Device: AJA FS2

Introduction

A number of parameters on the AJA FS2 frame synchronizer can be controlled from a SKAARHOJ control panel. The complete feature set is not implemented but a large variety of actions can be found. This document gives you an overview of possible control parameters.

The implementation have been done on a FS2 with Software Version 2.1.1.5.

Connection

Due to the amount of information on the FS2 a connection time is approximately 10 seconds. Connection status is shown in the serial monitor.

When a SKAARHOJ device have successfully connected to the FS2 the serial monitor will report:
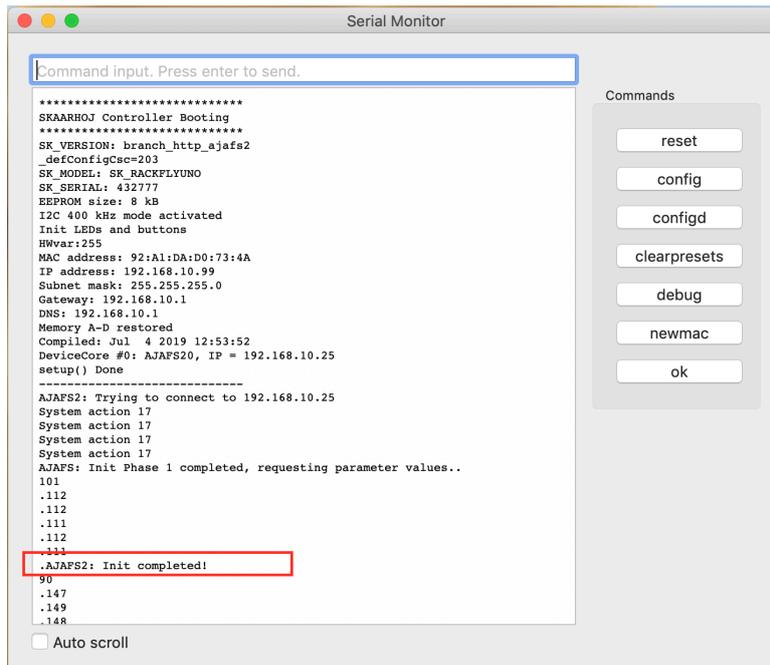
If the SKAARHOJ device are unable to locate the FS2 on the network the serial monitor will report:
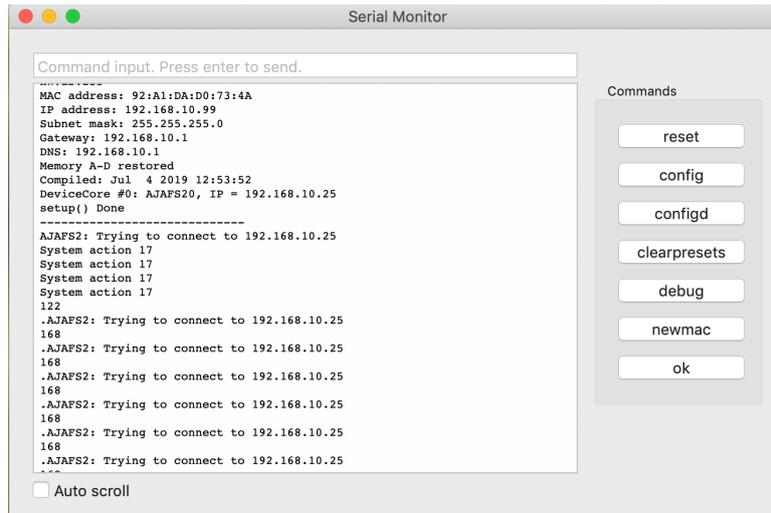
Device Core Details

