
Player's Manual
Deluxe
FE

WARNING - When using electric products, these basic precautions should always be followed.

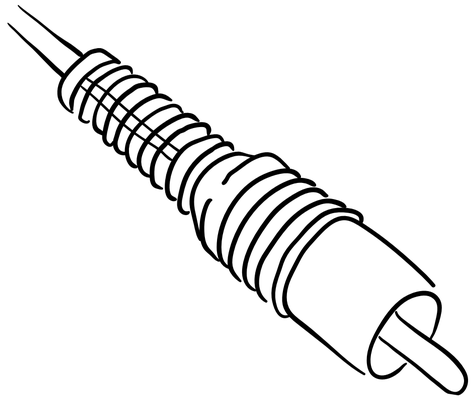
1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use apparatus near water - for example, but not limited to: near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool or the like.
6. Clean only with dry cloth.
7. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
8. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
9. Use attachments/accessories specified by the manufacturer. Ensure that any external equipment used in conjunction with this product is installed according to the safety specifications supplied with that equipment.
10. Unplug this apparatus during lightning storms or when unused for a long period of time.
11. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings. Do not expose this product to rain or moisture.
12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as if power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Thank You.

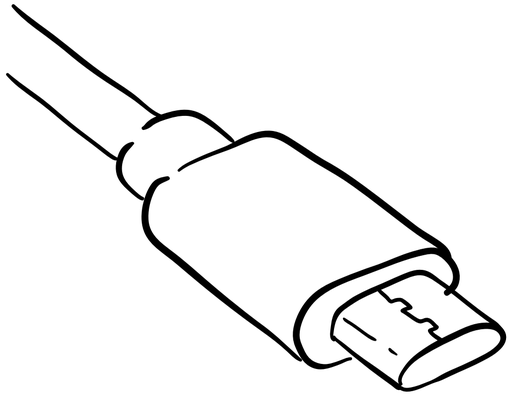
Thank you for choosing the **MisMatcher Delux II by Freedom Enterprise.** Built from the ground up, the Delux II pushes the boundaries of real-time video glitching with improved performance, flexibility, and expandability. This manual will guide you through its features and help you get started on creating bold, experimental visuals. Enjoy exploring what's possible with the next generation of the MisMatcher series.

