

Wave Electronics MX Matrix - URC Driver

Release Notes

Current Version: 1.0.0

Introduction

This driver has been designed to provide 1-way control of a Wave Electronics MX matrix via TCP/IP and RS232. The following features are supported:

- **General Commands:**
 - Basic Input/Output switching
 - Switching one input to all outputs
- **CEC Commands:**
 - CEC Power On
 - CEC Power Off
- **Rebooting Commands:**
 - System Rebooting
- **Preset Commands:**
 - Preset Saving
 - Preset Recalling
- **Audio Matrix Commands (not available for the MX0404 model):**
 - Setting Audio Switch Mode
 - Switching Audio Input for Audio Output

This driver has been written and tested using the following Wave Electronics device types:

- MX0404
- MX0808

Driver Configuration

It is recommended that the Wave Electronics MX system be installed, configured and tested by a suitably qualified engineer, according to Legrand's documentation, prior to integration with this driver.

Driver Installation

Two driver file's exist in the release package:

Driver File Name	Description
MX0404.cd2	The driver file for the 4x4 matrix
MX0808.cd2	The driver file for the 8x8 matrix

Adding the Drivers

There are four variations of the driver that can be installed:




- MX0404 (4x4 - RS232)
- MX0808 (8x8 - RS232)
- MX0404 (4x4 - IP)
- MX0808 (8x8 - IP)

These drivers are very similar except that they natively support a different number of input and output devices in Accelerator. It is also important to note the 4x4 driver does **not** include Audio Matrix commands.

To add the driver:

- Select a room to place the driver
 - It doesn't really matter where this driver goes but it would make sense to locate it in the project where you have it physically in the installation.
- Choose **Program** -> **4. Add Other Devices**.
- Ensure **Select Database** is set to **My**.
- Choose either **IP** or **RS232** database in **Select Module Type**
- Set Select Category to **MATRIX SWITCHES**.
- Choose **Wave Electronics** from the **Select Brand list**.
- From **Select Model** choose the desired driver.
- Click **Add Selected Modules** to add the device to the room.

Step 4 Add Non-URC Devices - Office

 Add Selected Modules
  Create New Driver
  Test

1. Select Room : Office Previous Next	5. Select Brand : WAVE ELECTRONICS	6. Select Model : MX0404 MX0808	7. View Function List Input Functions Input1 Input2 Input3 Input4 ETC CEC ON CEC OFF System Reboot Save Preset 1
2. Select Database : <input type="radio"/> URC <input checked="" type="radio"/> My 3. Select Module Type : IP Database 4. Select Category : MATRIX SWITCHES			8. Select 2-Way Modules for Network Remotes/Keypads <input checked="" type="radio"/> IP <input type="radio"/> RS232
For testing : Test Through Base Station TYPE : MRX-10 MAC : 00:1F:B8:2A:21:8D IP : 172.16.112.6 Discover Target IP : 172.16.112.58 Port : 0 Repeat : 1			9. Volume Popup Available

