Source Selector Plugin

For QSC Q-Sys

Version 1.0

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Revision History

Date	Version	Comments
20-10-26	1.0	Initial Release

Introduction

This is a reference manual to describe the interface provided for the Source Selector plugin for the QSC Q-Sys system**.**

Overview

The plugin facilitates executing source selection on 3 levels of devices to route the selected source to the corresponding screen/display, these 3 levels are:

1. Matrix switcher
2. AV Transmitter or smaller (sub) switch
3. Screen/Display

For each source to be used in the plugin, the information indicating these 3-level switching should be set in the **Source Controls** tab on the plugin to enable the plugin to select/route the correct input to the correct output, when this source is selected.

With this plugin no need to create any logic for the source selection on the 3 levels mentioned above, since the plugin itself is handling both the control and the feedback logic based on the information listed in the plugin.

If these are not provided properly the plugin will not function properly, all these parameters should be set after loading the program to the Core processor or emulating it.

This plugin is Core processor licensed, meaning that the plugin will not work in full if it is not licensed to the target processor, in this case the plugin will indicate that on the status indication on the layout, and it will execute source selection only the first 3 source entries if it is not licensed properly, but in case of emulation, the plugin will have 5 active sources, the total number of active sources will be indicated in the status indicator, which means that only the active sources will have full control and feedback functions. To license it you will need the License key and Activation key which can be acquired by visiting https://ultcontrol.com/modules/source-selector/

Properties

Properties	
Source Selector V1.0 Properties	
License Key	
Activation Key	
Source Count	5
Matrix Input Count	8
Matrix Output Count	8
Control Method	Control Pins
Show Debug	No

License Key: To set the license key for the target Core processor to activate the plugin.

Activation Key: To set the activation key for the target Core processor to activate the plugin.

Source Count: To set the number of sources to be used in the plugin. Accepted values from 1 to 200. This will affect the number of tabs used for **Source Controls**, all sources will be distributed into multiple tabs each will have up to 20 sources.

Matrix Input Count: To set the number of inputs to be used as matrix input, this will set the number of control available for transmitters as well as the input detection controls, it will also set the limit of the parameters to be set in the **Source Controls** tab related to input numbers. Accepted values from 1 to 200. This will affect the number of tabs used for **AV Controls**, all input controls will be distributed into multiple tabs each will have up to 20 inputs.

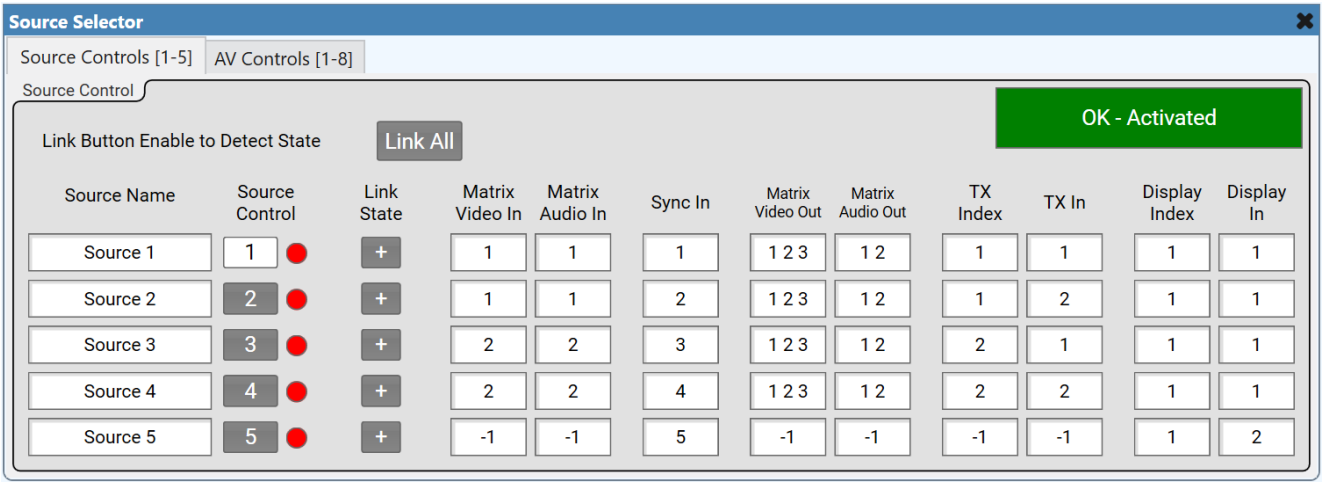
Matrix Output Count: To set the number of outputs to be used as matrix output, this will set the number of control available for video and audio outputs as well as the number of displays to be controlled, it will also set the limit of the parameters to be set in the **Source Controls** tab related to output numbers. Accepted values from 1 to 200. This will affect the number of tabs used for **AV Controls**, all output controls will be distributed into multiple tabs each will have up to 20 outputs.