Contents

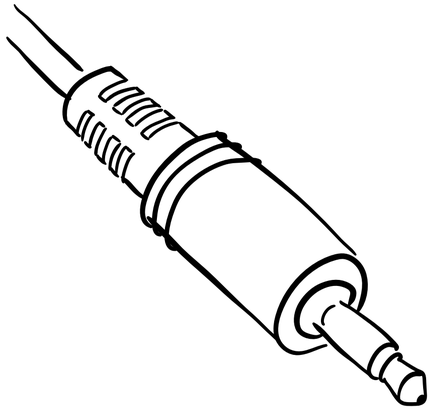
Cables



RCA

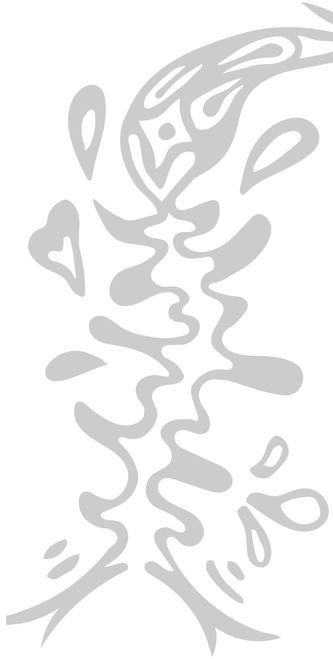


USB-C PD only



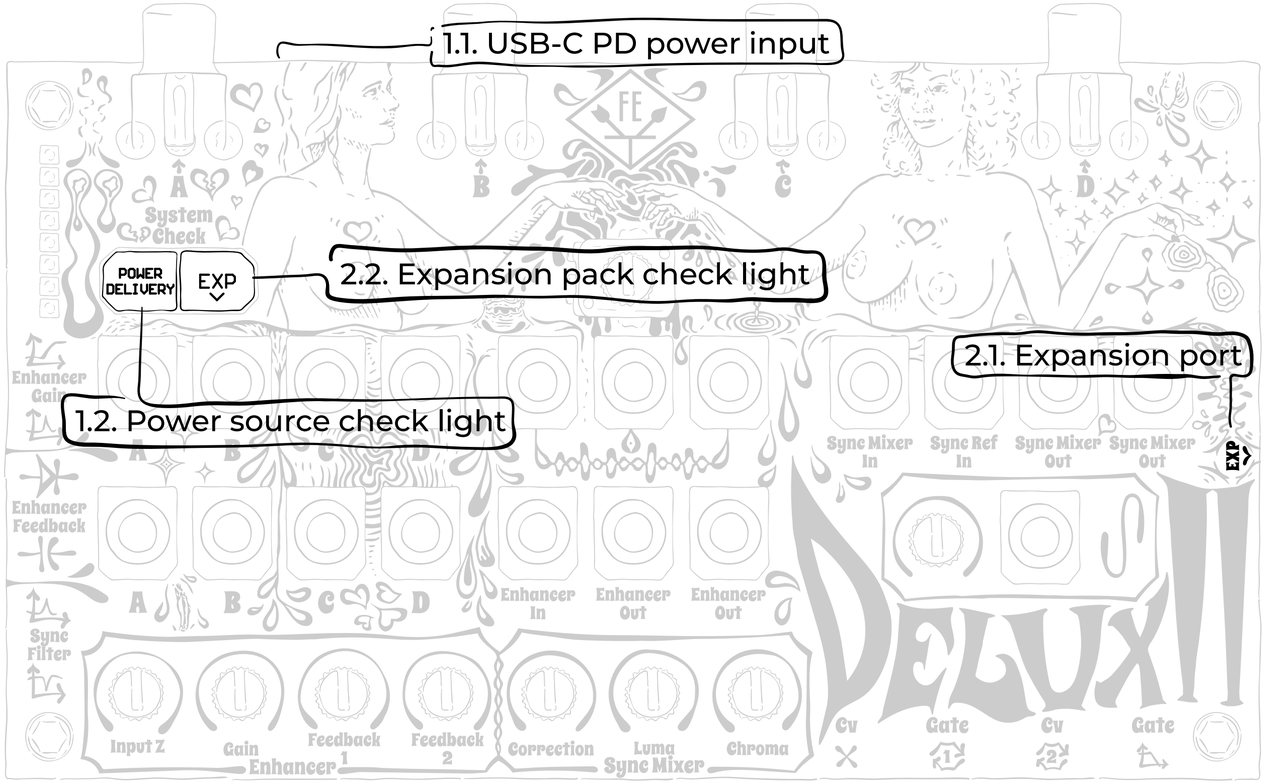
3.5mm TS Patch Cables

Quick Start - Delux II only, no expansions



1. Connect your USB-C PD power source to the MisMatcher Delux II.
2. Connect your camera or HDMI2AV to your MisMatcher’s RCA A port, using a RCA cable.
3. Connect your CRT TV to your MisMatcher’s RCA C port, using an RCA cable.
4. Connect one end of a 3.5mm patch cable to RCA A access point.
5. Connect the other end of the same 3.5mm patch cable to the keychain splitter.
6. Connect one end of another 3.5mm patch cable to the keychain splitter, on the same side as before.
7. Connect the other end of the same 3.5mm patch cable to Sync Ref In.
8. Connect one end of another 3.5mm patch cable to the keychain splitter, on the same side as before.
9. Connect the other end of the same 3.5mm patch cable to Enhancer In.
10. Connect one end of another 3.5mm patch cable to Enhancer Out.
11. Connect one end of the same 3.5mm patch cable to Sync Mixer In.
12. Connect one end of another 3.5mm patch cable to Sync Mixer Out.
13. Connect one end of the same 3.5mm patch cable to RCA C access point.
14. Use all of the seven knobs at the bottom to control the effects.

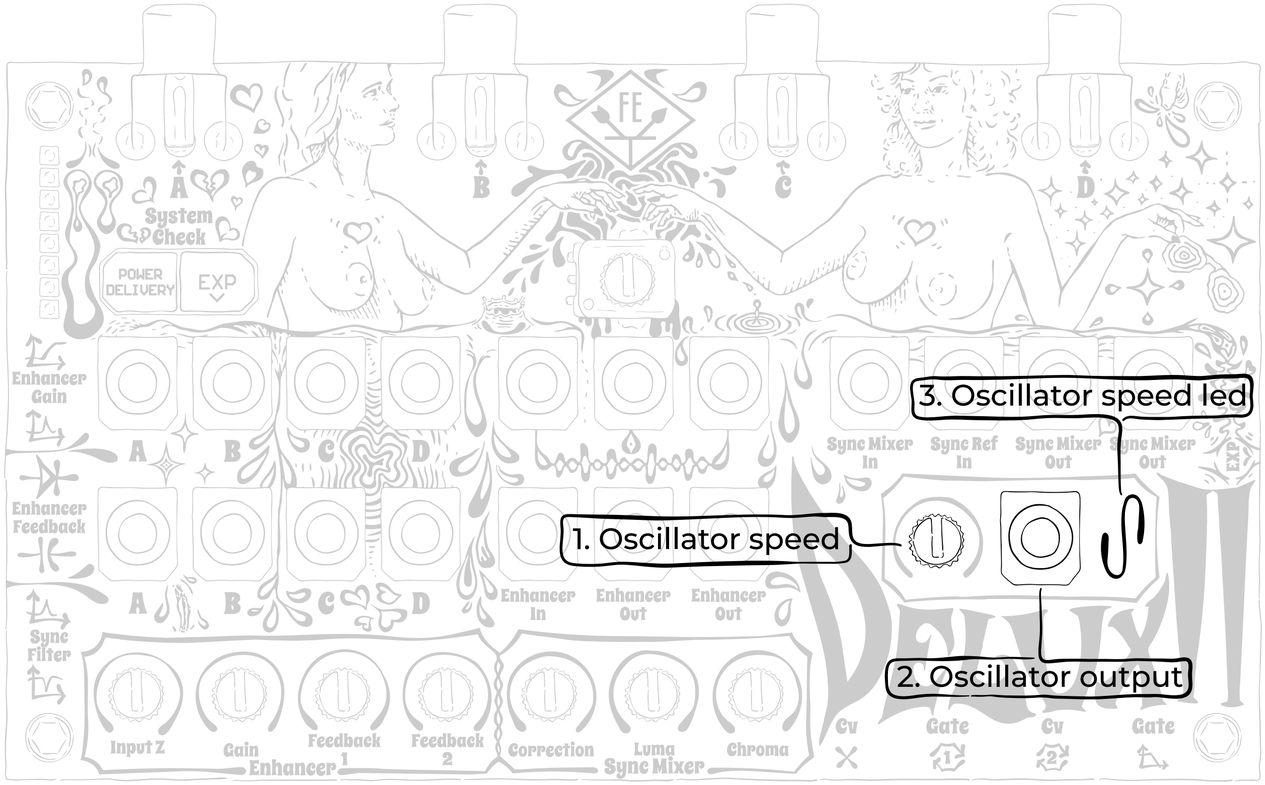
Controls - Misc



To power your MisMatcher Delux II, connect a USB-C PD power source to the USB-C port. If the source meets the required specifications, the Power Delivery icon in the System Check will turn green. If it stays red, try a different power adapter.