From the same panel it is possible to control the 2 different Video channels and switch between these on the fly. When relevant the channel for Actions on the FS2 Device Core can be set to Mem A-D, or Video 1-2. In the default configurations you will often find this set to Mem A so the different channels can be controlled on the fly by changing the Memory Parameter A to values between 1 to 2 elsewhere on the panel. The mapping between the Memory A and channels are shown below.
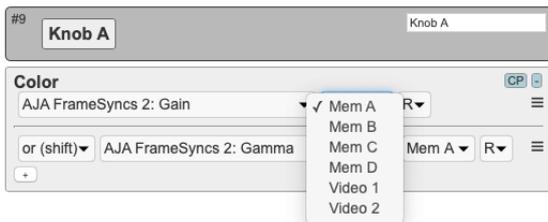
Mem A = 1 = Video 1 + Audio 1

Mem A = 2 = Video 2 + Audio 2

A action is typically build up of two parameters:

- Selection of the Video Channel on the FS2

- Selection of a specific value if it exists
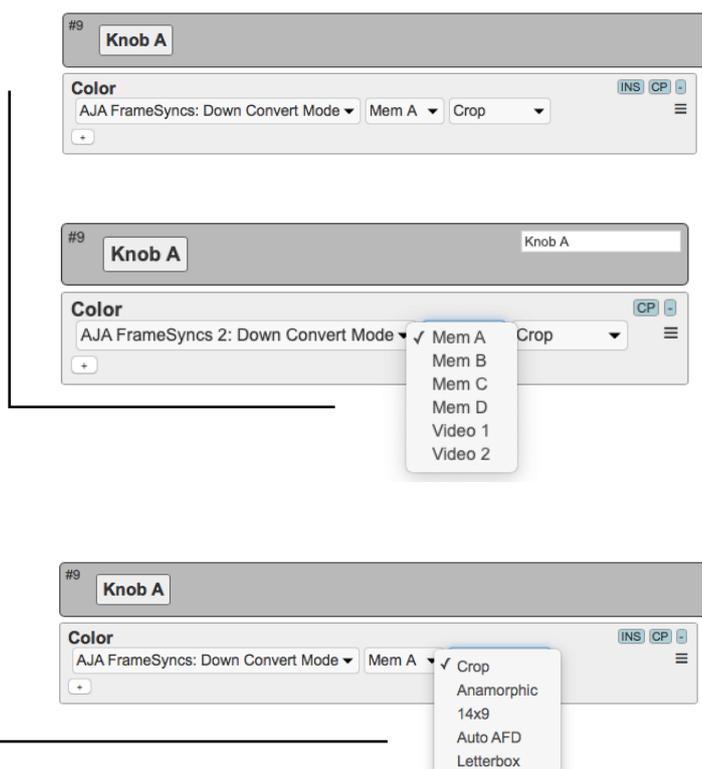
This is a overview of the actions implemented in the Device Core

✓ AJA FrameSyncs 2: Input
AJA FrameSyncs 2: Loss of input
AJA FrameSyncs 2: Output Format
AJA FrameSyncs 2: SD Aspect Ratio
AJA FrameSyncs 2: Up Convert Mode
AJA FrameSyncs 2: Down Convert Mode
AJA FrameSyncs 2: Custom Size/Pos
AJA FrameSyncs 2: Custom Size
AJA FrameSyncs 2: Custom Aspect
AJA FrameSyncs 2: Custom Position
AJA FrameSyncs 2: Region of Interest
AJA FrameSyncs 2: ROI
AJA FrameSyncs 2: Test Pattern Gen
AJA FrameSyncs 2: Test Pattern Type
AJA FrameSyncs 2: ProcAmp Enable
AJA FrameSyncs 2: Color Corrector
AJA FrameSyncs 2: ProcAmp Settings
AJA FrameSyncs 2: Gain
AJA FrameSyncs 2: Black
AJA FrameSyncs 2: Gamma
AJA FrameSyncs 2: Video Legalizer
AJA FrameSyncs 2: Video Legalizer Settings
AJA FrameSyncs 2: Freeze Output
AJA FrameSyncs 2: Fan Speed
AJA FrameSyncs 2: Output Frame Rate
AJA FrameSyncs 2: Genlock Source
AJA FrameSyncs 2: HDMI RGB Range
AJA FrameSyncs 2: Preset
AJA FrameSyncs 2: Audio Input Map
AJA FrameSyncs 2: Embedded Audio Out
AJA FrameSyncs 2: Audio Follow Video
AJA FrameSyncs 2: Audio Signal Gen
AJA FrameSyncs 2: Audio Delay

The Actions are divided by using the control categories from the Frame Sync.