Control Method: To set the method the plugin will control the AV system devices, selection are **Control Pins**, which will allow the plugin to control the AV devices through signals connected to the plugin control pins, or **Script Access**, which will allow the module to control the AV devices' components directly using its script access name.

License and Activation keys can be acquired by visiting https://ultcontrol.com/modules/source-selector/

Control Layout

Source Controls Tab(s):



Number of **Source Controls** tabs will depend on the number of sources set in the **Source Count** property; each tab will accommodate up to 20 sources.

Common controls:

Link Button Enable to Detect State: If enabled it will make all sources enable state to follow the source sync detection, i.e. button will be enabled if there is a sync signal detected for the corresponding source, this setting will affect all sources and the state of the Link State buttons for all sources will follow this setting when changed.

Status: Shows the plugin status whether in full or demo mode.

Source controls:
This is set of controls that are repeated one for each source as set in the **Source Count** property.

Source Name: This is to set a name for the corresponding source, this is not used by the program, but it is used to make it easier to understand the source details when read by humans.

Source Control: This contains 2 controls:

- Toggle Button to execute a source selection action, this will cause the plugin to select the corresponding input on the AV transmitter, input and output on the matrix receiver, and input on the screen/display, as set in the corresponding parameters for the target source. Button will show whether the source is selected or not as per the current routing on AV transmitters, Matrix switcher and screens/displays as per the corresponding parameters for the target source, the source(s) matching the current routing on these 3 devices, will be shown as on, rest will be off.
- LED to show whether source is detected or not, these signals will be updated based on the source detection feedback signals from the matrix switcher linked to the Input Detect LED in the AV Controls section.

Link State: This is to enable/disable the link between the source selection button enable state to the corresponding source sync LED Unlike the **Link All** control this will affect the corresponding source

only, if enabled, source selection button will be enabled only when the corresponding sync LED is on otherwise the button will be disabled, if the **Link State** parameter is disabled, source selection buttons will be always enabled despite the state of the sync led for the corresponding source.

Matrix Video In: This is to set the video input number on the matrix switch to be used with the corresponding source when selected, or -1 to ignore video switching for the corresponding source. Only single number can be used in this field. Accepted values from -1 to the value set in the ***Matrix Input Count*** property.

Matrix Audio In: This is to set the audio input number on the matrix switch to be used with the corresponding source when selected, or -1 to ignore audio switching for the corresponding source. Only single number can be used in this field. Accepted values from -1 to the value set in the ***Matrix Input Count*** property.

Sunc In: This is to set the input sync number as connected to the plugin to be used with the corresponding source when input sync is detected, or -1 to ignore sync detection for the corresponding source. Only single number can be used in this field. Accepted values from -1 to the value set in the ***Matrix Input Count*** property.

Matrix Video Out: This is to set the video output number on the matrix switch to be used with the corresponding source when selected, or -1 to ignore video switching for the corresponding source. Single or multiple numbers can be set in this field separated with space to allow controlling multiple outputs for the same source control.