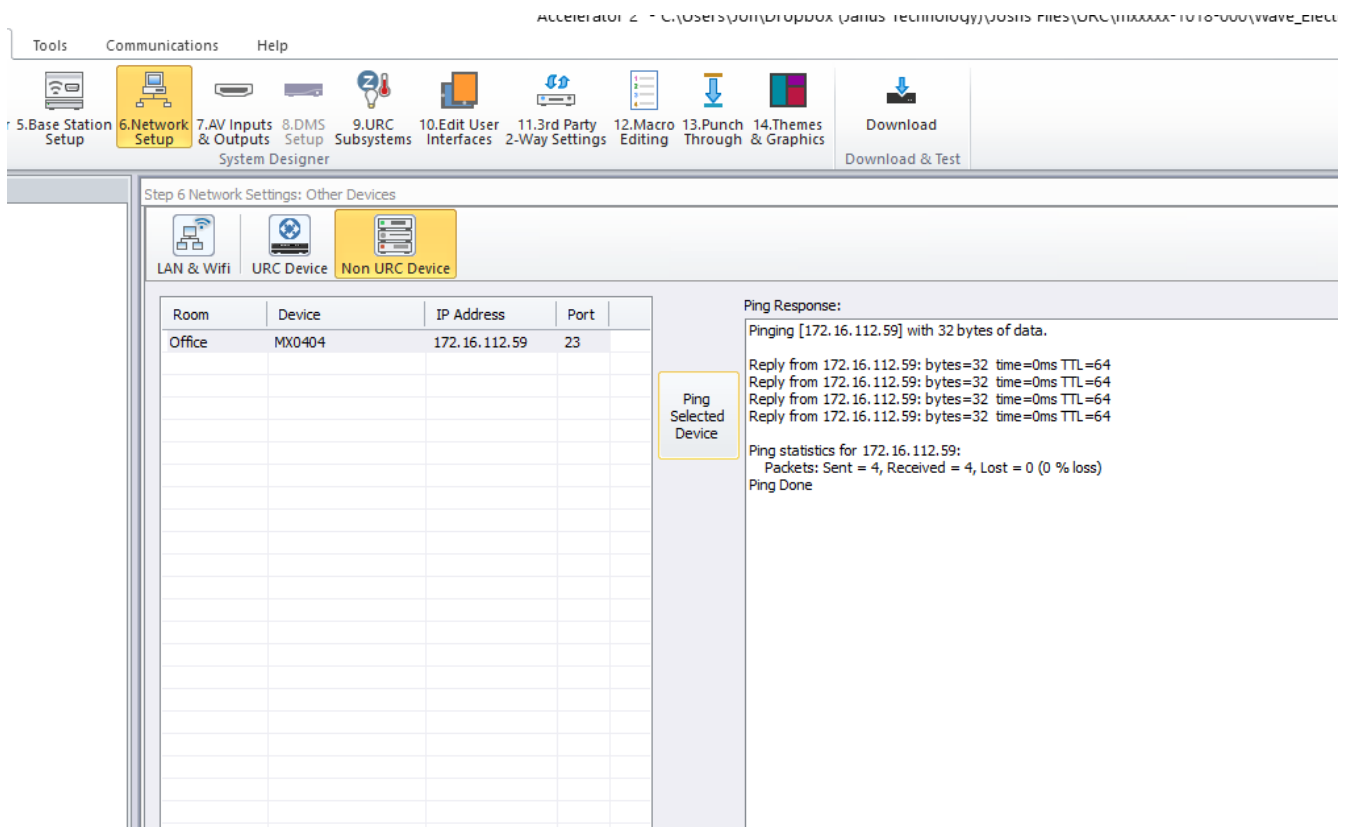
Configuring the Driver

The driver must be configured to properly support your devices.

IP Address

The IP Address of the MX matrix must be provided to the driver.

- Choose **Program -> 6. Network Setup.**
- Select **Non URC Device** tab.
- For each instance of the driver, provide the correct **IP address** in the table.
 - Note that the port should be set automatically but for reference the correct port is **23**