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AJA FrameSyncs 2: Test Pattern Type
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AJA FrameSyncs 2: Color Corrector
AJA FrameSyncs 2: ProcAmp Settings
AJA FrameSyncs 2: Gain
AJA FrameSyncs 2: Black
AJA FrameSyncs 2: Gamma
AJA FrameSyncs 2: Video Legalizer
AJA FrameSyncs 2: Video Legalizer Settings
AJA FrameSyncs 2: Freeze Output

Status - Video 1-2

AJA FrameSyncs 2: Fan Speed

Status - Config

AJA FrameSyncs 2: Output Frame Rate
AJA FrameSyncs 2: Genlock Source
AJA FrameSyncs 2: HDMI RGB Range

Status - System

AJA FrameSyncs 2: Preset

Status - Presets

AJA FrameSyncs 2: Audio Input Map
AJA FrameSyncs 2: Embedded Audio Out
AJA FrameSyncs 2: Audio Follow Video
AJA FrameSyncs 2: Audio Signal Gen
AJA FrameSyncs 2: Audio Delay

Status - Audio 1-2

Menu
Status
System
Config
Presets
Output
Video 1
Audio 1
Video 2
Audio 2
Network
Remote
Firmware
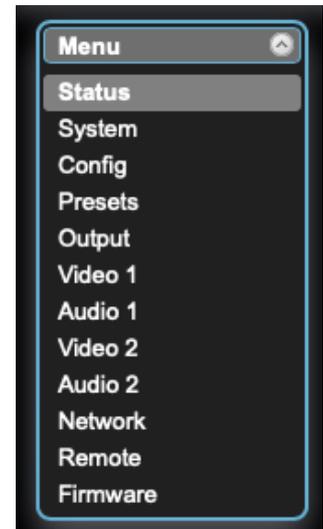
This is a table of actions for AJA FS2 Device Core