Matrix Audio Out: This is to set the audio output number on the matrix switch to be used with the corresponding source when selected, or -1 to ignore audio switching for the corresponding source. Single or multiple numbers can be set in this field separated with space to allow controlling multiple outputs for the same source control.

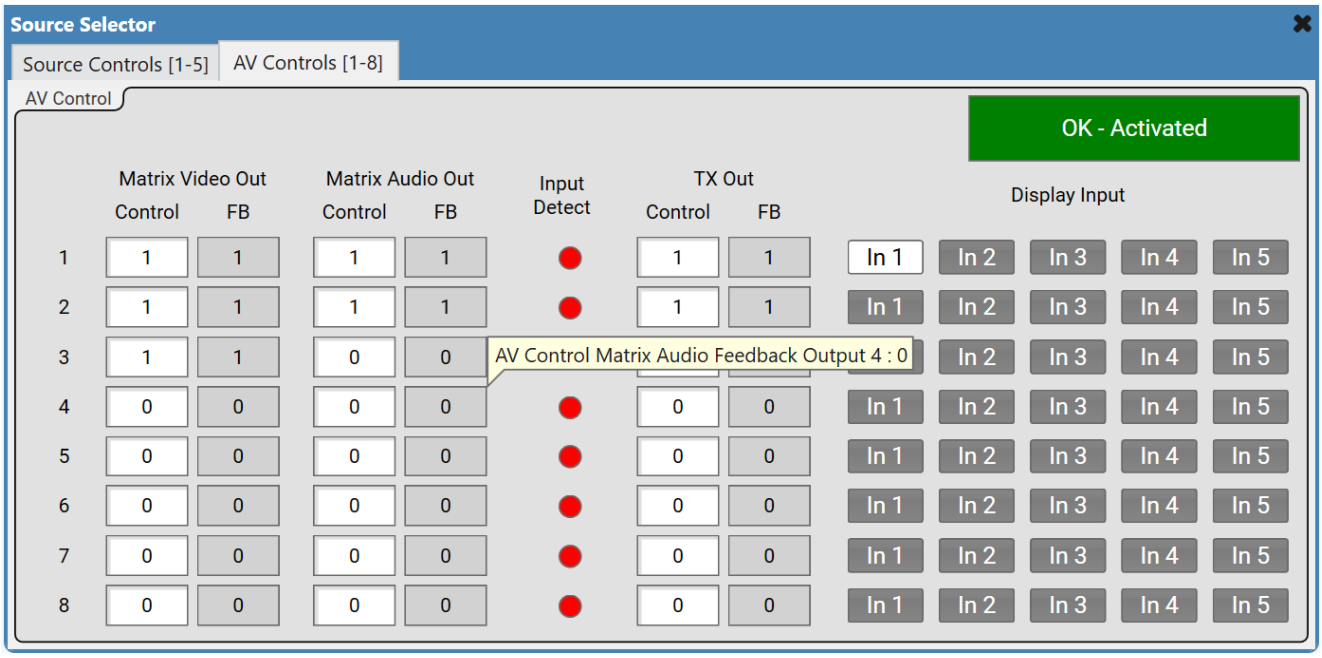
TX Index: This is to set the index of the transmitter to be used with the corresponding source when selected, use the corresponding AV transmitter index to be used within the plugin, or -1 to ignore AV transmitter switching for the corresponding source. Accepted values from -1 to the value set in the ***Matrix Input Count*** property.

TX In: This is to set the input number on the AV transmitter to be used with the corresponding source when selected, or -1 to ignore AV transmitter switching for the corresponding source. Accepted values from -1 to the value set in the ***Matrix Input Count*** property.

Display Index: This is to set the index of the display to be used with the corresponding source when selected, use the corresponding display index to be used within the plugin, or -1 to ignore display input selection for the corresponding source. Accepted values from -1 to the value set in the ***Matrix Output Count*** property.

