SW-4X2PS-70M Q-SYS Plugin Guide

For Q-SYS Designer · Plugin version 1.0.7

The KanexPro SW-4X2PS-70M plugin lets a Q-SYS system control the SW-4X2PS-70M over the network. It talks to the unit's own control port (TCP 8000): no other KanexPro software and no RS-232 cable are needed. Every control has a pin, so it can be wired to UCI buttons, logic and scripts like any Q-SYS control, and the plugin reads the unit back so changes made on its front panel, remote or web page show in Q-SYS.

> **Before you start —** the Q-SYS Core must reach the SW-4X2PS-70M on TCP port 8000. Give the unit a fixed IP address (or a DHCP reservation).

TABLE OF CONTENTS

1. What the plugin does
2. Before you start
3. Install the plugin
4. Properties
5. The plugin in Q-SYS Designer
6. Controls
7. Status
8. Troubleshooting

1. WHAT THE PLUGIN DOES

It controls: source, layout, volume, volume a step, mute the sound, mute, blank picture and sound (AV mute), freeze the picture, power, screen, presets, save, resolution, HDCP, output on, EDID, accept HDCP, detect a new source by, when the source goes, switch to, auto switching shows, two sources, three sources, four sources, window border, plays the sound of, level, plays, mix, delay (ms), EQ, reset the EQ, receiver shows, receiver switches by itself, receiver detects a source by, receiver USB device ports' 5V, turn the screen on and off by itself, turn it off after no source for, turn it on and off with, USB switching, USB devices go to, USB device ports' 5V, laptops on USB-C reach the network, clear a preset, lock the front buttons (on = locked), beep, IR remote, fan.

It reads back: power, something on the receiver's HDMI input, something on the receiver's USB host port, temperature (°C), running for (days:hours:min:sec), firmware, IP mode, address, subnet mask, gateway, control port, telnet port.

Settings that only the unit's own web page has (its network, logins and firmware) stay on that page.

2. BEFORE YOU START

- ✓ Q-SYS Designer on a Windows computer, and a Q-SYS Core.
- ✓ The SW-4X2PS-70M on the same network as the Core, or routed to it, with TCP port 8000 open between them.
- ✓ The unit's IP address (front panel or its own web page).

3. INSTALL THE PLUGIN

1. Download **KanexPro-SW-4X2PS-70M-QSYS-1.0.7.zip** from the SW-4X2PS-70M page on kanexpro.com (Resources) and unzip it.
2. Copy `KanexPro-SW-4X2PS-70M.qplug` into `Documents\QSC\Q-Sys Designer\Plugins` on the Q-SYS Designer computer, or drag the file onto Designer's window.
3. Restart Q-SYS Designer. The plugin appears in Schematic Elements under **Plugins > KanexPro**.
4. Drag it into the design, select it and set its properties (section 4).
5. Save the design to the Core and run it. The plugin connects by itself and shows its state on its Status control.

> **One plugin per unit —** for two SW-4X2PS-70M units, add the plugin twice and give each its own IP address.