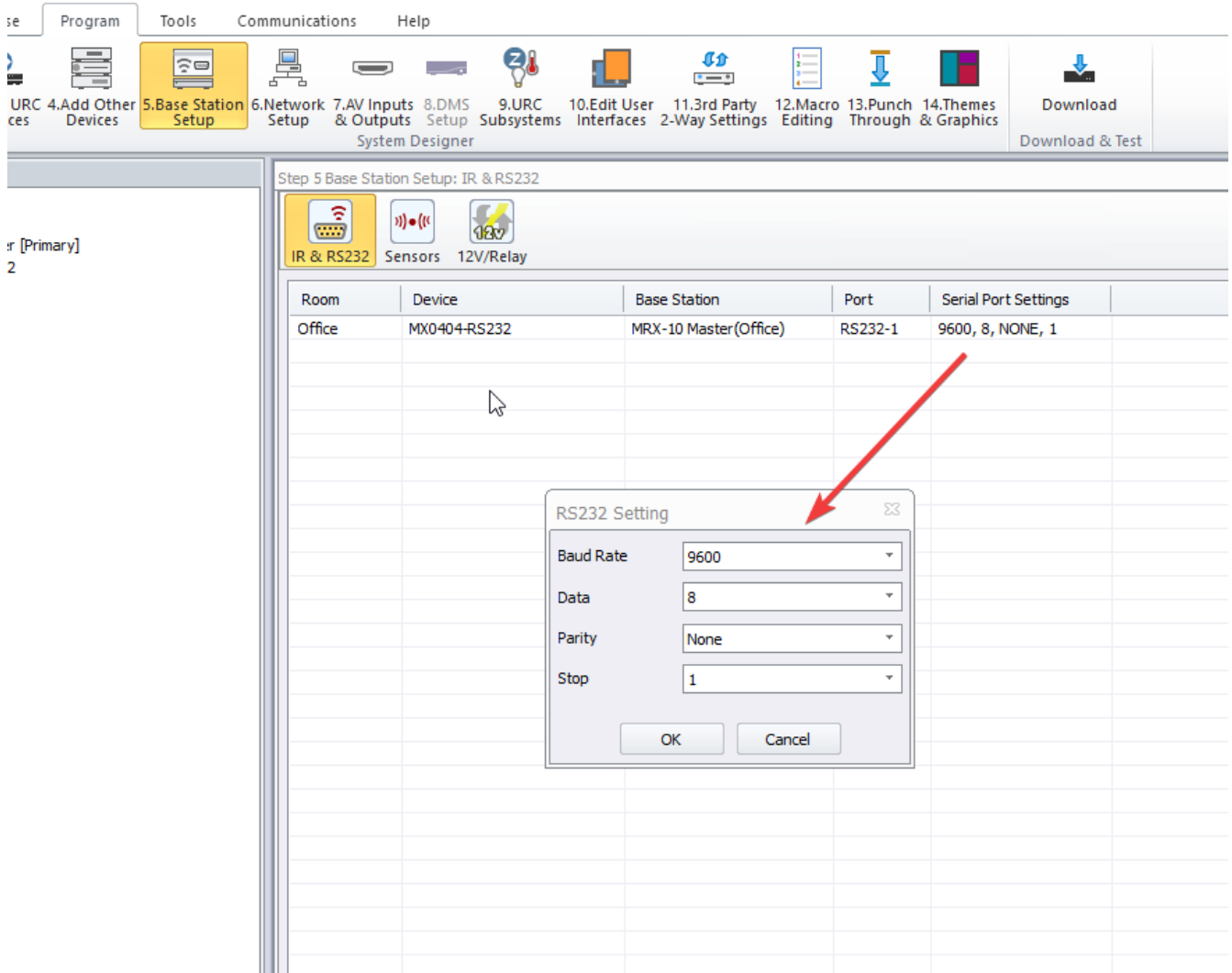
RS232 Settings

The correct RS232 settings of the MX matrix must be provided to the driver.

- Choose **Program -> 5. Base Station Setup.**
- Select **IR & RS232** tab.
- For each instance of the driver, provide the correct **RS232 Settings** in the table. These settings can be found below:
 - **Port:** The RS232 port connected to the device from the controller