Input #9 Knob A Color AJA FrameSyncs: Input ▾ Mem A ▾ SDI1 ▾ INS CP - ☰ +	Routes input to the selected Channel *Binary triggers:* Sets the selected input to the selected channel. *Pulse inputs:* Will cycle through the Inputs for the selected channel. *Displays:* "Input/Input x"
Loss of input #9 Knob A Color AJA FrameSyncs: Loss of input ▾ Mem A ▾ ✓ Black / Freeze INS CP - ☰ +	Selects option for Loss of input *Binary triggers:* Sets the selected mode for loss of input. *Pulse inputs:* Will cycle through options for loss of input *Displays:* "In Loss/mode"
Output Format #9 Knob A Color AJA FrameSyncs: Output Format ▾ Mem A ▾ INS CP - ☰ +	Selects Output Format *Binary triggers:* Not implemented *Pulse inputs:* Will cycle through options for Output Format *Displays:* "Output/Format"
SD Aspect Ratio #9 Knob A Color AJA FrameSyncs: SD Aspect Ratio ▾ Mem A ▾ ✓ Off / Letterbox / H Crop / Pillarbox / V Crop / 14x9 INS CP - ☰ +	Selects SD Aspect Ratio *Binary triggers:* Sets the selected SD Aspect Ratio *Pulse inputs:* Will cycle through options for Aspect Ratio *Displays:* "SD Aspect/mode"
Up Convert Mode #9 Knob A Color AJA FrameSyncs: Up Convert Mode ▾ Mem A ▾ 4x3 Pillar ▾ INS CP - ☰ +	Selects Up Convert Mode *Binary triggers:* Sets the selected Up Convert Mode *Pulse inputs:* Will cycle through options for Convert Mode *Displays:* "Up Conv/mode"
Down Convert Mode #9 Knob A Color AJA FrameSyncs: Down Convert Mode ▾ Mem A ▾ Crop ▾ INS CP - ☰ +	Selects Down Convert Mode *Binary triggers:* Sets the selected Down Convert Mode *Pulse inputs:* Will cycle through options for Convert Mode *Displays:* "Dn Conv/mode"
Custom Size/Pos #9 Knob A Color AJA FrameSyncs: Custom Size/Pos ▾ Mem A ▾ Off ▾ INS CP - ☰ +	Turn off/on Custom Size/Position *Binary triggers:* Sets Custom Size/Postion to on/off *Pulse inputs:* Will cycle through on/off for Custom Size/Pos *Displays:* "Cust S/P/mode"
Custom Size #9 Knob A Color AJA FrameSyncs: Custom Size ▾ Mem A ▾ INS CP - ☰ +	Sets the Custom Size *Binary triggers:* Not implemented *Pulse inputs:* Will set the custom size *Displays:* "Cust Size/%"
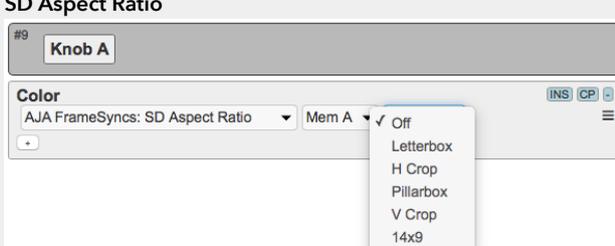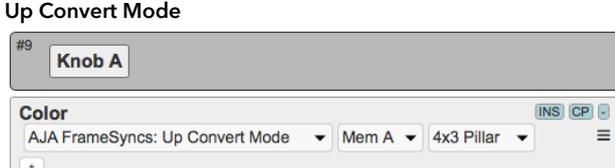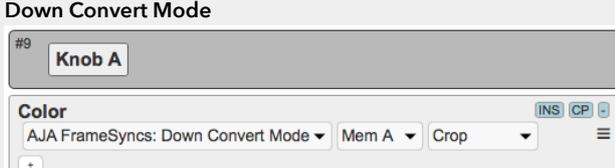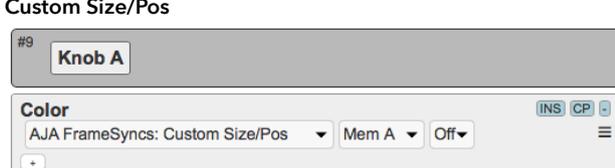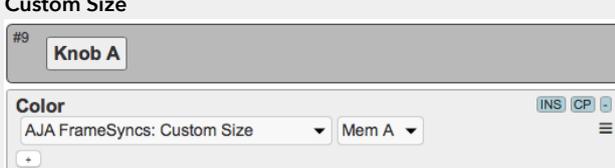
Custom Aspect

#9 Knob A

Color
AJA FrameSyncs: Custom Aspect | Mem A INS CP -
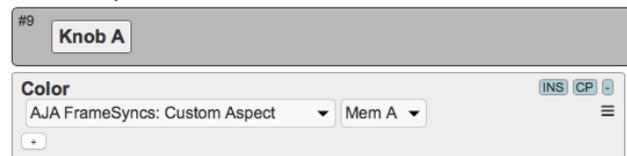
Sets the Custom Aspect

Binary triggers: Not implemented

Pulse inputs: Will set the custom aspect

Displays: "Cust Asp/%"

Custom Postion

#9 Knob A

Color
AJA FrameSyncs: Custom Position | Mem A | ✓ H / V | INS CP -

Sets the Custom Position for either H or V

Binary triggers: Not implemented

Pulse inputs: Will set the custom position for H or V

Displays: "CustPos H/%" or "CustPos V/%"

