

# **INSTRUO 1 f Fader Module User Manual**

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# **Description**

The Instruō [1]f is a crossfader, attenuator, attenuverter, and manual DC offset.

Whether you want to crossfade between two audio signals, attenuate an envelope, invert a sawtooth LFO for ramped modulation, or use a DC offset to access the Mod parameters of your arbhar, [1]f is the perfect multi-utility for all of your CV processing tasks.

# **Features**

- Crossfader
- Attenuator & Attenuverter

- · Unipolar positive or unipolar negative DC offset
- DC coupled for both audio and control voltage processing
- · Bicolour LED indication of output voltage

# Installation

- 1. Confirm that the Eurorack synthesizer system is powered off.
- 2. Locate 2 HP of space in your Eurorack synthesizer case.
- 3. Connect the 10 pin side of the IDC power cable to the 1×5 pin header on the back of the module, confirming that the red stripe on the power cable is connected to -12V.
- 4. Connect the 16 pin side of the IDC power cable to the 2×8 pin header on your Eurorack power supply, confirming that the red stripe on the power cable is connected to -12V.
- 5. Mount the Instruō [1]f in your Eurorack synthesizer case.
- 6. Power your Eurorack synthesizer system on.

#### Note:

This module has reverse polarity protection. Inverted installation of the power cable will not damage the module.

# **Specifications**

Width: 2 HPDepth: 27mm+12V: 8mA-12V: 8mA

[1]f | wuhnmf | noun (utility) because one is one



# Key

- 1. Input 1
- 2. Input 2
- 3. Output
- 4. Polarity Switch
- 5. Fader

Inputs: Input 1 and Input 2 are DC coupled inputs that allow for audio or control voltage processing.

Output: The Output is a DC coupled output that passes audio or control voltage signals. It will generate a unipolar DC offset if no signals are present at the Inputs. The polarity of the unipolar DC offset is determined by the Polarity Switch.

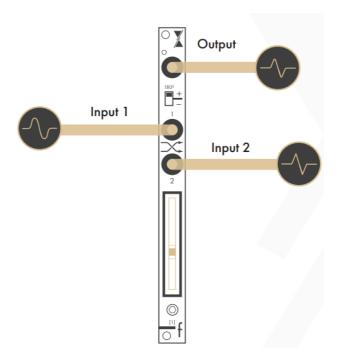
**Polarity Switch:** The Polarity Switch inverts the polarity of the signals present at either Input. The up position is the default. If no signals are present at the Inputs and a unipolar DC offset is generated at the Output, the Polarity Switch inverts the polarity of the unipolar DC offset.

If the Polarity Switch is in the up position, the DC offset will be unipolar positive. If the Polarity Switch is in the down position, the DC offset will be unipolar negative.

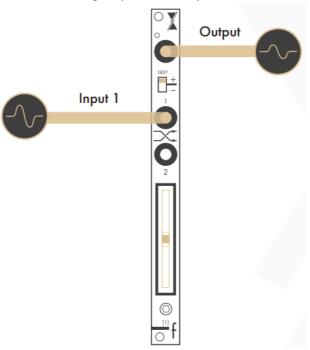
**Fader:** The Fader processes the signals present at the Inputs or sets the level of the DC offset if no signals are present at the Inputs. The Fader's LED will illuminate white for positive signals and amber for negative signals.

# **Patch Examples**

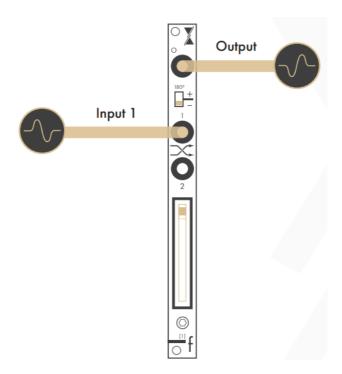
Crossfader: If signals are present at both Inputs, the module acts as a crossfader. When the Fader is in the up position, the signal present at Input 1 will pass to the output. Moving the Fader downwards crossfades from the signal present at Input 1 to the signal present at Input 2.



**Attenuator**: If a signal is present at Input 1 only and the Polarity Switch is in the up position, the module acts as an attenuator. When the Fader is in the up position, the signal present at Input 1 will pass to the Output. Moving the Fader downwards attenuates the signal present at Input 1 down to 0V at the lowest Fader position



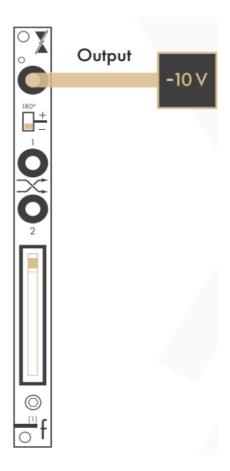
**Attenuverter**: If a signal is present at Input 1 only and the Polarity Switch is in the down position, the module acts as an attenuverter. When the Fader is in the up position, an inverted version of the signal present at Input 1 will pass to the Output. Moving the Fader downwards, attenuates the inverted version of the signal present at Input 1 down to 0V at the lowest fader position.



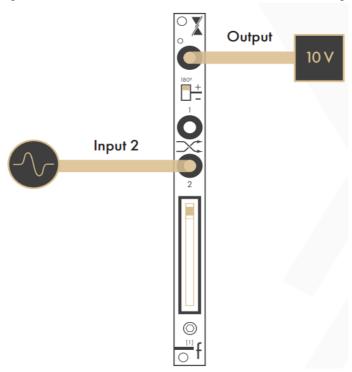
Unipolar Positive DC Offset: If no signal is present at the Inputs and the Polarity Switch is in the up position, the module acts as an unipolar positive DC offset. When the Fader is in the highest position, +10V is generated at the Output. Moving the Fader downwards attenuates the DC offset down to 0V at the lowest Fader position.



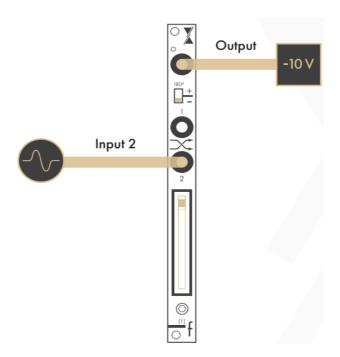
Unipolar Negative DC Offset: If no signal is present at the Inputs and the Polarity Switch is in the down position, the module acts as an unipolar negative DC offset. When the Fader is in the highest position, -10V is generated at the Output. Moving the Fader downwards attenuates the DC offset down to 0V at the lowest Fader position.



Unipolar Positive DC Offset Crossfader: If a signal is present at Input 2 only and the Polarity Switch is in the up position, the module acts as a unipolar positive DC offset crossfader. When the Fader is in the up position, the Output will pass +10V. Moving the Fader downwards crossfades from +10V to the signal present at Input 2.



Unipolar Negative DC Offset Crossfader: If a signal is present at Input 2 only and the Polarity Switch is in the down position, the module acts as a unipolar negative DC offset crossfader. When the Fader is in the up position, the Output will pass -10V. Moving the Fader downwards crossfades from -10V to the signal present at Input 2.



Manual Author: Collin Russell Manual Design: Dominic D'Sylva

 $\mathsf{C}$  This device meets the requirements of the following standards: EN55032, EN55103-2, EN61000-3-2, EN61000-3-3, EN62311.

# **Documents / Resources**



INSTRUO 1 f Fader Module [pdf] User Manual 1 f Fader Module, f Fader Module, Fader Module, Module

Manuals+,