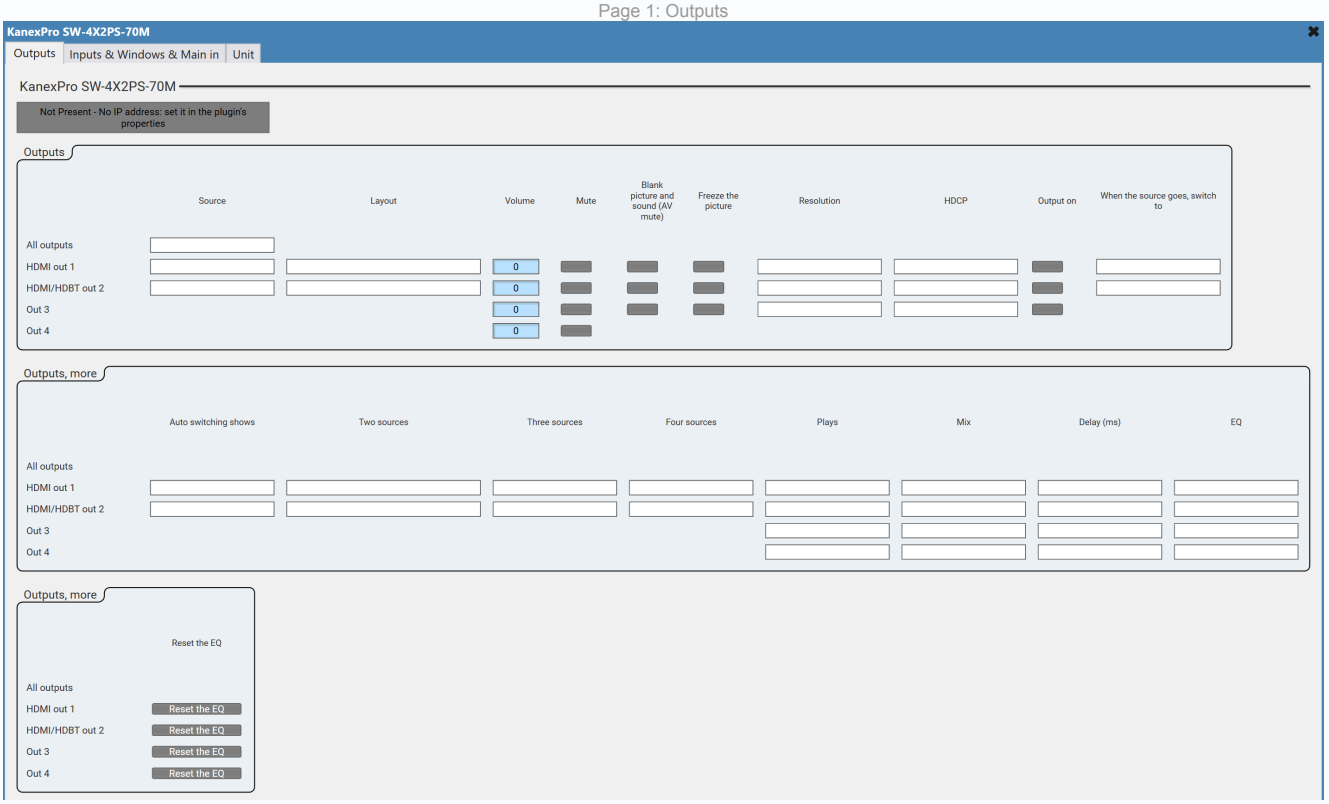
4. PROPERTIES

PLUGIN PROPERTIES

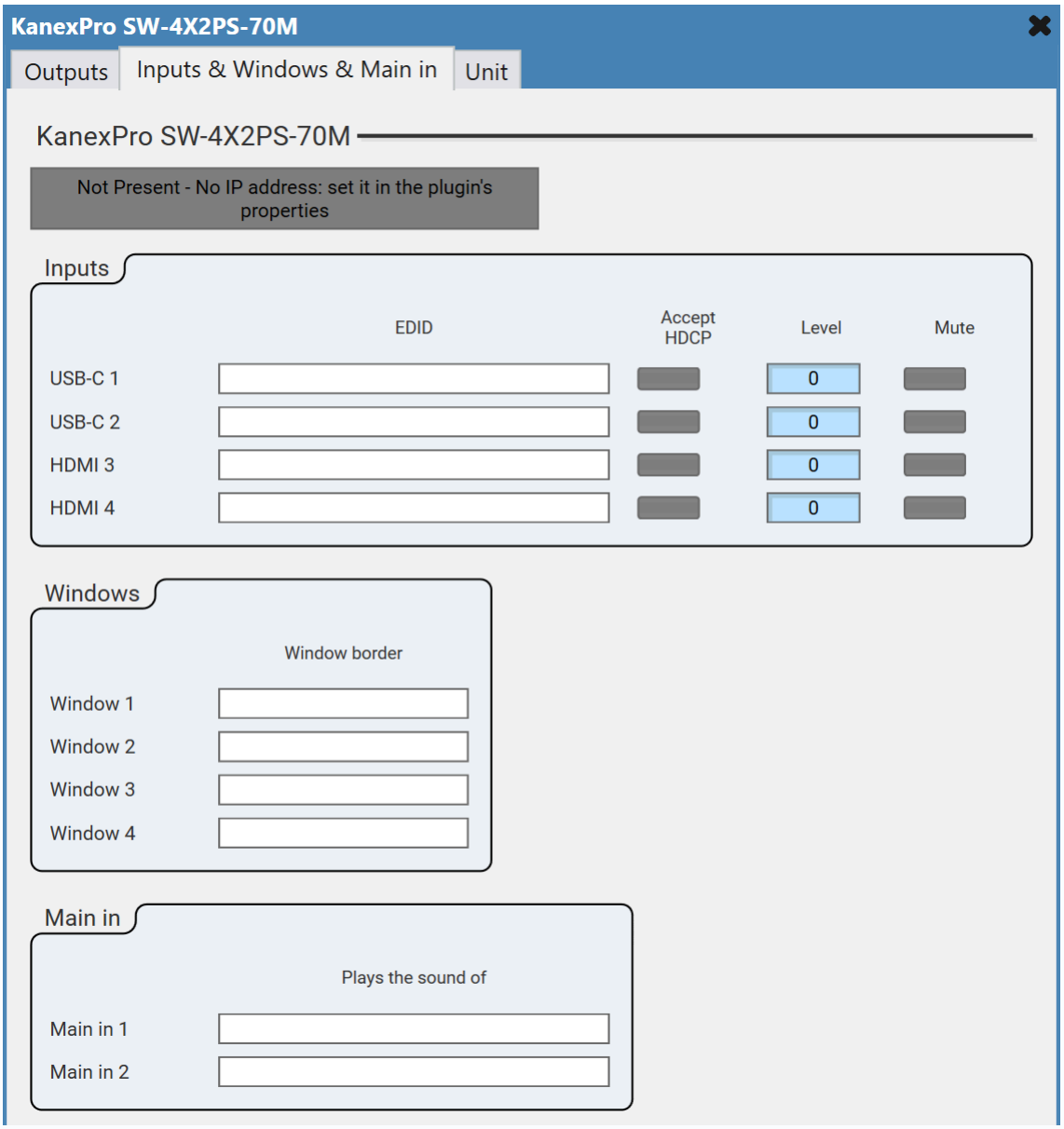
IP Address	The SW-4X2PS-70M's address on the control network. Empty by default.
Port	8000 (TCP), the unit's control port. Change it only if the unit's own web page was set to another port.
Poll Interval	How often, in seconds, the plugin reads the unit back. Default 10; 0 reads it only after a change from Q-SYS.