Region of Interest

#9 Knob A

Color
AJA FrameSyncs: Region of Interest | Mem A | ✓ Off / Setup / On Square / On Full | INS CP -
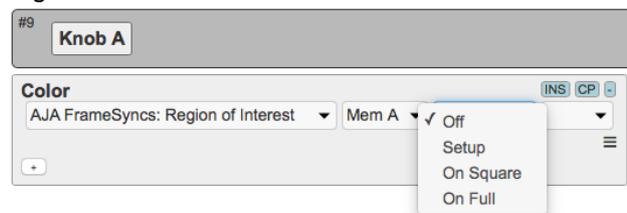
Sets the Region of Interest

Binary triggers: Sets Region of Interest. If Toggle is selected it will toggle between "Off" and the selected option.

Pulse inputs: Will cycle through options for Region of Interest

Displays: "ROI Mode/mode"

ROI

#9 Knob A

Color
AJA FrameSyncs: ROI | Mem A | ✓ Left / Right / Top / Bottom | INS CP -

#10 Knob B
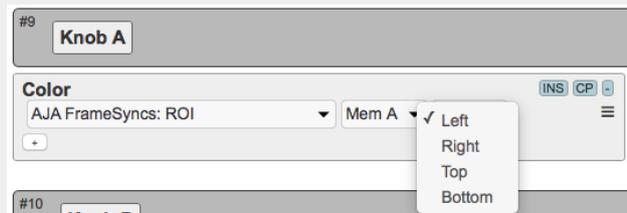
Sets the ROI parameters

Binary triggers: Not implemented

Pulse inputs: Will cycle through the selected ROI parameter

Displays: "ROI Left/%", "ROI Right/%", "ROI Top/%", "ROI Bottom/%"

Test Pattern Gen

#9 Knob A

Color
AJA FrameSyncs: Test Pattern Gen | Mem A | Off | INS CP -

Controls the Test Pattern Generator

Binary triggers: Sets the generator to on or off

Pulse inputs: Will cycle through on/off

Displays: "Test Gen/mode"

Test Pattern Type

#9 Knob A | Knob A

Color
AJA FrameSyncs 2: Test Pattern Type | Mem A | ✓ 100% Bars / 75% Bars / Ramp / Multiburst / Flat Field / Black | INS CP -

#10 Knob B
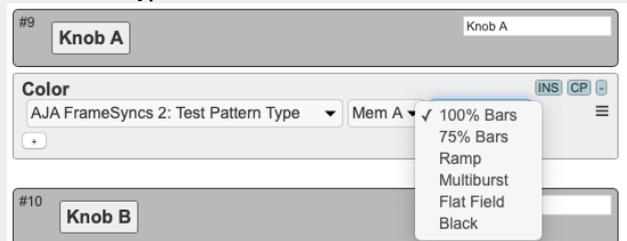
Controls the Test Pattern Type

Binary triggers: Sets the type to the chosen mode

Pulse inputs: Will cycle through the modes

Displays: "Test Ptrn/mode"

ProcAmp Enable

#9 Knob A

Color
AJA FrameSyncs: ProcAmp Enable | Mem A | Off | INS CP -

Sets ProcAmp to on or off

Binary triggers: Sets ProcAmp to the chosen mode

Pulse inputs: Will cycle through the modes

Displays: "ProcAmp/mode"

Color Corrector

#9 Knob A

Color
AJA FrameSyncs: Color Corrector | Mem A | Off | INS CP -

Sets Color Corrector to on or off

Binary triggers: Sets Color Corrector to the chosen mode

Pulse inputs: Will cycle through the modes

Displays: "ColorCorr/mode"

