

Crosspoint Router & Buffer Plugin - Quick Setup Guide

Introduction

This guide will help you set up and use the Crosspoint Router & Buffer Plugin for Q-SYS. This plugin gives you one set of UCI controls that route to multiple independent zones. Design your interface once, then switch between zones at runtime.

Quick Reference

- **Plugin Name:** ProgrammedAV ~ Crosspoint Router and Buffer
- **Control Types:** Toggle, Fader, Trigger, Momentary, Exclusive, Text
- **Zone Range:** 2 to 16 zones per plugin instance
- **Control Range:** 0 to 32 per type (0 to 8 for Exclusive)
- **License:** Required for Core hardware, not required in Designer emulation mode

Prerequisites

- Q-SYS Designer v9.x or higher
 - Valid plugin license key (for Core deployment)
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Installation

1. **Drag the Crosspoint Router & Buffer Plugin** from the Plugins section of the Schematic Library into your Q-SYS design.
 2. **Configure the plugin properties** in the Properties panel before running the design. See [Plugin Properties](#) below.
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Plugin Properties

Zone Configuration

- **Zone Count:** Number of independent zones (2 to 16)
- **Zone Names:** Give each zone a meaningful name (e.g., "Bar", "Restaurant", "Stage"). These names appear on the zone select buttons and zone header display.

Control Counts

Set how many of each control type you need. Set any count to **0** to disable that type entirely. It won't appear on the block face or create any pins.

PROPERTY	RANGE	DEFAULT	DESCRIPTION
Toggle Count	0 to 32	4	Latching on/off buttons
Fader Count	0 to 32	0	Continuous value knobs
Fader Min	-100 to 255	0	Minimum fader value
Fader Max	-100 to 255	100	Maximum fader value
Trigger Count	0 to 32	0	Stateless pulse buttons (fire and forget)
Momentary Count	0 to 32	0	True-while-held buttons
Exclusive Count	0 to 8	0	Radio-select toggles (one active at a time)
Text Count	0 to 32	0	Editable text fields

Wiring Your Design

Input Side (UCI Controls)

The plugin block face shows your shared controls: toggles, faders, triggers, etc. Place these on your UCI for operator access. The controls are named generically (Toggle 1, Fader 2, etc.), so set meaningful legends in UCI Designer for your operators (e.g., "Mute", "Volume", "Source A").

Output Side (Per-Zone Pins)

Each zone gets its own set of output pins, organized into folders:

```
Control Pins
  > Input Controls      Toggle 1, Fader 1, etc.
  > Output: Bar         Z1_Toggle, Z1_Fader, etc.
  > Output: Restaurant  Z2_Toggle, Z2_Fader, etc.
  > Output: Stage       Z3_Toggle, Z3_Fader, etc.
  > Setup               Status, Sync
  > Zone                Zone Select 1..N, Zone Header, Active
Zone
```

Wire the per-zone output pins to your destination components: audio processors, video switchers, lighting controllers, relay modules, or anything else in your design.

***Note:** All pins are bidirectional (PinStyle "Both"). External systems can both read from and write to the per-zone output pins.*

Using the Plugin

Switching Zones

- **Zone Select buttons:** Click a zone button to switch. Only one zone is active at a time.
- **Active Zone pin:** An external script or logic block can switch zones by writing an integer (1 to N) to this pin.

How Controls Behave

TYPE	BEHAVIOUR	STORES STATE PER ZONE
Toggle	Latching on/off	Yes, syncs when switching zones
Fader	Continuous value	Yes, syncs when switching zones
Exclusive	Radio-select (one active)	Yes, syncs when switching zones
Text	Editable text field	Yes, syncs when switching zones

TYPE	BEHAVIOUR	STORES STATE PER ZONE
Trigger	Stateless pulse	No, fires to whichever zone is active
Momentary	True while held	No, fires to whichever zone is active

When you switch zones, all stateful controls update to show the new zone's current values. Stateless controls (Trigger, Momentary) simply route to whichever zone is currently active.

Syncing

The plugin's feedback handlers automatically update the UCI when individual zone output pins change. The **Sync** pin is specifically for use with Q-SYS snapshots. When a snapshot recall bulk-restores multiple output pin values at once, Sync forces the UCI to re-read the active zone's current state in one pass. Wire an output pin from your Snapshot Controller block to the Sync pin so the plugin automatically syncs on every recall.

Controls Page

The main operator interface. Shows the zone header, zone select buttons, and all configured control types. The page height adjusts dynamically based on which control types are enabled.

Setup Page

Shows the Sync button, plugin status indicator, and an information grid displaying all configured control counts.

Tips

- **Legends are yours to set.** The plugin names controls generically. Set meaningful legends for your UCI headings.
- **Scale faders downstream.** All faders share the same min/max range from properties. If different controls need different ranges, scale at the destination.
- **Use Debug Print during commissioning.** Set to "All" to see every zone switch and control event in the debug console, then set to "None" for production.
- **Multiple instances work.** Need two UCIs independently controlling the same

zones? Use two plugin instances and wire their output pins to the same destinations.

Troubleshooting

Controls not updating when switching zones

- Press the **Sync** button to force a re-read from the active zone's output pins
- Check that Debug Print is set to "All" and verify zone switch messages appear in the debug console

Faders showing unexpected values

- Check that Fader Min and Fader Max are set correctly in properties
- All faders share the same range. Scale at the destination if different ranges are needed.

Exclusive toggles not behaving as radio buttons

- Exclusive controls only allow one active at a time within the group. Pressing the currently active button will not deselect it. This is by design to prevent empty selections.

Plugin status shows "Invalid or missing license"

- Verify your license key is entered correctly in the License Key property
- License keys are tied to a specific Q-SYS Core (Locking ID). Make sure the key matches the Core running the design.
- No license is required when running in Q-SYS Designer emulation mode

For additional support, please contact sean@programmedAV.com.au