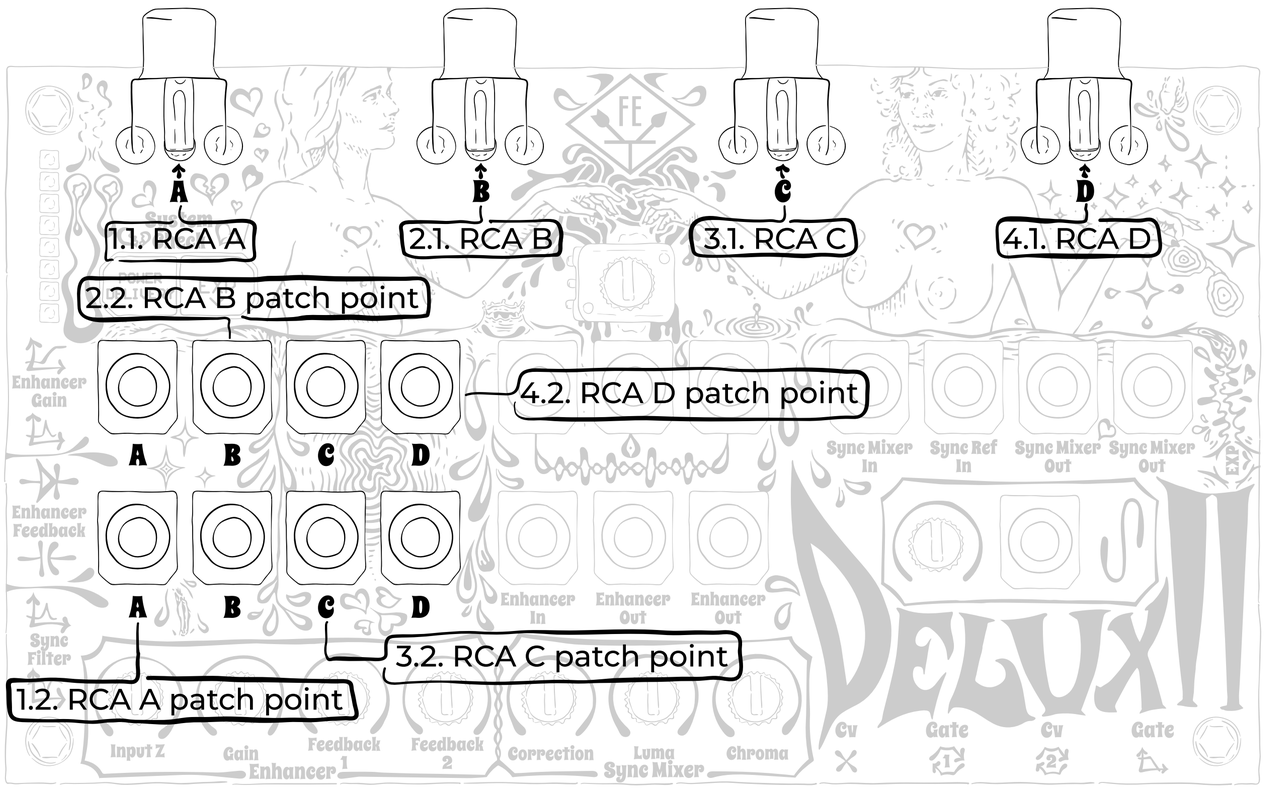
To connect expansion modules, first make sure the Delux II is completely powered off. Align the arrows near the expansion ports and press the modules together so there are no visible gaps. Once powered on, if the expansion is properly connected, the EXP icon in the System Check will turn green. If it remains red, disconnect power immediately and check that the pin headers between the Delux II and Expansion Pack are correctly aligned.

Controls - Oscillator



The MisMatcher Delux II has a built-in sinewave oscillator. You can use it to drive the Gate and CV inputs at the bottom, or inject noise into the video signal.

Controls - I/O

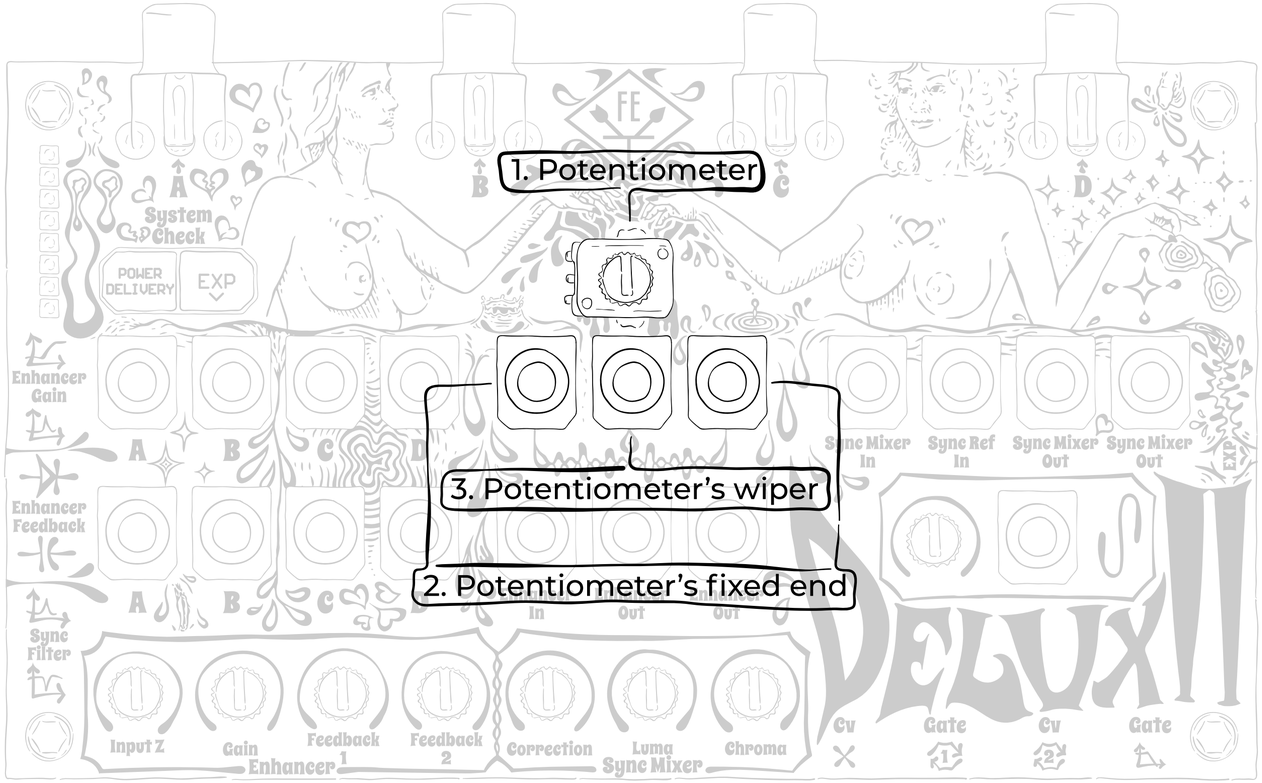


The four RCA ports at the top can be used to easy connect your cameras and monitors to the MisMatcher Delux II. The patch points at the bottom are used to perform the patching using only **3.5mm TS patch cables.**

The corresponding jacks at the bottom are used to patch your desired signal path. **Each RCA jack is passively split into two 3.5mm TS patch points.**

Only use 3.5mm TS patch cables on the patch points.

