

Companion — Kestrel user guide

This module routes **regions of interest to DeckLink outputs** from a Stream Deck or any other Bitfocus Companion surface, through **Kestrel** — take any region to any output, cycle regions on an output, fire a salvo, kill every output at once, with live crosspoint tally.

The [README](#) covers installing the module. This is how to build a page with it.

Before you rely on this: the module's 21 automated checks run against a **fake Kestrel**, so they prove the module's own shape rather than that the two ends agree. Kestrel itself has been verified against real SDI hardware; this module driving it has not been used in a show. The live test against a really-running Kestrel is the one that matters when either side changes.

If the connection comes up with no actions, variables or presets at all, you are on a version that dies during startup — upgrade to the newest release before investigating anything else.

This module was built with AI assistance, directed and reviewed by a human author.

Connecting

Kestrel's control API — the address along the bottom of Kestrel's own window, `127.0.0.1:9720` by default.

There is no authentication. Anyone who can reach that port can re-route every output and kill them all at once. Keep it on a management interface, not on a show network anyone can join.

Max crosspoint presets in the connection config caps how many buttons a large show generates.

The crosspoint

Take region to output is the whole idea: one region of the input picture, onto one SDI output.

The dropdown carries a **— clear —** entry, which drops the crosspoint **without stopping the output** — it falls back to its idle fill. That distinction matters on a rig where a downstream device is watching for signal: clearing a crosspoint is not the same as killing an output.

Cycle the region on an output steps forward or back through the regions, and can optionally include "nothing routed" in the cycle. It exists for a surface with fewer buttons than the show has regions.

Salvo puts one region on *every* output at once. **Outputs on / off** is the global kill.

Set an output's idle fill chooses black, bars, or the full input for when nothing is routed — bars being the one to pick when somebody downstream needs to see that the path is alive.

Tally, and the two feedbacks that differ

Crosspoint is taken colours the button **in the region's own colour, taken from Kestrel**, so the surface matches the operator's screen without anyone maintaining a second colour scheme.

It **dims rather than clears** when the outputs are killed: the routing is still what it was, it is simply not going anywhere. That is information you want during a kill, not a blank page.

Output is carrying a region is the stricter one — true only when that output is *really on air*. Muted, unrouted, or the input gone, and it is false.

Input is locked deserves a button of its own. When it is false, **every routed output is carrying black**, and nothing else on the surface will tell you that.

Output is scaling too far warns above a threshold you set — the quiet quality failure, where everything is routed correctly and a region is being blown up past what it can stand.

Two things that will not do what you expect

Nudging a region is safe to hold down. Kestrel clamps at the frame edge rather than refusing the command, so a held button walks the region to the edge and stops there.

Killing the transmitter does not remove the signal. A DeckLink output goes on sending locked black long after the process that opened it has exited — measured twenty seconds after the fact, a looped-back input still reported a good, locked 1080p50 signal.

So **"outputs off" is not a way to prove to a downstream device that the source has gone.** Pull the cable if that is what you are testing.

Building a surface that fails safe

1. **Input is locked**, prominent. It is the single failure that makes every other light on the page a lie.
 2. **Crosspoint tally in Kestrel's own region colours**, so the surface and the screen agree.
 3. **Output-is-carrying** on anything that reads as "on air", rather than the crosspoint tally.
 4. **Scaling-too-far with a real threshold**, set from what the show's outputs can stand.
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5. **The global kill somewhere deliberate** — it is one press with no confirmation.

Troubleshooting

Symptom	Cause
No actions or presets at all	The module died during startup. Upgrade.
Everything is routed and every output is black	The input is not locked. Add that feedback.
Tally is dim rather than lit	Outputs are killed. The routing is intact.
A downstream device still sees signal after outputs off	The card keeps transmitting after the process exits. This is not the module.
A region will not move any further	It is clamped at the frame edge, by design.
The picture is soft on one output	Scaling too far — the feedback exists for exactly this.

See also

- [README](#) — installing, and the full action/feedback/variable list
 - [companion/HELP.md](#) — the same material, in Companion's help panel
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Latest version of this guide: stoatworks-labs.com/software/companion-kestrel/guide/ · Source and issues:

<https://github.com/stoatworks-labs/companion-module-kestrel>