ProcAmp Settings

#9 | Knob A

Color | INS | CP | -
AJA FrameSyncs: ProcAmp Settings ▾ | Mem A ▾ | ✓ Gain
+ | | Black
| | Hue
#10 | Knob B | Saturation
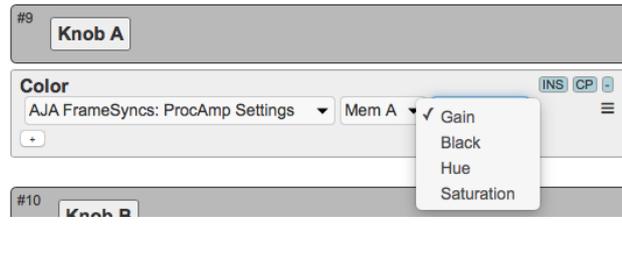
Controls the 4 ProcAmp values

Binary triggers: Not implemented

Pulse inputs: Will cycle the selected ProcAmp parameter

Displays: "Gain/value" , "Black/value", "Hue/value", "Sat/value"

For "Gain" + "Black"
Analog inputs - Gain: Set the value between 0-1.5
Analog inputs - Black: Set the value between -20 - +20

Gain

#9 | Knob A

Color | INS | CP | -
AJA FrameSyncs: Gain ▾ | Mem A ▾ | ✓ R
+ | | G
| | B
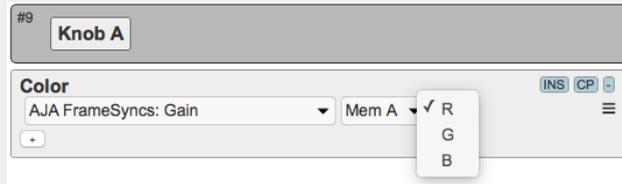
Controls the Color Corrector Gain RGB Values

Binary triggers: Not implemented

Pulse inputs: Will cycle the selected RGB Gain value

Displays: "Gain R/value" , "Gain G/value", "Gain B/value"

Black

#9 | Knob A

Color | INS | CP | -
AJA FrameSyncs: Black ▾ | Mem A ▾ | R▾
+
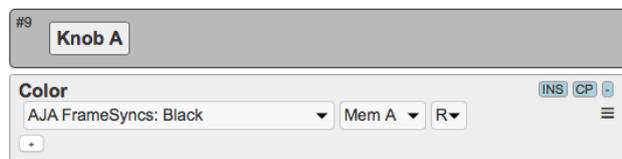
Controls the Color Corrector Black RGB Values

Binary triggers: Not implemented

Pulse inputs: Will cycle the selected RGB Black value

Displays: "Black R/value" , "Black G/value", "Black B/value"

Gamma

#9 | Knob A

Color | INS | CP | -
AJA FrameSyncs: Gamma ▾ | Mem A ▾ | ✓ R
+ | | G
| | B

Controls the Color Corrector Gamma RGB Values

Binary triggers: Not implemented

Pulse inputs: Will cycle the selected RGB Gamma value

Displays: "Gamma R/value" , "Gamma G/value", "Gamma B/value"

Video Legalizer

#9 | Knob A

Color | INS | CP | -
AJA FrameSyncs: Video Legalizer ▾ | Mem A ▾ | Off ▾
+
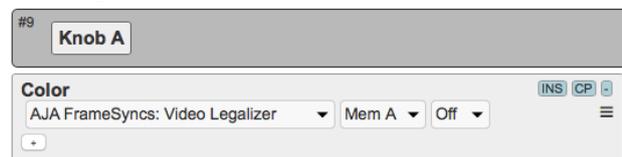
Sets the Video Legalizer to on or off

Binary triggers: Sets the Video Legalizer to the chosen mode

Pulse inputs: Will cycle through the modes

Displays: "Legalizer/mode"

Video Legalizer Settings

#9 | Knob A

Color | INS | CP | -
AJA FrameSyncs: Video Legalizer Settin▾ | Mem A ▾ | ✓ White
+ | | Black
#10 | | Chroma