Controls - Passive Mixer / Attenuator

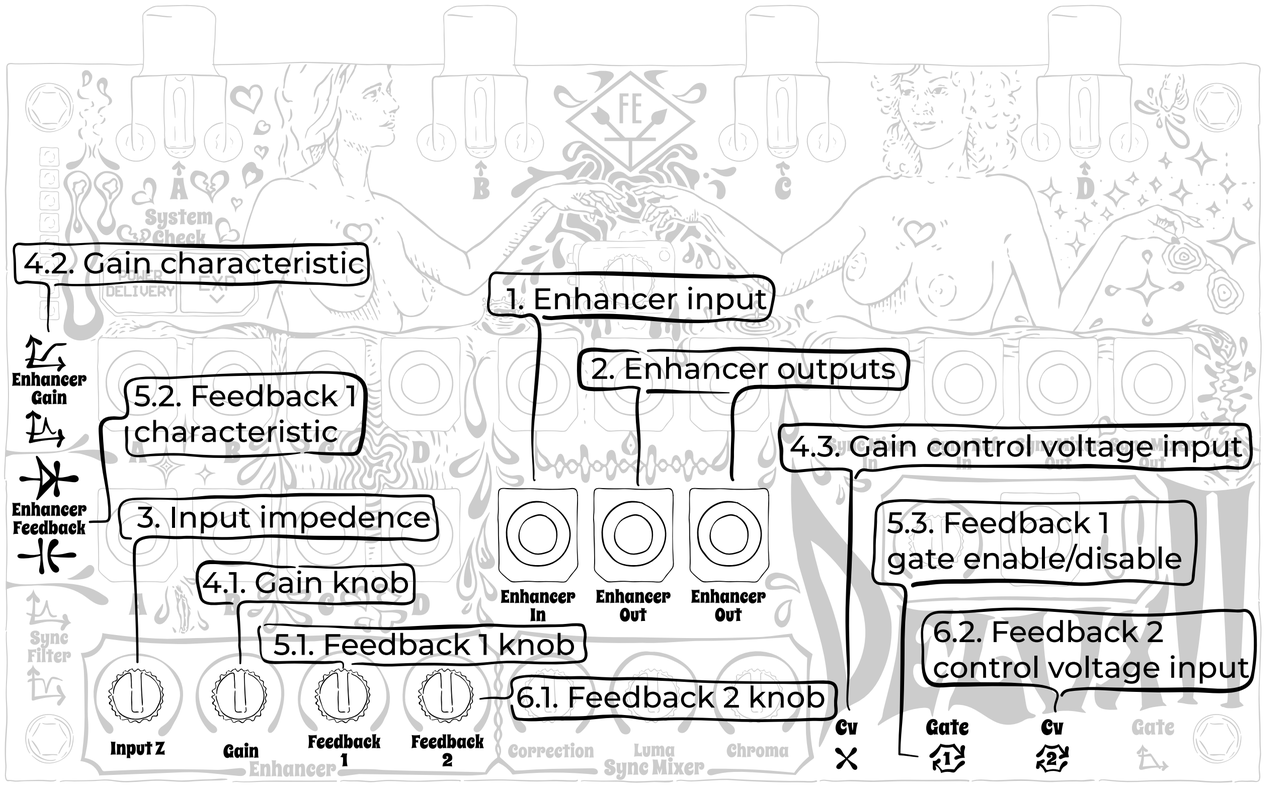


The potentiometer in the user interface can be used to either attenuate a video signal or fade between two video sources.

Its jacks are automatically connected to ground if no patch cable is inserted. To create an attenuator, connect your video source to one of the fixed end jacks and leave the other fixed end unplugged. The attenuated signal can be accessed from the middle (wiper) jack.

To fade between two video sources, connect a different source to to each fixed end. The wiper will output a blend of the two signals.

Controls - Enhancer



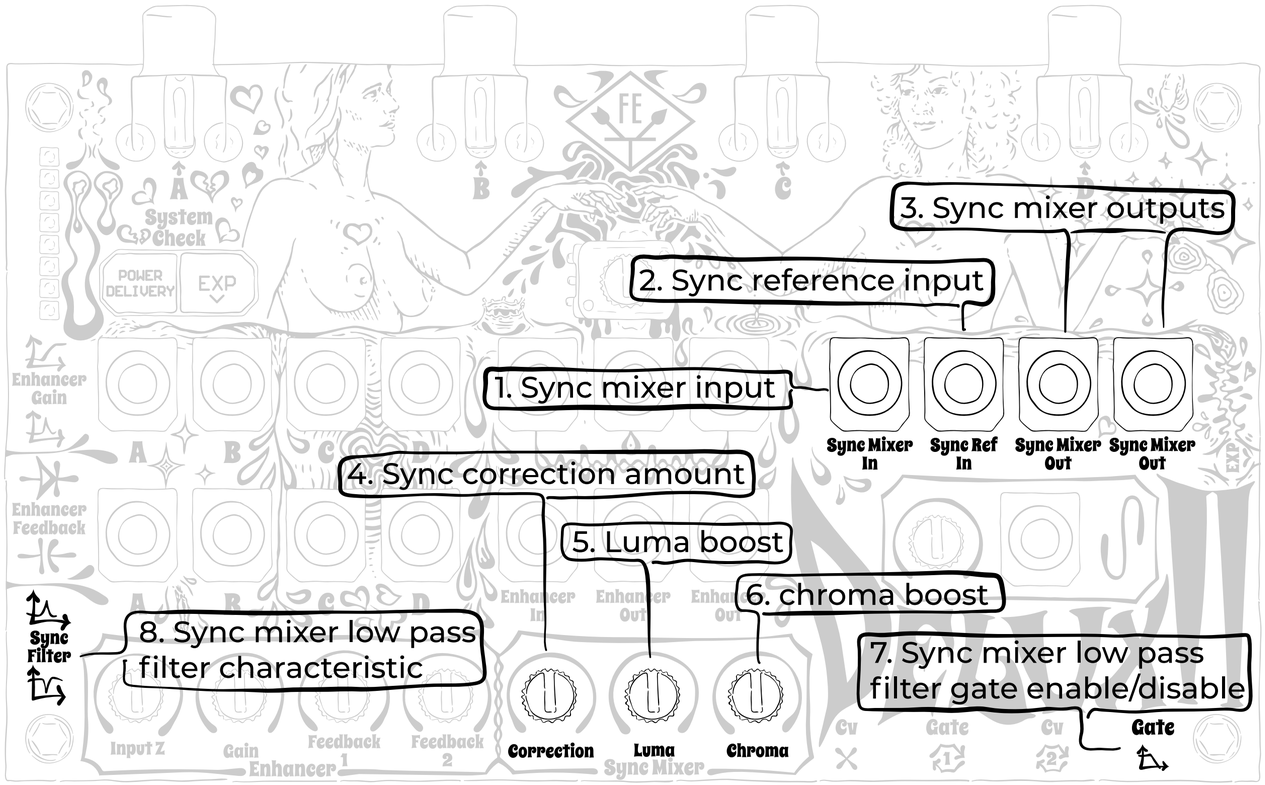
The Enhancer can boost saturation and sharpness or, using Input Z, Gain, Feedback 1, and Feedback 2, distort the video to create unique effects. Patch video into the Enhancer Input (1) and connect a monitor to the Outputs (2).