5. THE PLUGIN IN Q-SYS DESIGNER

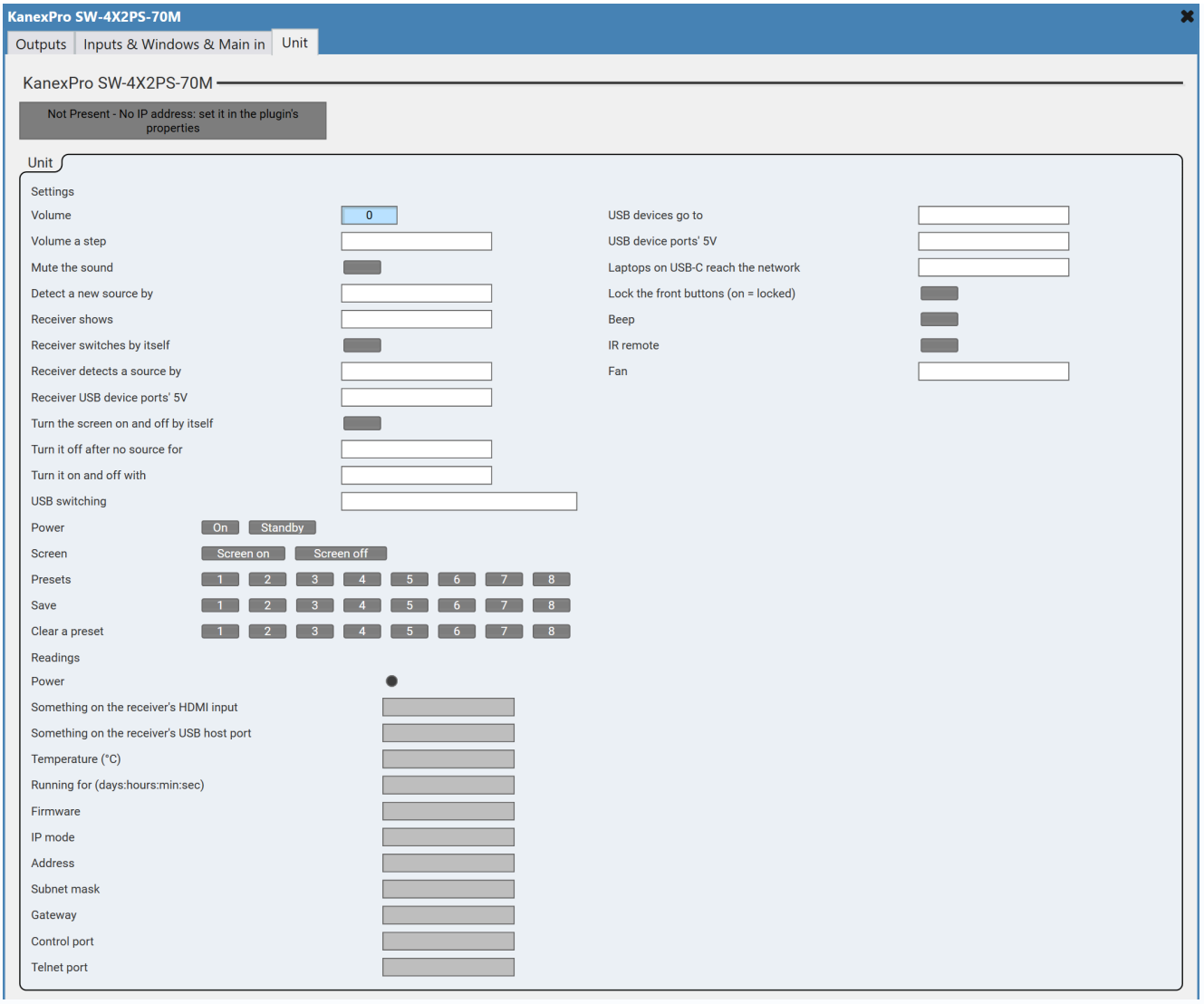
Page 1: Outputs



Page 2: Inputs & Windows & Main in


KanexPro SW-4X2PS-70M
Outputs
Inputs & Windows & Main in
Unit
KanexPro SW-4X2PS-70M
Not Present - No IP address: set it in the plugin's properties
Inputs
EDID
Accept HDCP
Level
Mute
USB-C 1
USB-C 2
HDMI 3
HDMI 4
0
Windows
Window border
Window 1
Window 2
Window 3
Window 4
Main in
Plays the sound of
Main in 1
Main in 2

Page 3: Unit



The SW-4X2PS-70M plugin's control panel in Q-SYS Designer

6. CONTROLS

140 controls. Where a control is repeated for each input or output, it is listed once.

#	Control	Where	What it does
0	**Status**	the plugin	Shows whether the plugin is connected to the unit, and why not (section 7).
1	**Source (all outputs)**	each output	Sends one input to every output at once.
2	**Source**	each output	Picks the input this output shows.
3	**Layout**	each output	Sets the layout on each output. Choices: Auto; Single; Dual-LR; Dual-TB; PIP-LT, and 18 more. If one output shows a multiview layout, the other can only show the same one, Auto or Single. Custom layouts are drawn on the switch's own web page.
4	**Volume**	the unit	Sets the volume, from 0 to 100.
5	**Volume a step**	the unit	Sets the volume a step. Choices: Down; Up.
6	**Mute the sound**	the unit	Turns the mute the sound on or off.
7	**Volume**	each output	Sets the volume on each output, from 0 to 100.
8	**Mute**	each output	Turns the mute on or off on each output.

