. All zones in a multi-zone device use the same player. The USB source uses the Music Player device type in your template but will default to a device type called MusicCast if your template contains one.

Configuration

MusicCast sources and MusicCast Zones are added separately to your project. Because you can add a different number of zones than you can players, but you can't have a player without a zone the number of devices in the system are determined by the number of zones, and the device configuration information is entered into the Zone sources. Users of Integration Designer version earlier than 10.0 will always have to add the Device Count. The only auto-programmed zone is the Main zone. You can add tag additional commands manually and then add commands for the other zone if you need them.

Entering the device name in the configuration will allow that name to show up when selecting variables and commands for that device. There is a variable that allows you to use that name on your panel (Config Name) but most likely you will use the variable for the actual device name (Player Name) that the driver gets from the device itself.

The current version of the driver is not capable of device discovery, so you must enter an IP address for the device into the configuration. This will require you to use either a static IP address or to have your router reserve a specific DHCP address for the device.

Because MusicCast devices can have up to 4 zones in the case of some receivers, you must enter the number of zones. This will allow them to show up in the variable and command sections.

Differing MusicCast models have different resolution in their volume control. The driver can get that information from the device, but you need to know that information so that you can have ID set any gauges or sliders to the correct ranges (although they can always be edited later). There are commands that allow you to treat the volume as a range from 0 to 100 and that works fine with sliders but doing that with volume up/down buttons while showing volume as an integer can cause scaling problems not every volume change commands causes a change in the displayed value, even though it does change the actual system volume. In addition, although the device can find out the range of the volume control, it can't find out the actual numbers used, or whether it uses half dB steps. Because of this the range for most receivers is 0 to 161 instead of the -80 to 16 they show on the front panel. If you need to find the range of the volume control or other controls such as subwoofer, tone control etc. you can access the device from your browser at: http://{{ip_address}}/YamahaExtendedControl/v1/system/getFeatures to get this information. Look down towards the end for information marked as "range-step"

Transport (including visibility)

Transport controls are part of the NetUSB device and include revered state and visibility variables. You can program visibly so that only the transport commands available in the current service are displayed. A classic example is that skipping backwards is not available in Pandora, so the system can be programmed to hide the button when on that service. Integration Designer does not autoprogram visibility, so it will have to be added manually. This is especially important for stop and pause buttons as most broadcast type services such as SiriusXM don't support a pause command so it's a good idea to only leave the stop button showing.

Source Selection

Zones are also responsible for the source selection, even if it's a streaming source. There are discrete commands

for every possible input for every zone even though some of the combinations are obviously not possible. Once again, the device can find the available sources for a room and, in fact, the list variables that allows you to select sources for a room do adjust to only show available sources but if you use discrete commands you'll be responsible for knowing which inputs/sources can be used is a specific zone of a device.

Volume Control

As mentioned earlier the volume can be different on nearly every device you have the option of showing volume using the native resolution/values of the device or as a 0-100 value. You cannot show volume as a -80.0 to 16.5 value.

If you use the Group Volume command the driver will send the command to every other player in the group as well. It is recommended that the Group volume commands be used as if there is no group, it will just change the one device but when there is a group it will adjust all of them. You can create a separate page if you want to adjust the balance in a group using the regular volume commands.

EQ/Tone/Subwoofer

Tone controls also can have a range that varies from device to device, and in fact, they can be unavailable in some devices. The URL mentioned under volume in the Configuration section can also show the range for tone control/eq and other controls. Any gauges tend to get programmed with -12 to 12 as their range, you may have to change this manually.

Browsing

Every MusicCast device keeps its own set of browsing lists. When you enter your account information it must be entered into each device. The devices themselves can have multiple accounts for some services and switch between them but this is not available in the API yet. The MusicCast API describes each entry in the list as something it can enter, like a folder, or something it can play. The Browse Mode can be changed on a panel by panel basis so that if you select a folder in 'Select' mode it will enter that folder and list it's content. Selecting it in Play mode should play the folder. These commands are in the API but do not work yet. I've left them in as they are supposed to work and subsequent firmware updates may enable it but as of now there is no need for these commands as they don't alter how the menu works.

The overall source menu does not drill down to the top menu of the service, they are separate lists. You can use the source list and then switch to the browse list and it will reflect the source most recently picked, or you can use separate discrete commands to select the source while jumping to a browse page with the browse list on it.

Presets

Each player has 40 presets which store predefined sources. A set of modes for presets is defined as well. The action taken by the driver when selecting from the preset list depends on the current mode of the panel. Recall, or Play, starts playback of the selected preset. Store replaces the current preset with the currently playing item. Clear removes the preset at the current location.

The Presets list will always have 40 items in it, even if they are empty, so you have access to any empty preset you want to fill.

There are also commands to directly access presets to allow you to make a page with direct buttons. In addition, there are variables that can be used to label those buttons with the titles and services for that preset

Recent

The Recent list is similar to the Presets list but is added to with every change in source. A Clear Recents command allows the end user to clear the list and start saving them again.

Events

The players send driver events whenever they leave or enter play mode, or just when the currently playing song title changes. There are also events for zone audio events: Power or Mute on or off and source changes for any zone on the device. Each zone has its own set of these events, so you can distinguish where it happened.

Linking

Linking commands allow you to link any device to any other, with 'selected' devices able to be either the target or

the master of the link. Variables include boolean variables to show the relationship between any two devices as well as an overall status that tells when a device is the master or client of a group. Unfortunately, unlinking from a group leaves the device using ‘MCLink’ as it’s source and the device saying it’s still a client. In order for it to show that it’s not a client a new source has to be selected.