- Serial Port Settings:

- **Baud Rate:** 9600
- **Data:** 8
- **Parity:** None
- **Stop:** 1



Configure Inputs and Outputs

The driver can automatically switch between inputs and outputs if configured correctly.

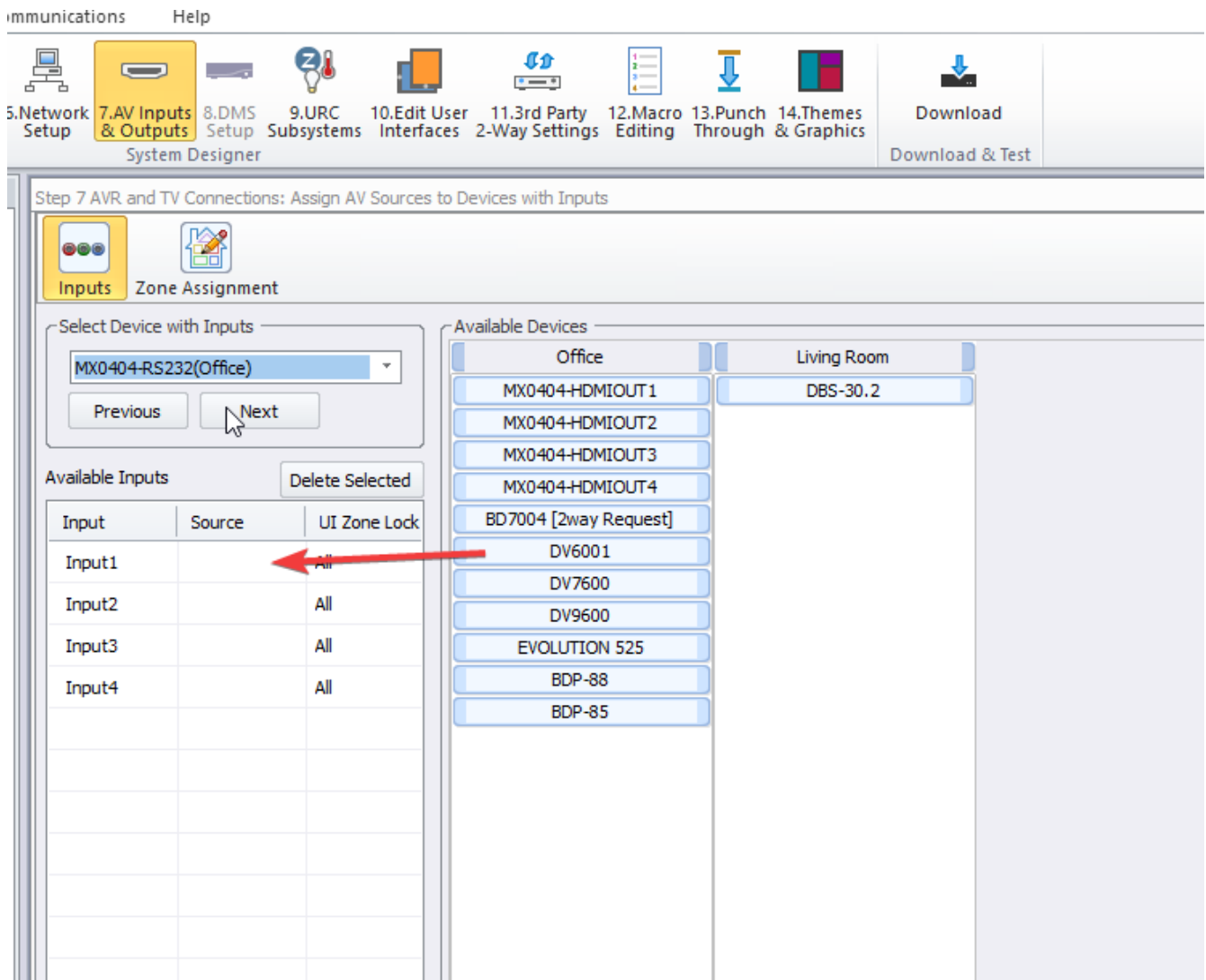
Please ensure that you have installed the driver with the required number of inputs and outputs. The following variations are available:

- MX0404 (4x4 - RS232)
- MX0808 (8x8 - RS232)
- MX0404 (4x4 - IP)
- MX0808 (8x8 - IP)

Choose **Program -> 7. AV Inputs and Outputs** to configure the inputs and outputs for the matrix.

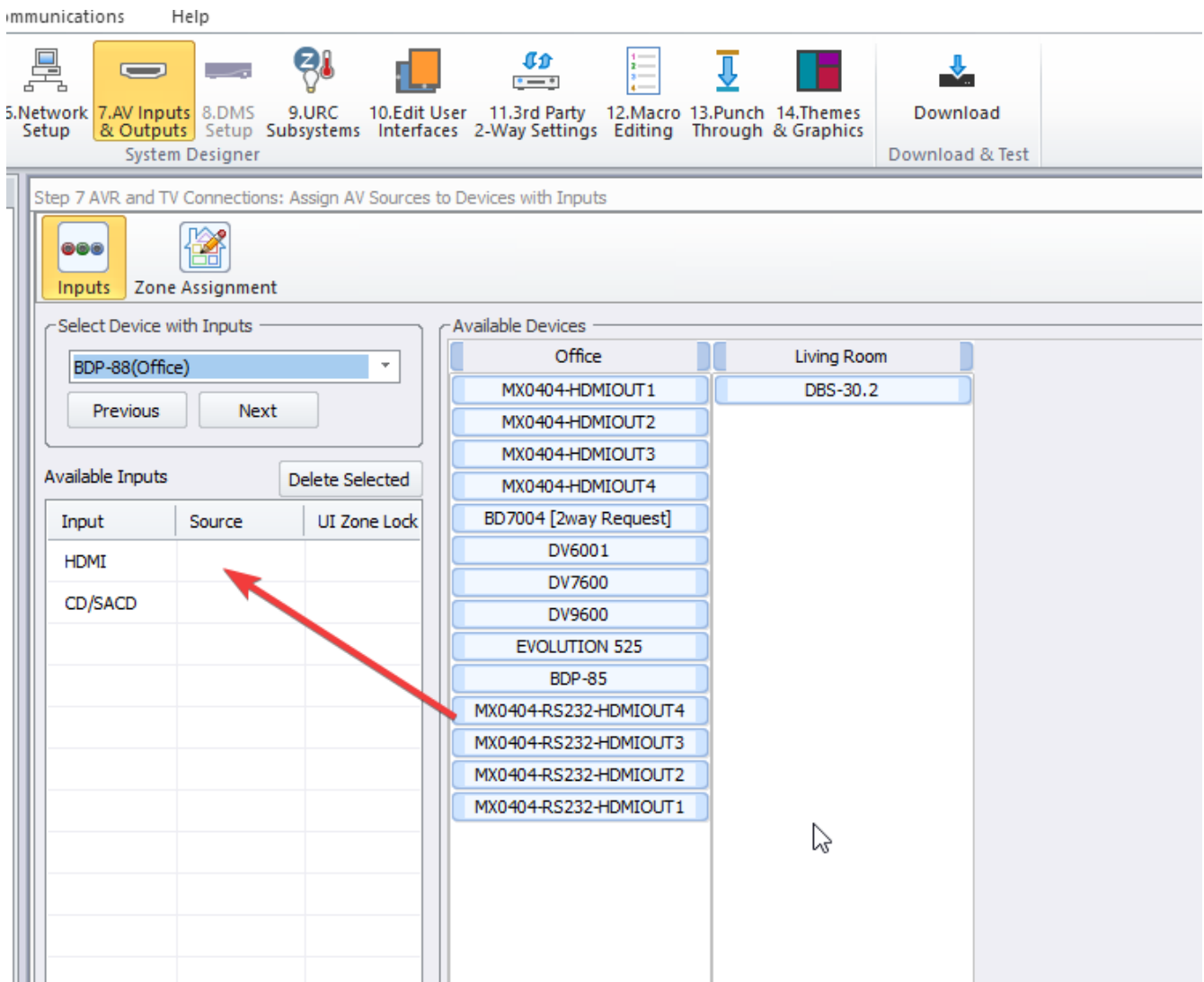
To configure the **inputs**:

- Select the **Inputs** tab.
- Choose the desired **MX** matrix from the **Select Device with Inputs** drop-down menu
- From the list of **Available Devices** drag each device you wish to configure as an input to the correct HDMI Input.



To configure the **outputs**:

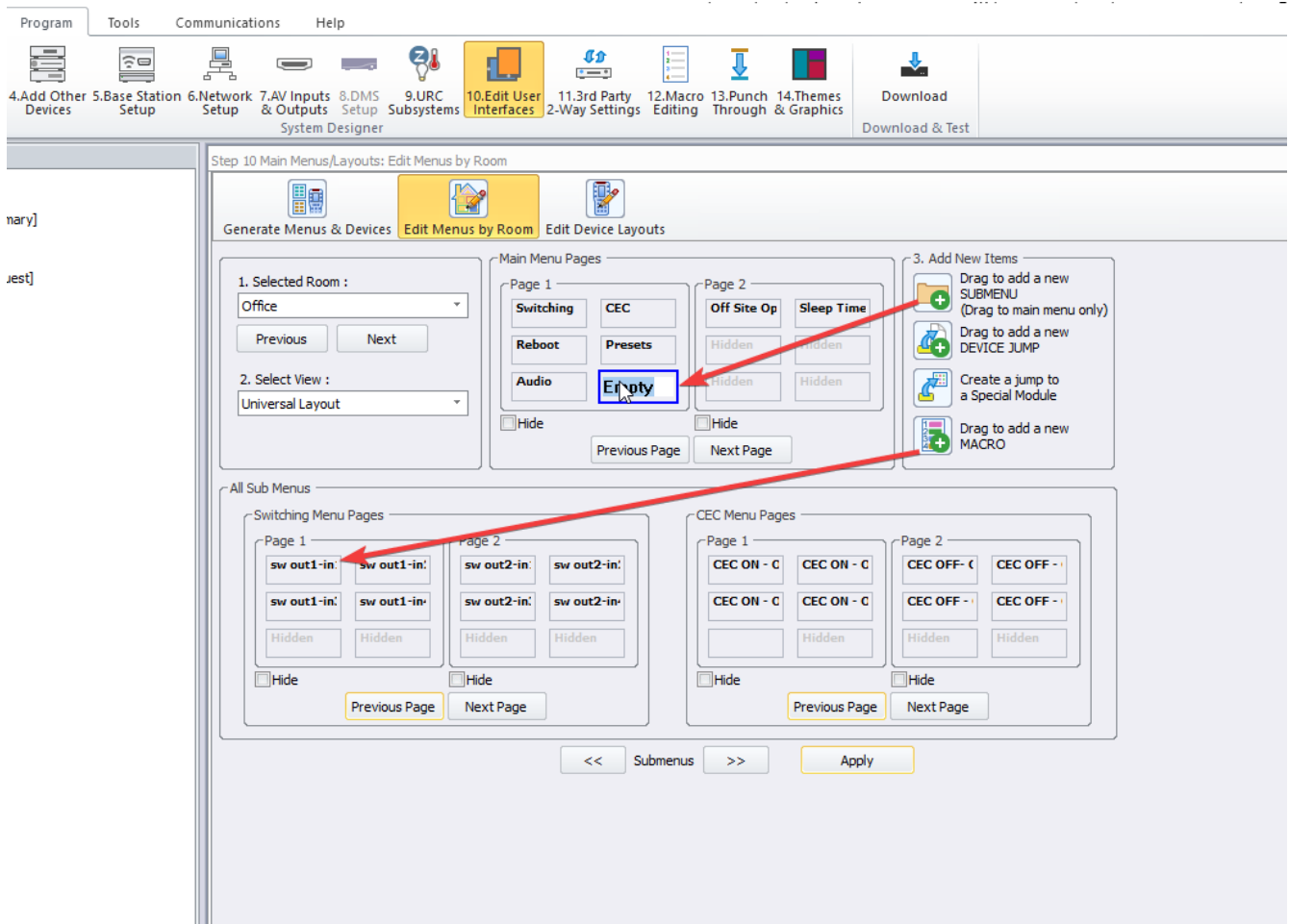
- Select the **Inputs** tab.
- Choose the device you wish to provide the **MX matrix** device output to as an input from the **Select Device with Inputs** drop-down menu
- From the list of **Available Devices** drag the correct **MX matrix** output to the selected device HDMI input.