Controls the Video Legalizer Settings

Binary triggers: Not implemented

Pulse inputs: Will cycle through the selected values

Displays: "LegWhite/value", "LegBlack/value", "LegChroma/value"

Freeze Output

#9 | Knob A

Color | INS | CP | -
AJA FrameSyncs: Freeze Output ▾ | Mem A ▾ | Off▾
+
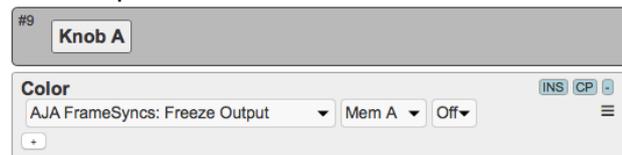
Controls the mode for Freeze Output

Binary triggers: Sets the Freeze Output to the chosen mode

Pulse inputs: Will cycle through the modes

Displays: "Freeze/mode"

Fan Speed

#9 | Knob A

Color | INS | CP | -
AJA FrameSyncs: Fan Speed ▾
+

Controls the Fan Speed

Binary triggers: Not implemented

Pulse inputs: Will cycle Fan Speeds

Displays: "Fan Speed/value"

Output Frame Rate

#9 **Knob A**	Knob A

Color INS CP -
AJA FrameSyncs 2: Output Frame Rate ▾ ✓ 59.94/23.98
50/25
60/24
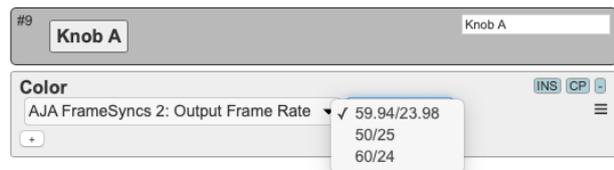
Controls the global Output Frame Rate

Binary triggers: Sets the Output Frame Rate to the chosen mode

Pulse inputs: Will cycle through the modes

Displays: "FrameRate/mode"

Genlock Source

#9 **Knob A**	Knob A

Color INS CP -
AJA FrameSyncs 2: Genlock Source ▾ ✓ REF
VID1
VID2
FREE
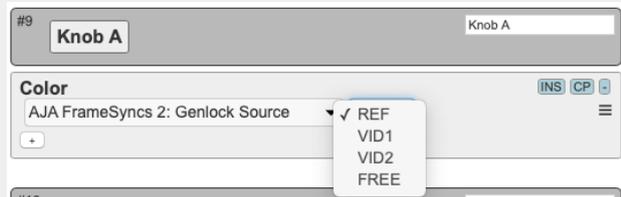
Controls the global Genlock Source

Binary triggers: Sets the Genlock Source to the chosen mode

Pulse inputs: Will cycle through the modes

Displays: "GenLokSrc/mode"

HDMI RGB Range

#9 **Knob A**	

Color INS CP -
AJA FrameSyncs: HDMI RGB Range ▾ ✓ Full
SMPTE
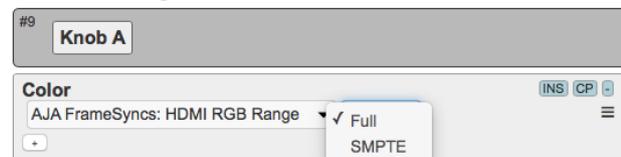
Controls the HDMI RGB Range

Binary triggers: Sets the HDMI RGB Range to the chosen mode

Pulse inputs: Will cycle through the modes

Displays: "HDMIRGBRA/mode"

