Joystick Override / Hold Group guide

This is a guide on how to handle 'Joystick override' and 'Hold groups' for CCU operators - allowing automatic routing of cameras to a confidence monitor.

Imagine these operator steps:

1. CCU 1 presses the joystick :: Route cam 1 to monitor
2. CCU 4 presses the joystick :: Route cam 4 to monitor
3. CCU 2 presses the joystick :: Route cam 2 to monitor

   ...
4. CCU 4 lets go of the joystick :: (nothing happens)
5. CCU 2 lets go of the joystick :: Return to route cam 1 to monitor
6. CCU 1 lets go of the joystick :: Return to original input for monitor

You can of course have more CCU's - and the order of who does what when is remembered by the system.

Prerequisite

This setup requires a 4 things:

- Blue Pill device --> Is the brain, running the config and controlling both ETH-GPI Link and video switcher/router

  For example 'Blue Pill Server' : https://www.skaarhoj.com/product/blue-pill-server

- ETH-GPI Link --> Handles the GP inputs from the CCU's

  https://www.skaarhoj.com/product/eth-gpi-link

- A number of CCU's with GP output for joystick press

- A video switcher/router (for example; Aja Kumo, ATEM, Tricaster, vMix etc.)

NOTE: The Blue Pill device must have Reactor 2.2.3-pre10 or later installed. This is handled on the 'Packages' page.
NOTE: The ETH-GPI Link must be in 'Blue Pill Mode', which means it's controlled by a Blue Pill device.

Configuration

1. Goto IP address of Blue Pill device to see Reactor, the configuration manager.
2. Click '**Add panel'** and select your ETH-GPI Link
3. Click '**Add device**' and select your routing device
4. In the ETH-GPI Link configuration drop-down menu, **select default configuration** 'Tally & Routing'
5. Click '**Camera Selector**' to open settings -> Add empty rows (by holding Shift) -> Set route index [1, 2, 3..]
   (these are the camera inputs on the switcher/router)
6. Click '**Routing Trigger**' to open settings -> Select the output to route to
7. Click '**GPIO Input mapping**' to open settings -> Change type from ‘Tally Program’ to ‘Route Index’
8. Click '**Config Variables**' to open settings -> Select 'Press' or ‘Hold down’