Display In: This is to set the input number on the display to be used with the corresponding source when selected. This number is a reference number to the corresponding signals **Display Input** select buttons in **AV Controls**, or -1 to ignore display input selection for the corresponding source. Accepted values from -1 to 5.

AV Controls Tab(s):



Number of **AV Controls** tabs will depend on the number of matrix inputs and outputs set in the ***Matrix Input Count*** and ***Matrix Output Count*** properties; each tab will accommodate up to 20 input/output.

Common controls:

Status: Shows the plugin status whether in full or demo mode.

AV control:
This is set of controls that are repeated one for each input and output as set in the ***Matrix Input Count*** and ***Matrix Output Count*** properties respectively. These controls are used to send control triggers and receive feedback triggers from the controlled AV system (Matrix Switcher, AV Transmitter and Displays).

Matrix Video Control: This is to set the video input number to be selected on the corresponding output on the controlled matrix switcher. Accepted values from 0 to the value set in the ***Matrix Input Count*** property.

Matrix Video FB: This is to show the currently selected video source on the controlled matrix switcher.

Matrix Audio Control: This is to set the audio input number to be selected on the corresponding output on the controlled matrix switcher. Accepted values from 0 to the value set in the ***Matrix Input Count*** property.

Matrix Audio FB: This is to show the currently selected audio source on the controlled matrix switcher.

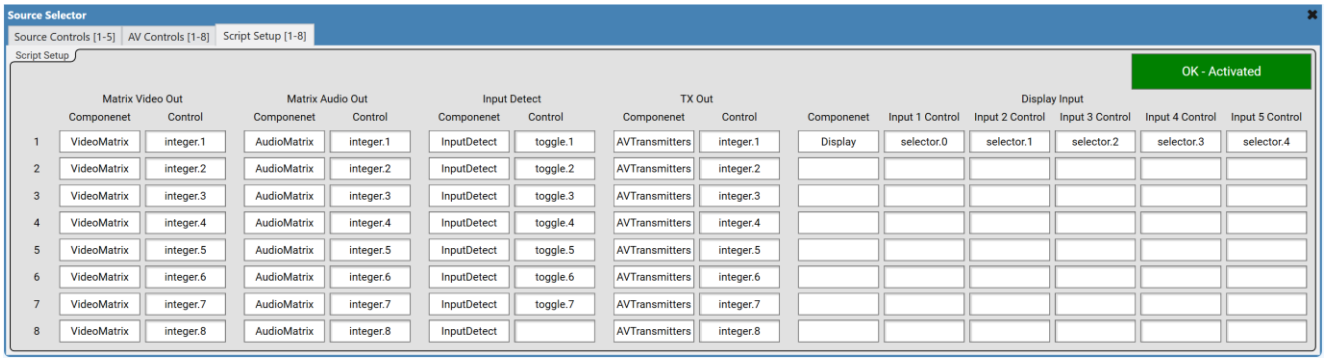
Input Detect: This is to show the current input detect state of the corresponding input as connected to the plugin.

TX Out Control: This is to set the input number to be selected on the corresponding AV transmitter. Accepted values from 0 to the value set in the ***Matrix Input Count*** property.

TX Out FB: This is to show the currently selected input on the corresponding AV transmitter.

Display Input (In 1 to In 5): These are to trigger input select on the corresponding display, buttons will show feedback also as set in the controlled display.

Script Setup Tab(s):



Number of **Script Setup** tabs will depend on the number of matrix inputs and outputs set in the ***Matrix Input Count*** and ***Matrix Output Count*** properties; each tab will accommodate up to 20 input/output.
This tab(s) will be available only if **Control Method** property is set to **Script Access**.

Common controls:

Status: Shows the plugin status whether in full or demo mode.

