INSTRUO | SPECIALIST SYNTHESIZERS

cuïr

Output Module

User Manual

Contents

Description

The Instruō **cuïr** is a final stage output module designed to interface with professional audio equipment outside of the modular synthesis ecosystem. Modular level signals are very high amplitude and often too hot for traditional summing mixers, audio interfaces, and guitar effects pedals.

cuïr attenuates and converts unbalanced modular level signals to balanced line level signals so that they're ready to go into their next stage within the signal path.

Add to that its high quality headphone amplifier and individual attenuation controls, and it's clear that cuïr is the one-stop-shop for all of your modular output needs.

Features

- Stereo modular level to ¼" balanced line output
- Left mono input normals to the right mono input
- High quality headphone amplifier
- Stereo input backjack for interfacing with other back jack-compatible module sources
- 2 x high quality 150cm balanced cables included

Installation

1. Confirm that the Eurorack synthesizer system is powered off.
2. Locate 4 HP of space in your Eurorack synthesizer case.
3. Connect the 10 pin side of the IDC power cable to the 2x5 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 2x8 pin header on your Eurorack power supply, confirming that the red stripe on the power cable is connected to -12V.
5. Mount the Instruō **cuïr** 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: 4 HP
- Depth: 30mm
- +12V: 30mA
- -12V: 30mA

cuïr | kir | **verb** (transmutation) to convey into another form, to send into or through something, to move in a specified direction

Key

1. Left Input
2. Right Input
3. Left Channel LED
4. Right Channel LED
5. Left Output
6. Right Output
7. Headphone Output
8. Balanced Level
9. Headphones Level
10. Stereo Input Back Jack
11. Orientation Solder Jumpers

Inputs

Left Input: 1/8" (3.5mm) mono unbalanced audio input.

- Modular level audio signals present at the **Left Input** will be converted to line level for the **Left Output** and **Headphone Output**.
- The **Left Input** normalises to the **Right Input** if no signal is present at the **Right Input**.

Right Input: ⅛/8" (3.5mm) mono unbalanced audio input.

- Modular level audio signals present at the **Right Input** will be converted to line level for the **Right Output** and **Headphone Output**.

Left Channel LED: LED indication of the audio signal at the **Left Output**.

- The brightness of the **Left Channel LED** is relative to the amplitude of the audio signal produced at the **Left Output**.

Right Channel LED: LED indication of the audio signal at the **Right Output.**

- The brightness of the **Right Channel LED** is relative to the amplitude of the audio signal produced at the **Right Output**.

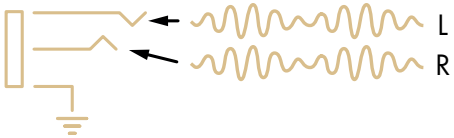
Outputs

The **cuïr** features a stereo pair of balanced differential line level outputs in 1/4" output jack format. A parallel (unbalanced) headphone driver/ line output provides a secondary monitoring source via a single stereo 1/4" output jack. A pair of high quality balanced 1/4" cables are included with the **cuïr**. These cables are braided, 150cm long, shielded and feature gold plated TRS contacts.

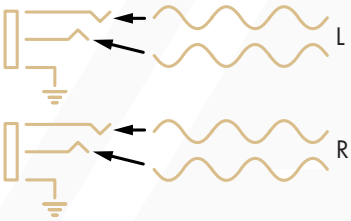
The cuïr features a pair of optimised audio line driver circuits which provide transformer-like floating outputs.The balanced differential outputs supply two parallel conductors carrying a mirrored pair of the source signal.

The mirrored signal is a polarity inversion of the original and allows for extra headroom in addition to the balanced connection's fundamental common-mode noise rejection. This greatly improves signal to noise ratios and can eliminate ground loop issues between the modular system and subsequent stages of the signal path.

Headphone Output



Balanced Outputs



Left Output: 1/4" (6.35mm) balanced low impedance audio output.

- Modular level audio signals present at the **Left Input** will be converted to balanced differential line level signals produced at the **Left Output**.

Right Output: 1/4" (6.35mm) balanced low impedance audio output.

- Modular level audio signals present at the **Right Input** will be converted to balanced differential line level signals produced at the **Right Output**.

Headphone Output: 1/4" (6.35mm) headphone output.

Balanced Level: Manual level control for the **Left** and **Right Outputs**.

- A reference point of +4dBU unity gain can be achieved at the **Left** and **Right Outputs** by setting the **Balanced Level** knob so that the knob's pointer points to the **Left Channel LED**.

Headphone Level: Manual level control for the **Headphone Output**.

- The **Headphone Level** knob setting is discrete and does not correspond to the **Balanced Level** knob setting.

Stereo Input Back Jack: External stereo input mounted to the back of **cuïr**.

- Modular level stereo output jacks mounted on the back of secondary modules can be connected to **cuïr** via an 1/8" (3.5mm) stereo cable.
- Inputs are 100KΩ impedance and sum at unity gain with the **Left** and **Right Inputs** on the front of the module.

Orientation Solder Jumpers: Solder jumper used to change the orientation of the module **(Warning! This is not a simple faceplate replacement.)**

- The **cuïr** ships with a 4HP faceplate with inverted graphics. This faceplate should simply be considered as a 4HP spacer panel. Retrofitting the panel on the **cuïr** module must only be performed by an experienced technician. Any modification is done at the risk of the owner.
- A soldering iron is required to reverse the input normalling. In order to do this, desoldering the **Right Orientation Solder Jumper** and bridging the **Wrong Orientation Solder Jumper** will correct normalisation from the **Left Input** to the **Right Input** in the inverted layout.

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CE This device meets the requirements of the following standards: EN55032, EN55103-2, EN61000-3-2, EN61000-3-3, EN62311.