9	**Blank picture and sound (AV mute)**	each output	Turns the blank picture and sound (AV mute) on or off on each output.
10	**Freeze the picture**	each output	Turns the freeze the picture on or off on each output.
11	**Power**	buttons 1 to 2	On: turns the unit on. Standby: puts the unit in standby. Back on takes a few seconds; the switch does not answer while it starts.
12	**Screen**	buttons 1 to 2	Screen on: turns the unit on. Screen off: puts the unit in standby. Sent to the screen over HDMI (CEC).
13	**Presets**	buttons 1 to 8	Recalls that preset.
14	**Save**	buttons 1 to 8	Saves the unit's current settings as that preset.
15	**Resolution**	each output	Sets the resolution on each output. Choices: Auto; 3840x2160p60; 3840x2160p50; 4096x2160p60; 4096x2160p50, and 11 more. Changes only while both outputs show Auto or Single; in a multiview layout the switch sets the resolution itself.
16	**HDCP**	each output	Sets the HDCP on each output. Choices: Auto; HDCP 1.4; HDCP 2.2.
17	**Output on**	each output	Turns the output on on or off on each output.
18	**EDID**	each input	Sets the EDID on each input. Choices: Auto (HDBT or HDMI or HDBT+HDMI); Copy HDMI Out 1; Copy HDMI Out 2; Copy HDBT Out 2; 4K2K60_444, Stereo Audio 2.0, and 12 more.
19	**Accept HDCP**	each input	Turns the accept HDCP on or off on each input.
20	**Detect a new source by**	the unit	Sets the detect a new source by. Choices: Signal; Source 5V.
21	**When the source goes, switch to**	each output	Sets the when the source goes, switch to on each output. Choices: Next input; USB-C 1; USB-C 2; HDMI 3; HDMI 4, and 1 more.
22	**Auto switching shows**	each output	Sets the auto switching shows on each output. Choices: Single source; Multiview.
23	**Two sources**	each output	Sets the two sources on each output. Choices: Dual-LR (Left-by-Right); Dual-TB (Top-by-Bottom); PIP-LT (Left-by-Top); PIP-LB (Left-by-Bottom); PIP-RT (Right-by-Top), and 2 more.
24	**Three sources**	each output	Sets the three sources on each output. Choices: Triple-L (Left); Triple-R (Right); Triple-T (Top); Triple-B (Bottom); Triple User Defined.
25	**Four sources**	each output	Sets the four sources on each output. Choices: Quad-L (Left); Quad-R (Right); Quad-T (Top); Quad-B (Bottom); Quad-S (Square), and 1 more.
26	**Window border**	each win	Sets the window border on each win. Choices: Off; Black; Red; Green; Blue, and 5 more.
27	**Plays the sound of**	each n	Sets the plays the sound of on each n. Choices: Follow the output's picture; USB-C 1; USB-C 2; HDMI 3; HDMI 4.
28	**Level**	each input	Sets the level on each input, from 0 to 100.
29	**Mute**	each input	Turns the mute on or off on each input.
30	**Plays**	each output	Sets the plays on each output. Choices: Main in 1; Main in 2; Line in; Dante in.
31	**Mix**	each output	Sets the mix on each output. Choices: Stereo; Left; Right; Left and right.
32	**Delay (ms)**	each output	Sets the delay (ms) on each output. Choices: 0; 1; 2; 3; 4, and 46 more.
33	**EQ**	each output	Sets the EQ on each output. Choices: Flat; Custom 1; Custom 2; Custom 3; Custom 4, and 1 more.
34	**Reset the EQ**	buttons 1 to 4	Reset: reset.
35	**Receiver shows**	the unit	Sets the receiver shows. Choices: HDBT in; HDMI in. HDBT in is what the switch sends on output 2; HDMI in is a source plugged into the receiver itself, at the screen.