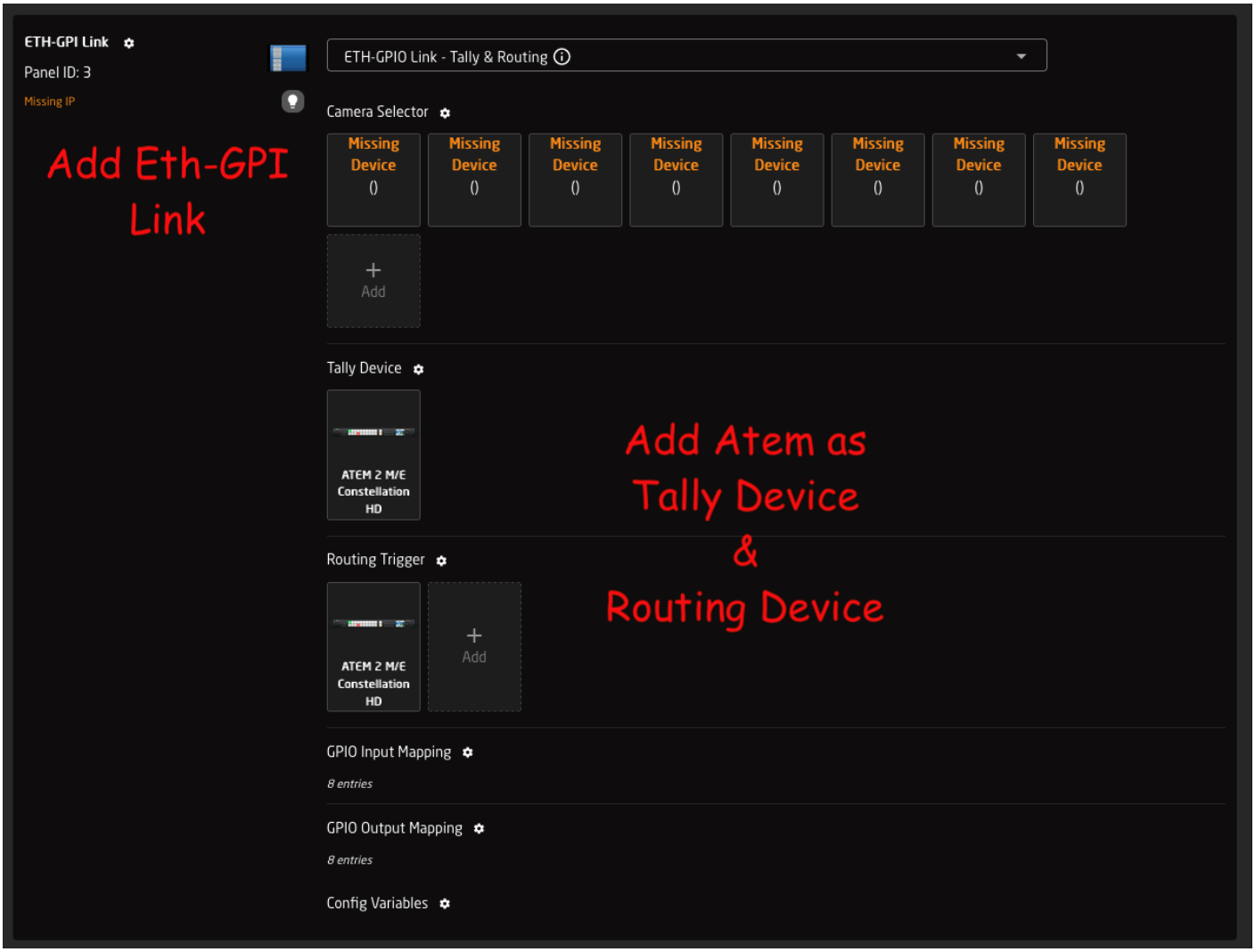
Advanced step to share stack between multiple [Blue Pill Inside] RCP panels in the same configuration:

1. Goto Configuration page -> click '>>' in window left/top top show Layer Tree
2. Find variable: HoldGroupState -> right-click it and copy it
3. Scroll down to lowest Root layer -> right-click it and paste variable here (variables here are shared by all panels)