User Interface

There is no built in user interface provided for this driver. However, you can configure buttons with attached macros that can be used to control the various functions of the driver:

- Choose **Program -> 10. Edit User Interfaces**
- Select the **Edit Menus by Room** tab
- Add a new sub menu to the main menu by dragging the option from the **3. Add New Items** panel into the **Main Menu** panel for the room where you wish this menu to appear
- You can double click on the name **Empty** to rename to something more appropriate
- In the sub menu section you can then drag the **new macro** option from the **3. Add New Items** panel into the sub-menu panel to add a new button

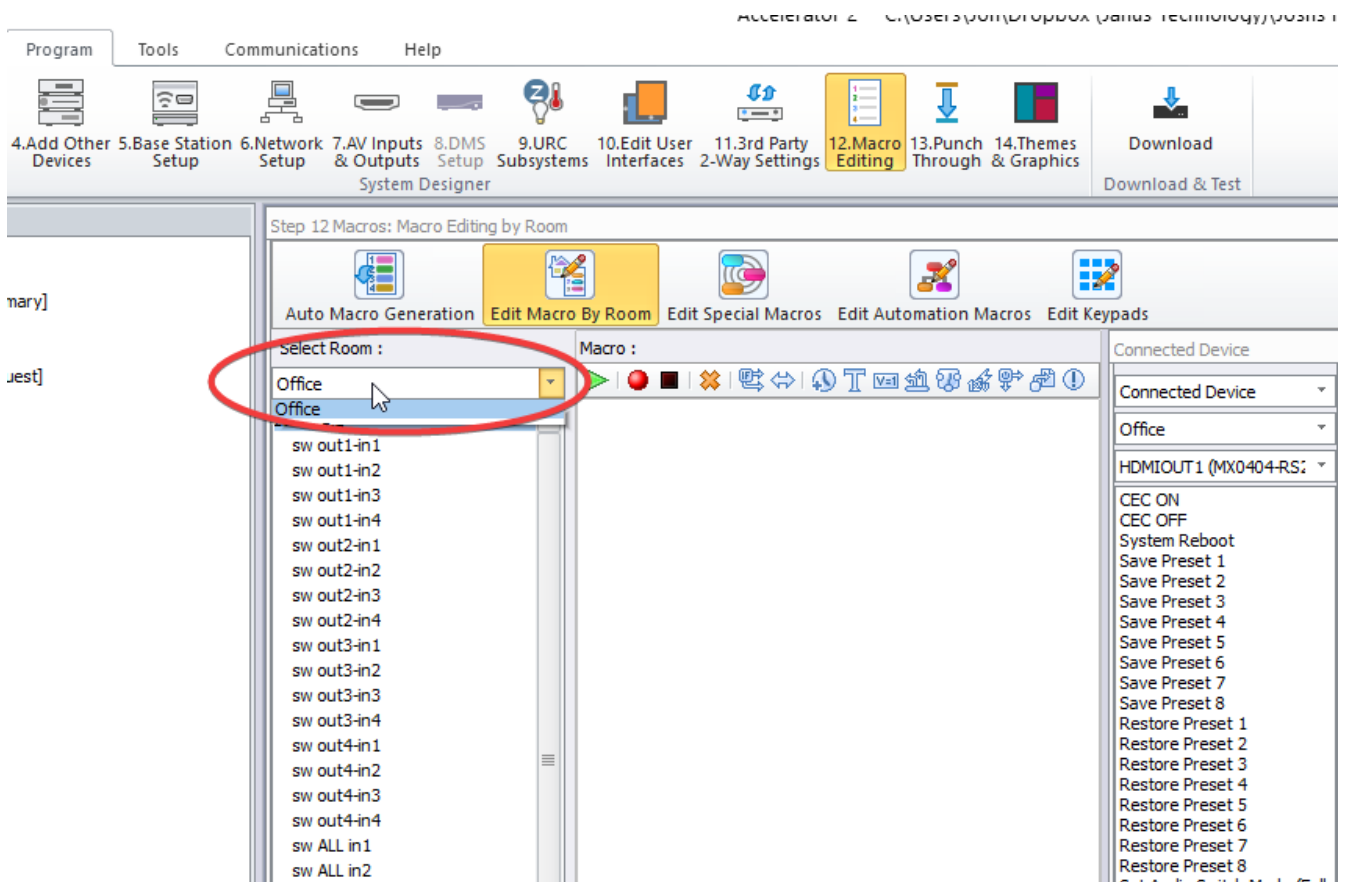


Once you have added all of the buttons you require you can assign macros to them - please see the next section for further details.

Macros

Ensure that system macros are generated for each instance of the driver by configuring **Program -> 12. Macro Editing** appropriately for your system.

You can view a list of user interface buttons that can be assigned macros by selecting the **Edit Macro By Room** tab and selecting the appropriate room from the drop down menu:



Buttons without actions assigned to them will be shown in **red**.

To add a command to an existing macro select **Connected Device** from the drop-down menu on a window to the right. Then select the desired **Room** from the next drop-down menu. Then select the **device** and its output you would like to add a command for. All the commands should be present now in the window:

Accelerator 2 - C:\Users\johnd\Documents\Johnd Technology\Projects\files\ORCA\XXXXX-1010-000

Program Tools Communications Help

4.Add Other Devices 5.Base Station Setup 6.Network Setup 7.AV Inputs & Outputs 8.DMS Setup 9.URC Subsystems 10.Edit User Interfaces 11.3rd Party 2-Way Settings 12.Macro Editing 13.Punch Through 14.Themes & Graphics Download Download & Test

System Designer

Step 12 Macros: Macro Editing by Room

Auto Macro Generation Edit Macro By Room Edit Special Macros Edit Automation Macros Edit Keypads

Select Room : Office

Macro :

Switching

- sw out1-in1
- sw out1-in2
- sw out1-in3
- sw out1-in4
- sw out2-in1
- sw out2-in2
- sw out2-in3
- sw out2-in4
- sw out3-in1
- sw out3-in2
- sw out3-in3
- sw out3-in4
- sw out4-in1
- sw out4-in2
- sw out4-in3
- sw out4-in4
- sw ALL in1
- sw ALL in2
- sw ALL in3
- sw ALL in4

CEC

- CEC ON - Out1
- CEC ON - Out2
- CEC ON - Out3
- CEC ON - Out4
- CEC OFF- Out1
- CEC OFF- Out2
- CEC OFF- Out3
- CEC OFF- Out4

Connected Device

Office

HDMIOUT1 (MX0404-RS)

CEC ON

CEC OFF

System Reboot

Save Preset 1

Save Preset 2

Save Preset 3

Save Preset 4

Save Preset 5

Save Preset 6

Save Preset 7

Save Preset 8

Restore Preset 1

Restore Preset 2

Restore Preset 3

Restore Preset 4

Restore Preset 5

Restore Preset 6

Restore Preset 7

Restore Preset 8

Set Audio Switch Mode (Follow)

Set Audio Switch Mode (Independent)