The Input Impedance control (3) adjusts the impedance between the buffer stage and main enhancer. The Gain knob (4.1) sets amplification; Gain Characteristic (4.2) defines the boosted frequency range; and the Gain CV Input (4.3) lets a CV signal control gain.

Feedback 1 (5.1) routes video from an internal stage back into the input, adding trails, echoes, or distortion. Its Characteristic (5.2) controls intensity. Feedback 1 is active unless disabled by a gate (5.3). Logic high (+5V) enables it; low (0V) disables.

Feedback 2 (6.1) adds further feedback from another stage for layered effects. It is also active by default, unless controlled via CV [xx+xx]V (6.2).

Controls - Sync Mixer



A stable picture depends on a clean sync signal. Distortion of video can weaken sync, causing horizontal or vertical scrolling on the screen. When undesired sync loss occurs, the Sync Separator and Sync Mixer help restore stability.

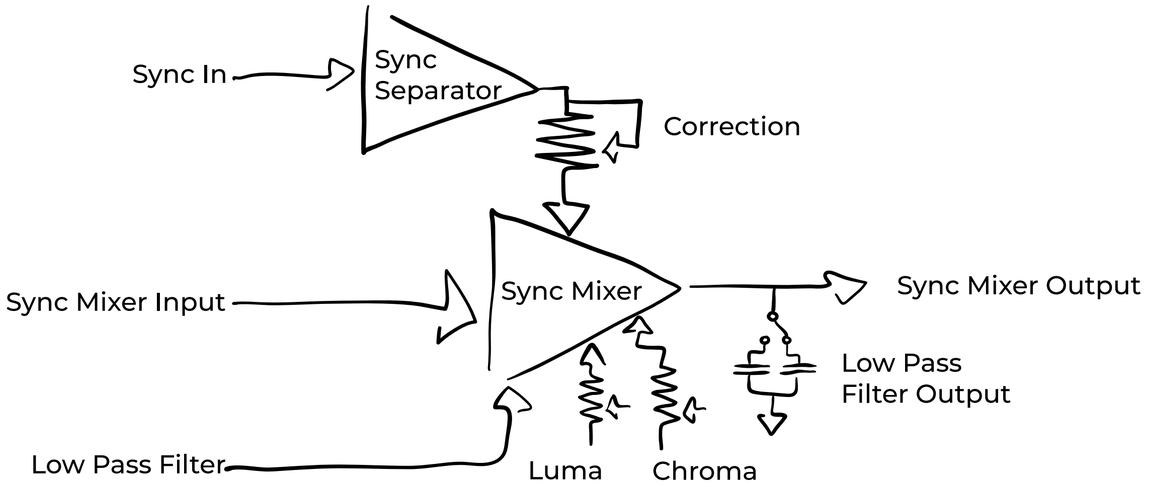
The Sync Separator extracts the sync signal from the video input. The Sync Mixer then combines the video signal at the Sync Mixer Input (1) with the extracted sync from the Sync Reference Input (2), producing a stable output at Sync Mixer Outputs (3).

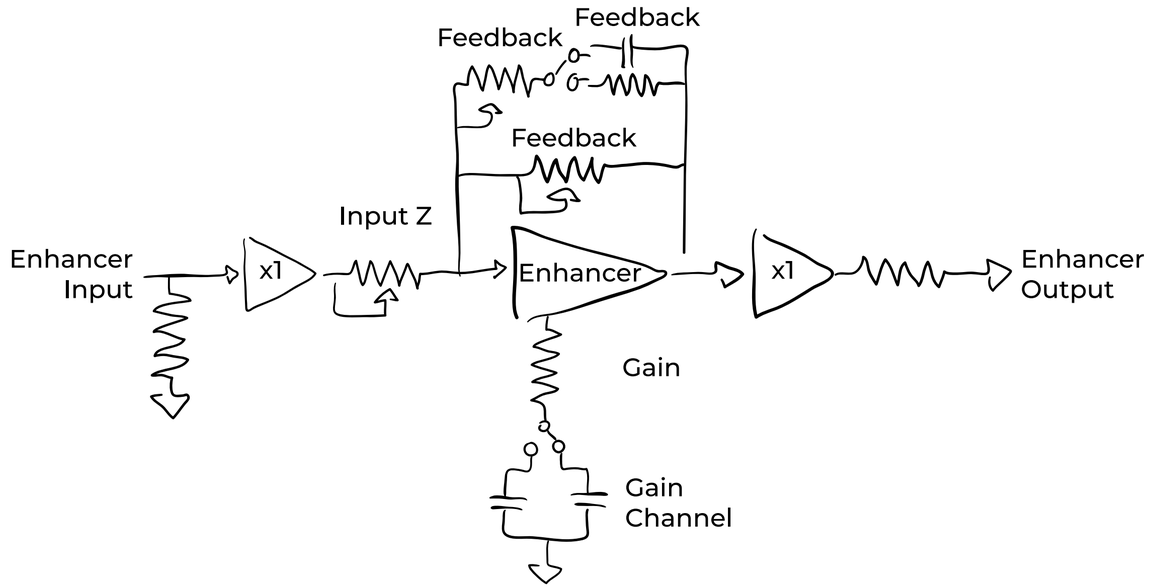
The Sync Correction Amount (4) adjusts how strongly the mixer replaces the original sync with the extracted sync, improving stability without compromising image quality.

Luma Boost (5) and Chroma Boost (6) enhance brightness and color saturation, respectively, to compensate for signal loss or degradation.