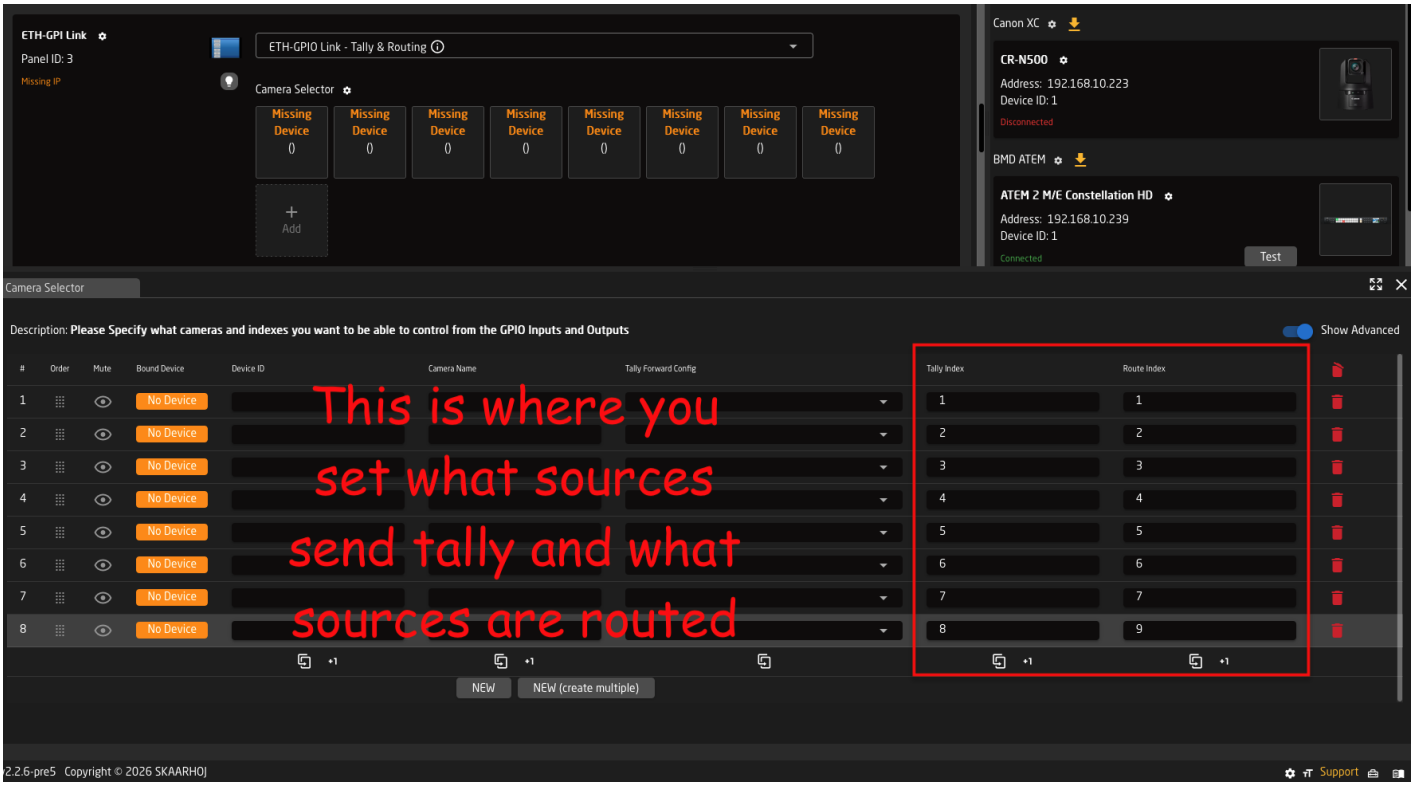
Screenshots

Same as config steps above

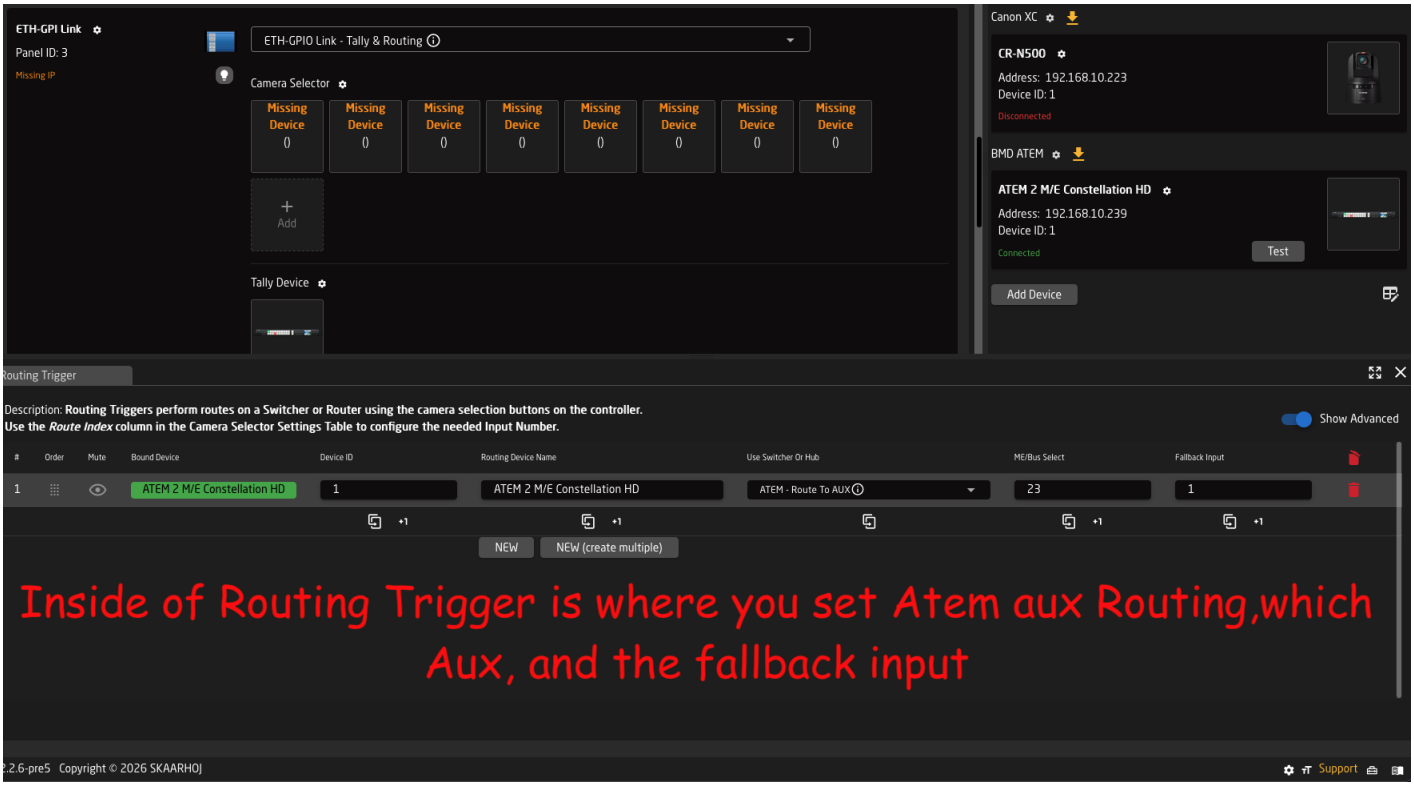
2:


ETH-GPI Link
Panel ID: 3
Missing IP
Add Eth-GPI Link
ETH-GPIO Link - Tally & Routing
Camera Selector
Missing Device ()
Add
Tally Device
ATEM 2 M/E Constellation HD
Add Atem as Tally Device & Routing Device
Routing Trigger
ATEM 2 M/E Constellation HD
Add
GPIO Input Mapping
8 entries
GPIO Output Mapping
8 entries
Config Variables

5:


ETH-GPI Link
Panel ID: 3
Missing IP
ETH-GPIO Link - Tally & Routing
Camera Selector
Missing Device ()
Add
Canon XC
CR-N500
Address: 192.168.10.223
Device ID: 1
Disconnected
BMD ATEM
ATEM 2 M/E Constellation HD
Address: 192.168.10.239
Device ID: 1
Connected
Test
Camera Selector
Description: Please Specify what cameras and indexes you want to be able to control from the GPIO Inputs and Outputs
Show Advanced
Order Mute Bound Device Device ID Camera Name Tally Forward Config Tally Index Route Index
1 No Device 1 1
2 No Device 2 2
3 No Device 3 3
4 No Device 4 4
5 No Device 5 5
6 No Device 6 6
7 No Device 7 7
8 No Device 8 9
This is where you set what sources send tally and what sources are routed
NEW
NEW (create multiple)
2.2.6-pre5 Copyright © 2026 SKAARHOJ
Support

6:


ETH-GPI Link
Panel ID: 3
Missing IP
ETH-GPIO Link - Tally & Routing
Camera Selector
Missing Device
Add
Tally Device
Canon XC
CR-N500
Address: 192.168.10.223
Device ID: 1
Disconnected
BMD ATEM
ATEM 2 M/E Constellation HD
Address: 192.168.10.239
Device ID: 1
Connected
Test
Add Device
Routing Trigger
Description: Routing Triggers perform routes on a Switcher or Router using the camera selection buttons on the controller.
Use the Route Index column in the Camera Selector Settings Table to configure the needed Input Number.
Show Advanced
Order Mute Bound Device Device ID Routing Device Name Use Switcher Or Hub ME/Bus Select Fallback Input
1 ATEM 2 M/E Constellation HD 1 ATEM 2 M/E Constellation HD ATEM - Route To AUX 23 1
NEW
NEW (create multiple)
Inside of Routing Trigger is where you set Atem aux Routing,which Aux, and the fallback input
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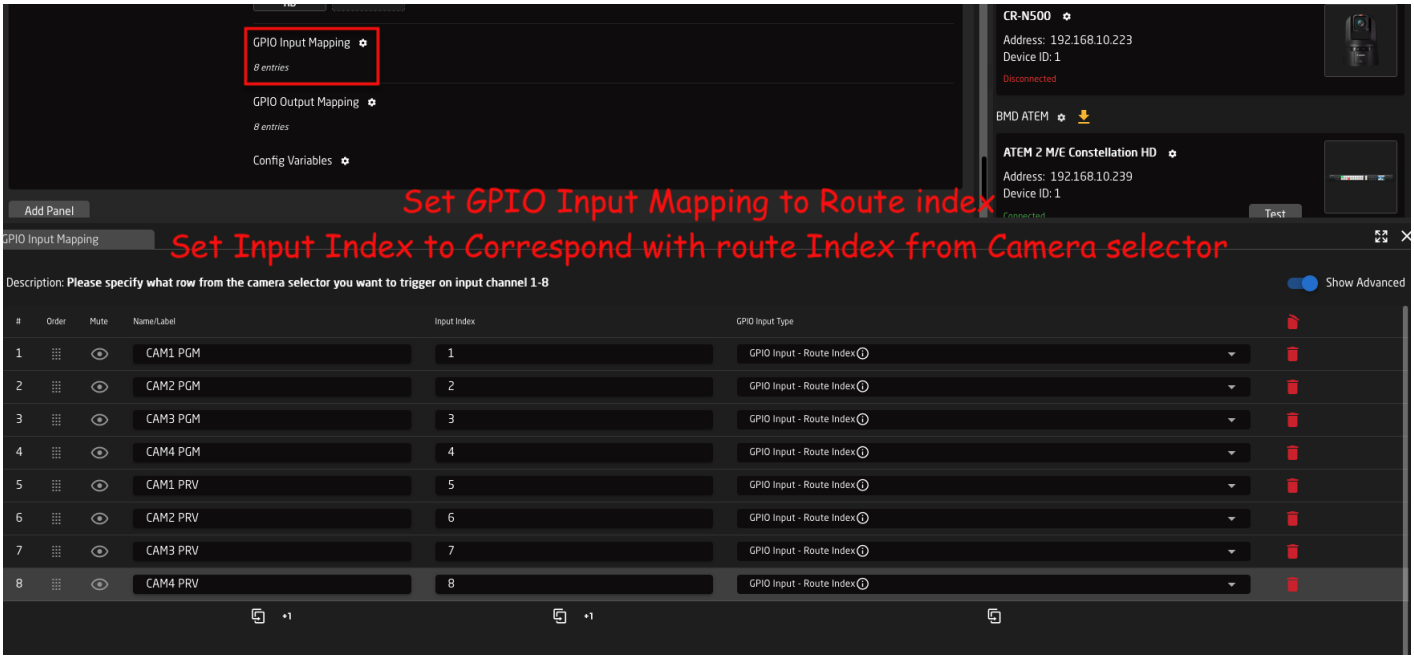