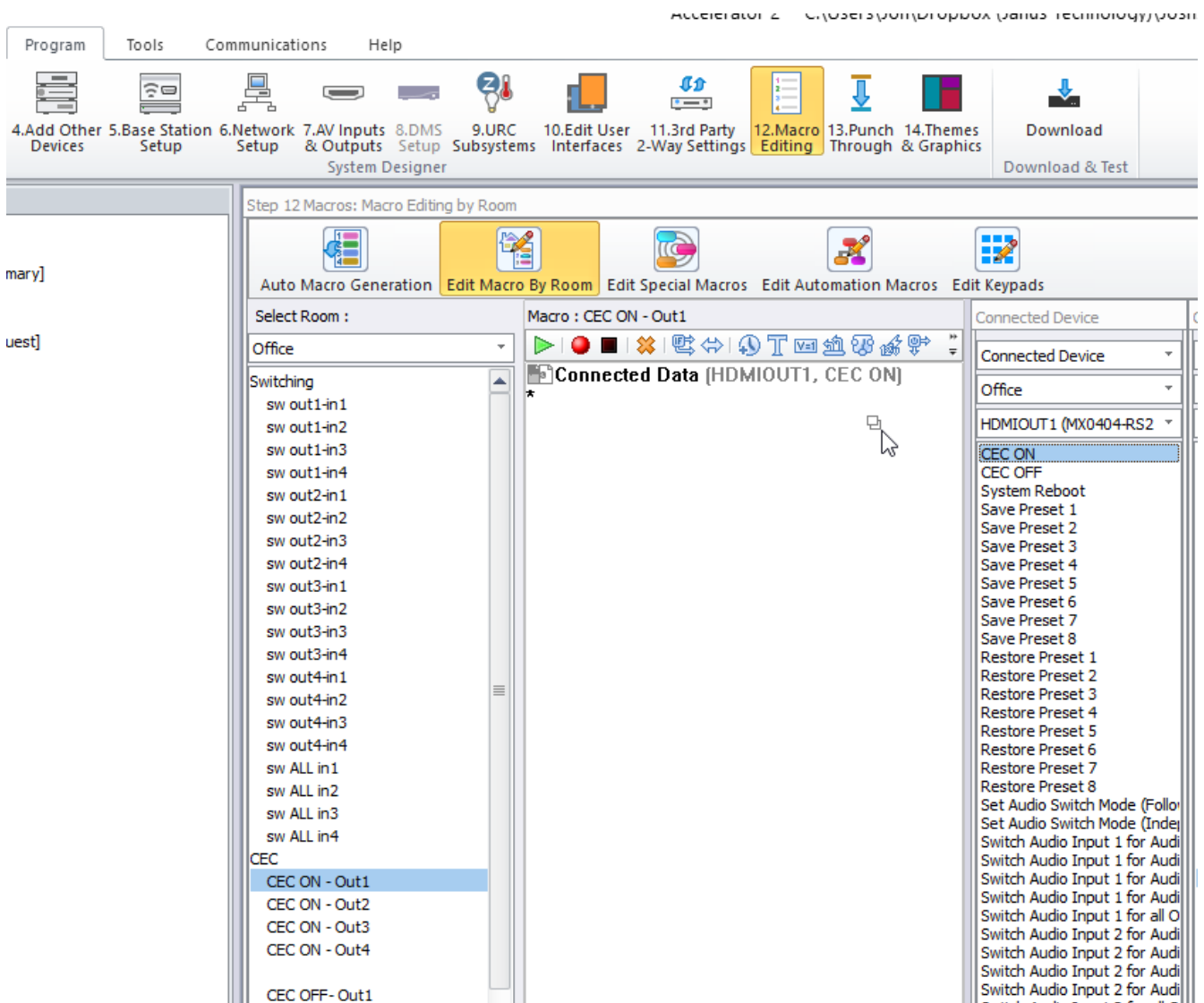
Switch Audio Input 1 for Audio

Switch Audio Input 2 for Audio

Switch Audio Input 1 for all Channels

Switch Audio Input 2 for all Channels

To add the command, you must drag and drop it into the macro of choice:



Commands

In this section you can find a list of all the available commands.

Available on **all** models

- **Switch one input to one output**
 - Switches one input to one specific output on matrix (a basic switch)
- **Switching one input to all outputs**
 - Switches one input to show on all outputs on matrix
- **CEC Power On**
 - Turns CEC on for a specific output
- **CEC Power Off**
 - Turns CEC off for a specific output
- **System Rebooting**
 - Reboots the matrix
- **Preset Saving**
 - Saves current output to input configuration in selected preset (1-8)
- **Preset Recalling**

- Recalls selected preset (1-8)

Only available on model(s) - MX0808

- **Set Audio Switch Mode to Independent**
 - Set Audio Matrix to independent. **Allowing** switch routing from one input source to one audio output
- **Set Audio Switch Mode to Follow Video Matrix**
 - Set Audio Matrix to follow video matrix. **Disallowing** switch routing.
- **Switching Audio Input for Audio Output**
 - Audio switch - routing one input source to one audio output. **Independent** switch mode must be active before trying an audio switch.

Downloading the Driver

Once you have configured the driver using the steps provided above you can now download the revised system configuration to your URC base station.

User Interfaces

The driver package **does not** include pre-designed interfaces.