Script Setup:
This is set of controls that are repeated one for each input and output as set in the ***Matrix Input Count*** and ***Matrix Output Count*** properties respectively. These controls are used to setup the script access component and control names for each matrix video and audio outputs, input detects, TX outputs and input select of the controlled displays, the plugin will use this information to control the AV system devices as desired.
Make sure to set the **Code Name** and **Script Access** (to **Script** or **All**) properties of the components to be controlled first to be able to see them in the lists in this tab(s)

Matrix Video Out Component: This combo box is used to select the component to be controlled and monitored by the corresponding video output in the **AV Control** tab(s), this will show the list of all accessed control components that are set to have script access to select from.

Matrix Video Out Control: This is to set the name of the control in the selected component the plugin will use to control the desired video output.

Matrix Audio Out Component: This combo box is used to select the component to be controlled and monitored by the corresponding audio output in the **AV Control** tab(s), this will show the list of all accessed control components that are set to have script access to select from.

Matrix Audio Out Control: This is to set the name of the control in the selected component the plugin will use to control the desired audio output.

Input Detect Component: This combo box is used to select the component to be monitored by the corresponding input detect in the **AV Control** tab(s), this will show the list of all accessed control components that are set to have script access to select from.

Input Detect Control: This is to set the name of the control in the selected component the plugin will use to monitor for the desired input detect on the target device.

TX Out Component: This combo box is used to select the component to be controlled and monitored by the corresponding TX out in the **AV Control** tab(s), this will show the list of all accessed control components that are set to have script access to select from.

TX Out Control: This is to set the name of the control in the selected component the plugin will use to control the desired TX output.

Display Input Component: This combo box is used to select the component to be controlled and monitored by the corresponding display in the **AV Control** tab(s), this will show the list of all accessed control components that are set to have script access to select from.

Display Input Control (In 1 to In 5): This is to set the name of the control in the selected component the plugin will use to control the desired display input.

Control Pins

AV Control: *(these will be available only if **Control Method** property is set to **Control Pins**)*

Display(s)		
Name	***Control Type***	***Values***
Input 1 Select Input 2 Select Input 3 Select Input 4 Select Input 5 Select	Trigger	

Input Detect		
Name	***Control Type***	***Values***
Input x	LED	

Matrix		
Name	***Control Type***	***Values***
Audio Control - Output x	Integer	0 to value ***Matrix Input Count*** property
Audio Feedback - Output x	Integer	
Video Control - Output x	Integer	0 to value ***Matrix Input Count*** property
Video Feedback - Output x	Integer	

Transmitter		
Name	***Control Type***	***Values***
Control - Output x	Integer	0 to value ***Matrix Input Count*** property
Feedback - Output x	Integer	

Source Control:

Detected		
Name	***Control Type***	***Values***
Source x	Trigger	

Link		
Name	***Control Type***	***Values***
Source x	Toggle	

Select		
Name	***Control Type***	***Values***

Source x	Trigger	

Source Info:

Display		
Name	***Control Type***	***Values***
Index Number – Source x	Integer	-1 to value ***Matrix Output Count*** property
Input Number – Source x	Integer	-1 to 5

Matrix		
Name	***Control Type***	***Values***
Audio Input Number – Source x	Integer	-1 to value ***Matrix Input Count*** property
Audio Output Number – Source x	String	-1 or Space separated integers
Video Input Number – Source x	Integer	-1 to value ***Matrix Input Count*** property
Video Output Number – Source x	String	-1 or Space separated integers

Name		
Name	***Control Type***	***Values***
Source x	String	

Sync Input Number		
Name	***Control Type***	***Values***
Source x	Integer	-1 to value ***Matrix Input Count*** property

Transmitter		
Name	***Control Type***	***Values***
Index Number – Source x	Integer	-1 to value ***Matrix Input Count*** property
Input Number – Source x	Integer	-1 to value ***Matrix Input Count*** property

General:

Name	***Control Type***	***Values***
Link All	Toggle	
Status	Status	OK - Activated Compromised – Demo Mode (Only x Active Sources)

Support

For plugin support or any information needed, please use the following:
https://ultcontrol.com/modules/source-selector/
support@ultcontrol.com