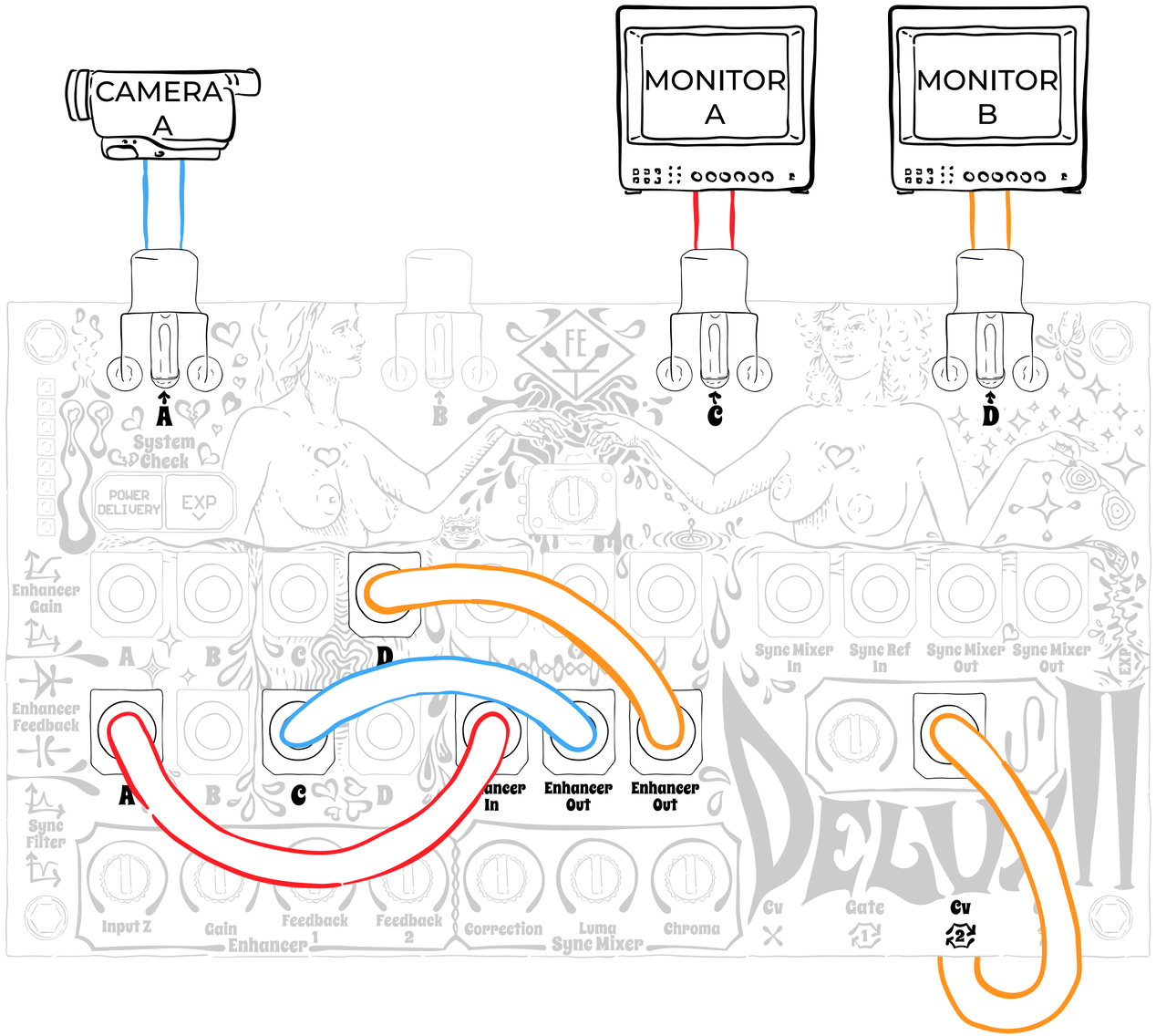
The Sync Mixer Low Pass Filter can be enabled or disabled via the Gate Enable/Disable input (7). Its behavior is shaped by the Band Pass / Cut control (8), allowing customization of the filter's response to improve picture stability.

Principle of Operation





Patching Examples - 1



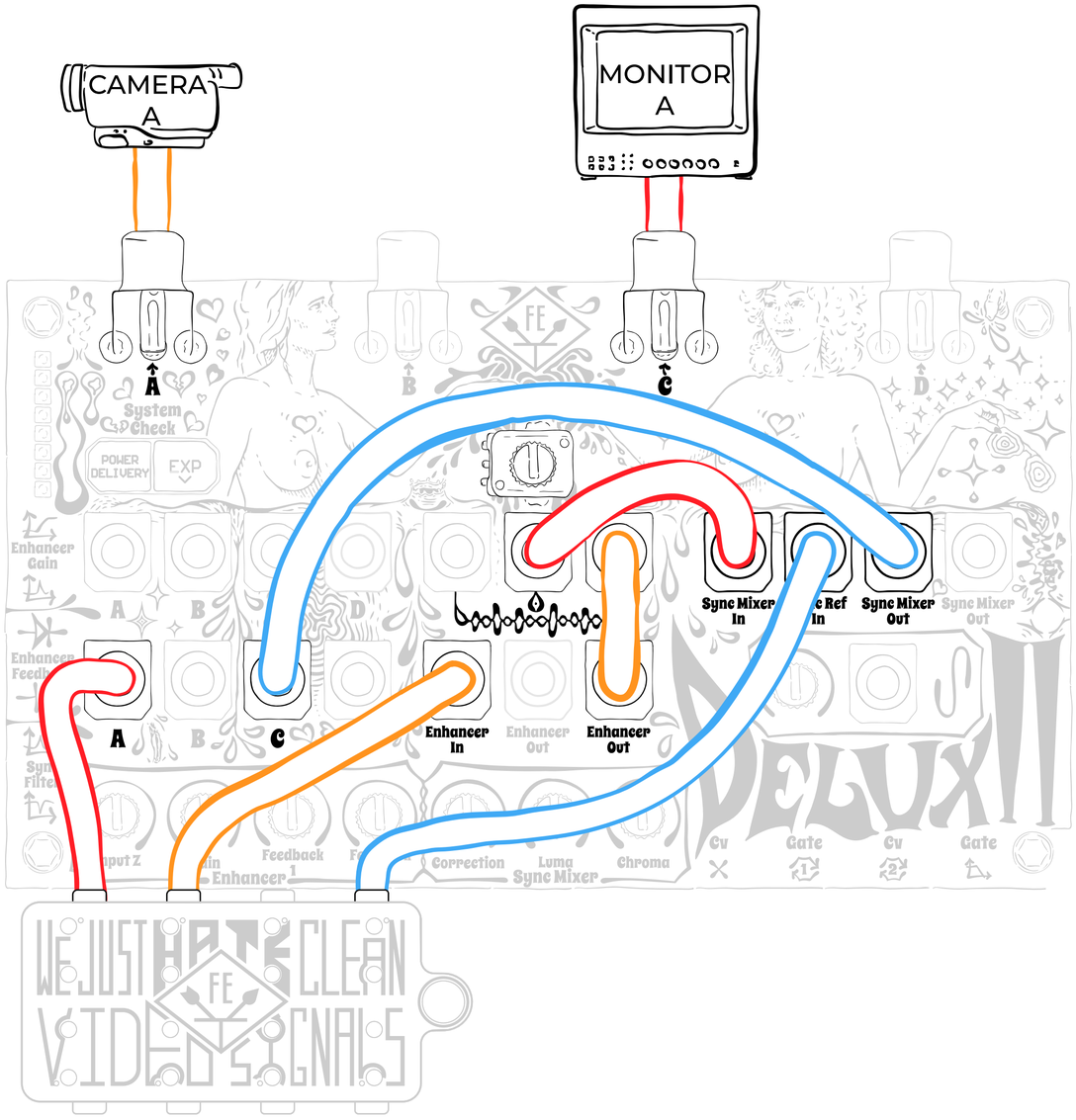
This is the most straightforward and simple patch you'll make.