Presets

#9 **Knob A**	

Color INS CP -
AJA FrameSyncs: Preset ▾ Recall/Set▾ ✓ Factory
1
2
3
4
5

#10 **Knob B**	
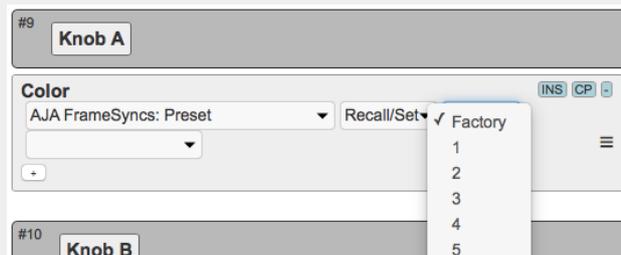
Controls the Presets on the FS. Select between 40 Presets and the Factory Default

Binary triggers: If "Recall/Set" - press and hold will perform a Preset Set
A single press will recall the preset
If "Set" a single press will save the preset
If "Recall" a single press will recall the preset

Pulse inputs: Not implemented

Displays:
If "Recall/Set" "Preset/no"
If "Set" "Set/no"
If "Recall "Recall/no"

Audio Input Map

#9 **Knob A**	Knob A

Color INS CP -
AJA FrameSyncs 2: Audio Input Map ▾ Mem A▾ ✓ AES/EBU
Analog
Embed SDI1
Embed SDI2
Embed Fiber1
Embed Fiber2
HDMI
Dolby Decode
Mute
Channel Map
Stereo Map

#10 **Knob B**	

Color CP -
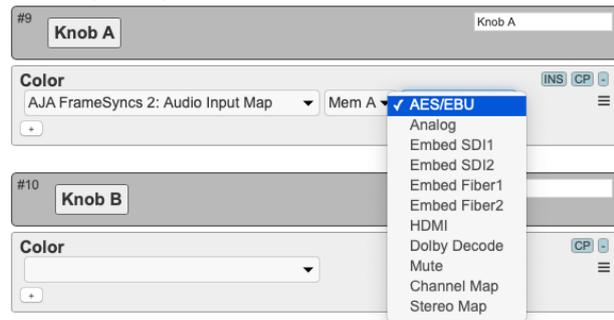
Controls the Audio Input Mapping

Binary triggers: Sets the Audio Embedding Mapping to the chosen mode

Pulse inputs: Will cycle through the modes

Displays: "Aud.Input/mode"

Embedded Audio Out

#9 **Knob A**	Knob A

Color INS CP -
AJA FrameSyncs 2: Embedded Audio Ou▾ Mem A▾ ✓ On
Mute
Off
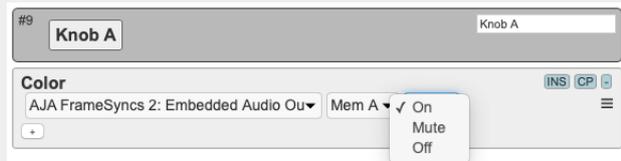
Controls the Embedded Audio Out

Binary triggers: Sets the Audio Embedding Out to the chosen mode

Pulse inputs: Will cycle through the modes

Displays: "Emb.Audio/mode"

Audio Follow Video

#9 **Knob A**	Knob A

Color INS CP -
AJA FrameSyncs 2: Audio Follow Video ▾ Mem A▾ ✓ Off
On
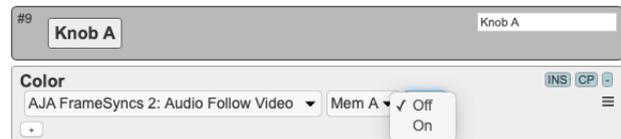
Controls the Audio Follow Video mode

Binary triggers: Sets the Audio Follow Video to the chosen mode

Pulse inputs: Will cycle through the modes

Displays: "Aud.Follow/mode"

Audio Signal Gen

Controls the Audio Signal Generator

Binary triggers: Sets the Audio Signal Generator to the chosen mode

Pulse inputs: Will cycle through the modes

Displays: "Aud.Sig.Ge/mode"

Audio Delay

Controls the Audio Delay

Binary triggers: Sets the Audio Delay for the chosen Audio Channel

Pulse inputs: Will cycle the Audio Delay

Displays: "Aud.Delay/mode"