36	**Receiver switches by itself**	the unit	Turns the receiver switches by itself on or off. On: plugging a source into the receiver's HDMI in puts it on that screen; unplugging it goes back to HDBT in.
37	**Receiver detects a source by**	the unit	Sets the receiver detects a source by. Choices: Source 5V; Signal.
38	**Receiver USB device ports' 5V**	the unit	Sets the receiver USB device ports' 5V. Choices: Force off; Force on; Follow host.
39	**Turn the screen on and off by itself**	the unit	Turns the turn the screen on and off by itself on or off.
40	**Turn it off after no source for**	the unit	Sets the turn it off after no source for. Choices: 5 sec; 10 sec; 30 sec; 1 min; 5 min, and 1 more.
41	**Turn it on and off with**	the unit	Sets the turn it on and off with. Choices: CEC; RS-232; CEC and RS-232.
42	**USB switching**	the unit	Sets the USB switching. Choices: Follow video; Manual; Auto (switch on USB 5V).
43	**USB devices go to**	the unit	Sets the USB devices go to. Choices: USB-C 1; USB-C 2; USB host 3; USB host 4. Takes effect when USB switching is Manual; in the other modes the switch picks the host itself.
44	**USB device ports' 5V**	the unit	Sets the USB device ports' 5V. Choices: Force off; Force on; Follow host.
45	**Laptops on USB-C reach the network**	the unit	Sets the laptops on USB-C reach the network. Choices: All USB-C inputs; USB-C 1; USB-C 2; None.
46	**Clear a preset**	buttons 1 to 8	Clears that preset.
47	**Lock the front buttons (on = locked)**	the unit	Turns the lock the front buttons (on = locked) on or off.
48	**Beep**	the unit	Turns the beep on or off.
49	**IR remote**	the unit	Turns the IR remote on or off.
50	**Fan**	the unit	Sets the fan. Choices: Auto; 25%; 50%; 75%; 100%.
51	**Power**	the unit	Lit when the unit reports power.
52	**Something on the receiver's HDMI input**	the unit	Shows the unit's something on the receiver's HDMI input.
53	**Something on the receiver's USB host port**	the unit	Shows the unit's something on the receiver's USB host port.
54	**Temperature (°C)**	the unit	Shows the unit's temperature (°C).
55	**Running for (days:hours:min:sec)**	the unit	Shows the unit's running for (days:hours:min:sec).
56	**Firmware**	the unit	Shows the unit's firmware.
57	**IP mode**	the unit	Shows the unit's IP mode.
58	**Address**	the unit	Shows the unit's address.
59	**Subnet mask**	the unit	Shows the unit's subnet mask.
60	**Gateway**	the unit	Shows the unit's gateway.
61	**Control port**	the unit	Shows the unit's control port.
62	**Telnet port**	the unit	Shows the unit's telnet port.

7. STATUS

STATUS CONTROL	
OK (green)	Connected to the unit and reading it back.
Initializing (blue)	Connecting. It tries again every few seconds by itself.

Fault (red)	Not connected, with the reason: the unit does not answer, or the connection was refused or closed.
Compromised (orange)	Connected, but the unit refused the last change. The text names it. The control returns to what the unit reports at the next read.
Not Present (grey)	No IP address is set in the plugin's properties.

8. TROUBLESHOOTING

The Status control shows Fault and it does not connect.
Check the IP address: find the unit's address on its front panel or its own web page and compare it with the plugin's IP Address property. A unit on DHCP may have moved; give it a fixed address or a DHCP reservation.

The address is right, but it still does not connect.
Check the network path. The Core and the unit must reach each other: the same network or VLAN, or a route between them. From a computer on the Core's network, the unit's web page should open at its address.

Could a firewall be blocking it?
Yes. A firewall or switch ACL between the Core and the unit must allow TCP port 8000 to the unit. Also leave the Port property at 8000 unless the unit's own web page was set to another port.

It connects, but a change does not happen.
The Status control shows Compromised and names the command the unit refused. The unit may be in standby: turn it on first.

Changes made on the unit do not show in Q-SYS.
Set Poll Interval above 0. Changes made on the unit's front panel, remote or web page then show within that many seconds.