You're running the camera straight through the Enhancer to bend, distort, and color-shift the image, your entry point into analog video glitching.

- Connect your camera to RCA A using an RCA cable.
- Connect Monitor A to RCA C using another RCA cable. If you have an extra monitor or capture device, connect it to RCA D for simultaneous output.
- Patch A to Enhancer In using a patch cable.
- Patch Enhancer Out to C and D using a patch cable.
- Patch the Oscillator to Feedback 2 CV Input, using a patch cable, to modulate the distortion and bring movement to the glitch.

Use the Enhancer's knobs to push the image from subtle analog warmth to full signal meltdown.

Patching Examples - 2

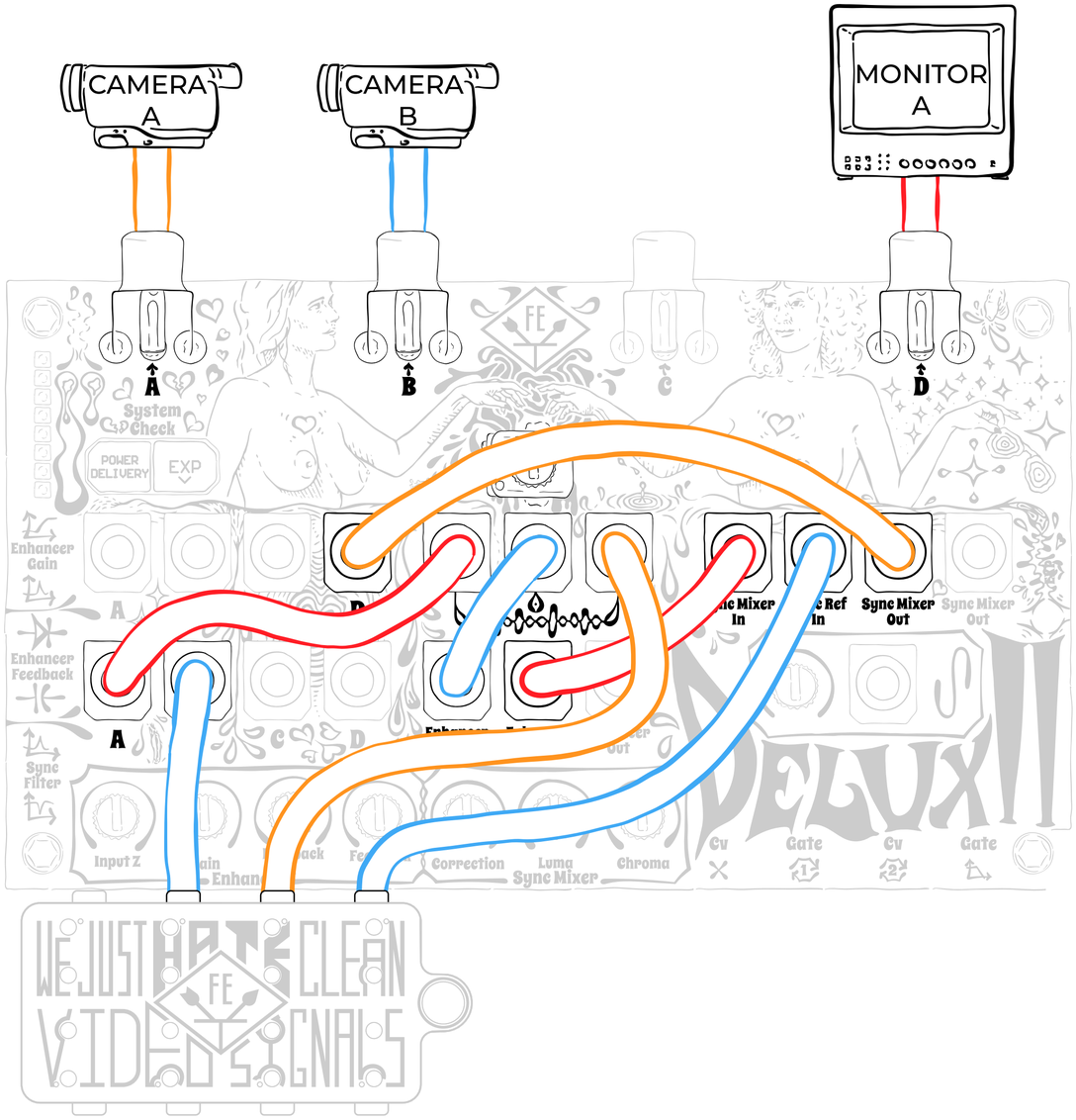


You may notice that if you push the Enhancer too hard, your monitor can lose sync. To fix this, you'll need to resync the signal comming out of the Enhancer with the original sync before the signal was mangled.

- Connect your camera A to RCA A using an RCA cable.
- Connect your Monitor A to RCA C using another RCA cable. If you have more monitors or capture cards you can patch them in as well.
- Patch A into one side of a keychain splitter, using a patch cable.
- Patch that same side of the keychain splitter into Enhancer In.
- Again, patch the same side of the keychain splitter to Sync Ref In.
- Patch Enhancer Out to one of the fixed ends of the Mixer Pot.
- Patch the Mixer Pot's wiper to Sync Mixer In.
- Patch one of the Sync Mixer Outs to C.

Use the Enhancer knobs to adjust the effect and the Sync Mixer knobs to keep the picture stable or glitch it even further.