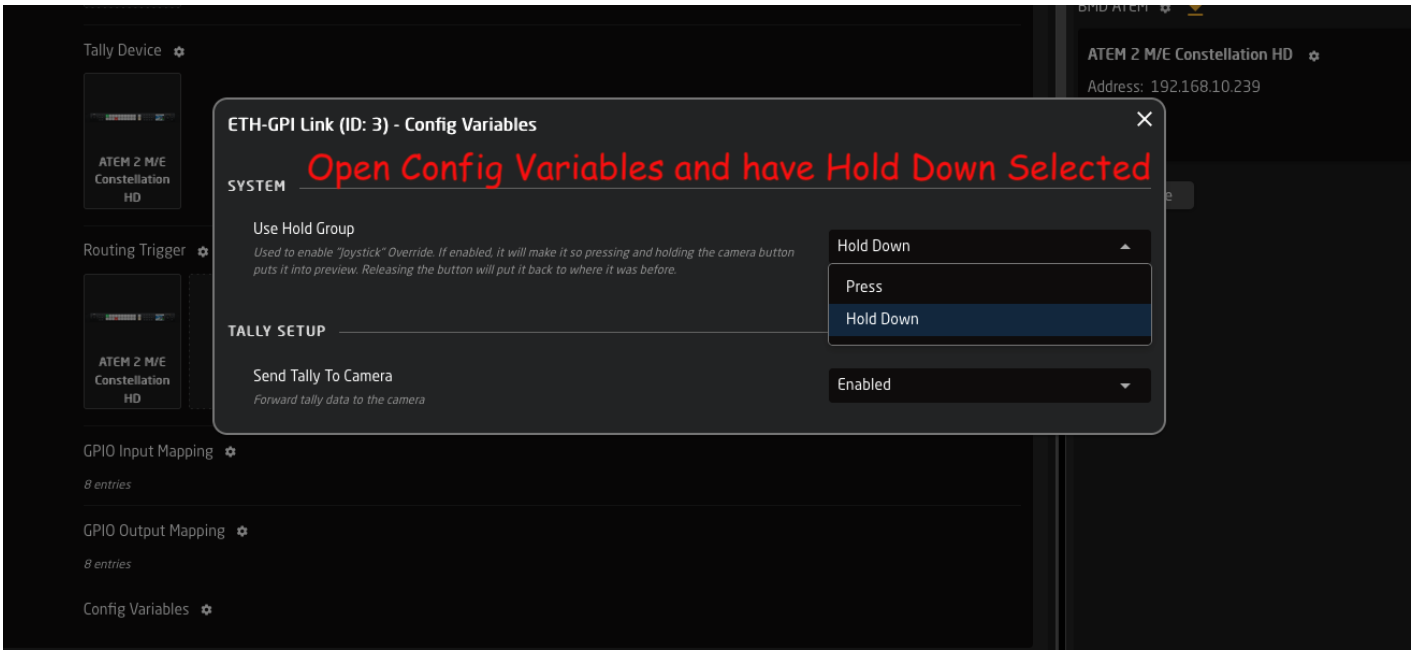
Support

7:


GPIO Input Mapping
8 entries
GPIO Output Mapping
8 entries
Config Variables
Add Panel
CR-N500
Address: 192.168.10.223
Device ID: 1
Disconnected
BMD ATEM
ATEM 2 M/E Constellation HD
Address: 192.168.10.239
Device ID: 1
Test
Set GPIO Input Mapping to Route index
Set Input Index to Correspond with route Index from Camera selector
GPIO Input Mapping
Description: Please specify what row from the camera selector you want to trigger on input channel 1-8
Show Advanced
Order Mute Name/Label Input Index GPIO Input Type
1 CAM1 PGM 1 GPIO Input - Route Index
2 CAM2 PGM 2 GPIO Input - Route Index
3 CAM3 PGM 3 GPIO Input - Route Index
4 CAM4 PGM 4 GPIO Input - Route Index
5 CAM1 PRV 5 GPIO Input - Route Index
6 CAM2 PRV 6 GPIO Input - Route Index
7 CAM3 PRV 7 GPIO Input - Route Index
8 CAM4 PRV 8 GPIO Input - Route Index

8:



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