Patching Examples - 3

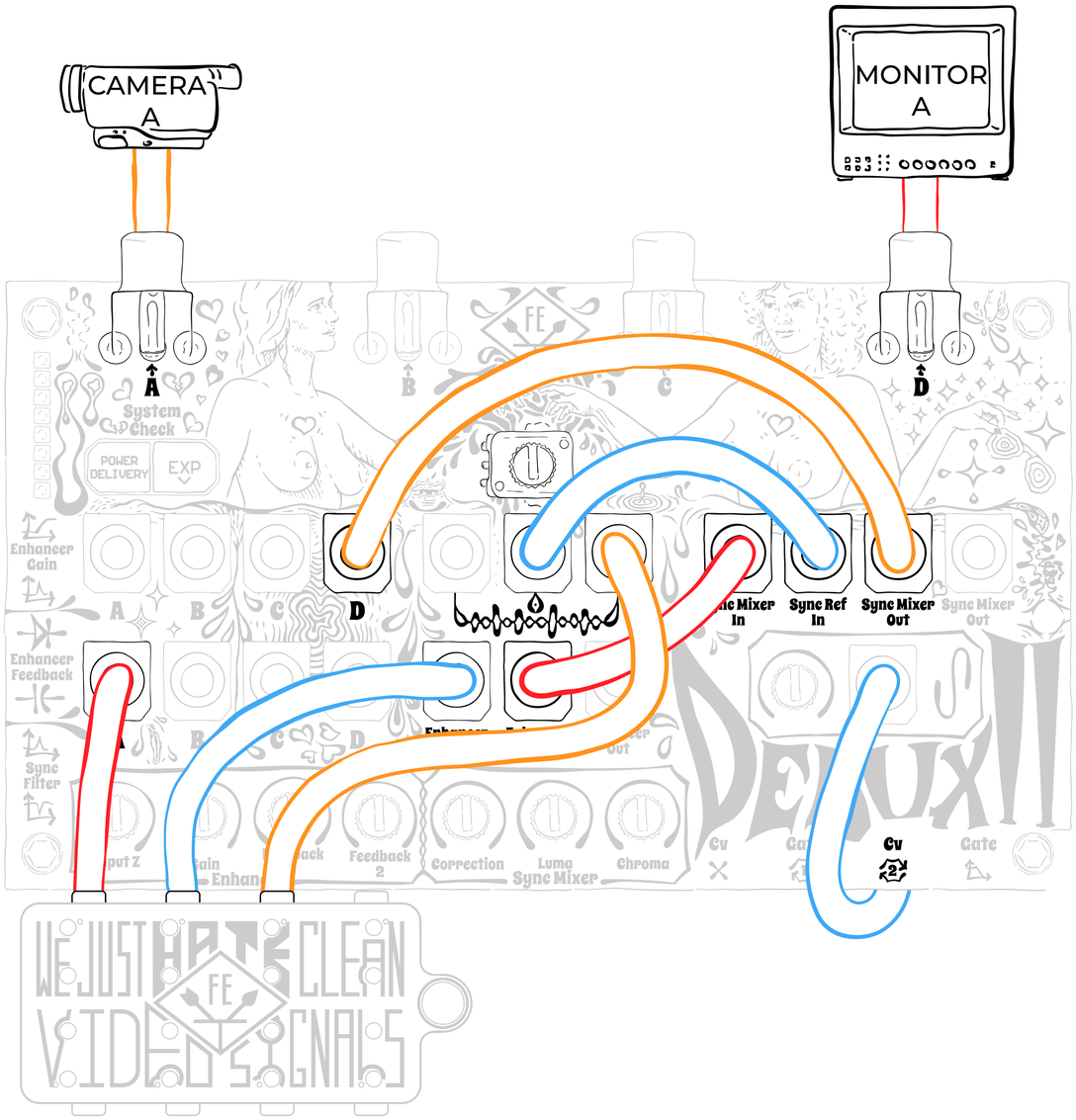


You don't have to limit your workflow to only one camera. In this example we'll create a more advanced Karl Klomp style video mixer.

- Connect camera A to RCA A, camera B to RCA B and monitor A to RCA D.
- Patch A into one fixed end of the Mixer Pot.
- Patch the Mixer Pot's wiper to Enhancer In.
- Patch Enhancer Out into Sync Mixer In.
- Patch Sync Mixer Out into D.
- Patch B into one side of the Keychain Splitter.
- Patch the same side of the Keychain Splitter into the other fixed end of the Mixer Pot.
- Patch the same side of the Keychain Splitter into Sync Ref In.

The Mixer Pot acts as a dirty fader between camera A and B. Camera B's sync reference is dominant.

Patching Examples - 4



Now lets use the Sync Mixer as a glitcher for more interesting effects. We'll achieve this by attenuating the Sync Ref Input.

- Connect your camera A to RCA A using an RCA cable.
- Connect your monitor A into RCA D using another RCA cable.
- Patch A into the Keychain Splitter using a patch cable.
- Patch the same side of the Keychain Splitter into Enhancer In.
- Patch Enhancer Out into Sync Mixer In.
- Patch Sync Mixer Out into D.
- Patch the same side of the Keychain Splitter into one of the fixed ends of the Mixer Pot.
- Patch the Mixer Pot's wiper into Sync Ref In.

Adjust the Mixer Pot to attenuate the Sync Ref In and create another layer of effects.

Troubleshooting

Problem	Possible solution
Power Delivery LED on the System Check is red.	⊰ Ensure you’re using a USB-C to USB-C power cable. ⊰ Ensure your power adaptor supports Power Delivery (PD). ⊰ Try a different cable and power adapter.
No video output	⊰ Ensure the Power Delivery LED on the System Check is lit green. ⊰ Ensure you’re using RCA cables in the top RCA ports. ⊰ RCA to 3.5mm cables that commonly come with video cameras won’t work. ⊰ Ensure you’re using proper 3.5mm TS patch cables for patching. ⊰ Double check your patching.
Unstable video on screen	⊰ Patch the Sync Mixer after the Enhancer to restore video sync (Example 2). ⊰ Ensure the Sync Mixer’s Correct knob isn’t at full CCW position. ⊰ Dial down the Gain, Feedback 1 and Feedback 2 knobs.
No reaction from the Gate / CV inputs	⊰ Only use TS patch cables with the signal on the tip. ⊰ Ensure the Gate signal is more than 3V and less than 10V, and the CV signal is between 0V to 5V.

Specifications

Size	145x83 mm (Standalone)
DC Input	9 V
Power Consumption	350 mA @ 9 V
Gate Input	[3;10] V, 5 V nominal
CV Input	[0;5] V
Video Format	NTSC, PAL, SECAM
Video Level Input / Output	2 $V_{pk\text{-}pk}$, 75 Ω termination

Warranty

Fully assembled versions of this product are covered by warranty for one year following the date of purchase. This warranty covers any defect in the manufacturing of this product, such as assembly errors or faulty components. This warranty does not cover any damage or malfunction caused by incorrect use, such as, but not limited to, power cables connected backwards, excessive voltage levels, or exposure to extreme temperature or moisture levels. The cost of returning a product for repair or replacement is paid for by the customer. DIY kits and bare printed circuit boards are not covered under any warranty and come with no guarantee of assembly troubleshooting or customer support.

MisMatcher Delux II | Owner’s Manual
Revision A December 2025
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Note: Specifications subject to change without notice