Mixup

Chainable Stereo Audio Utility Mixer
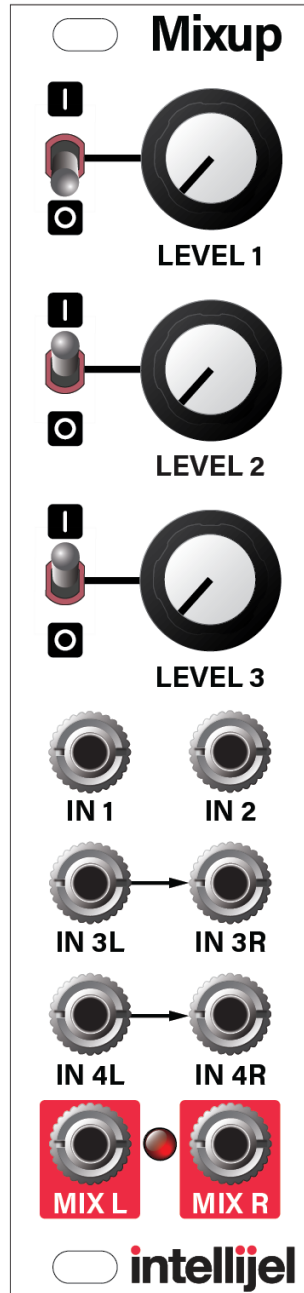

Manual Revision: 2017.12.07

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Overview

Mixup is a versatile, expandable audio mixer for eurorack format. It has six front panel inputs and two outputs. Inputs 1 and 2 are single-channel mono inputs, each with its own mute switch and level control; Input 3 is a dual-channel stereo input with a shared mute and level control; and input 4 is an auxiliary unity-gain, non-mutable stereo input.

Using bus connectors on the back panel, you can chain multiple Mixups together in series, giving you the ability to mix together even more inputs, or to create sub-mixes for routing around larger systems.

Because Mixup is designed specifically for audio (and not for CV mixing), it uses AC-coupled circuitry (which reduces the potential for 'pops' when muting and unmuting audio), and it uses audio-grade, logarithmic attenuators for a smooth, even response across the entire volume range.

Installation

Intellijel Eurorack modules are designed to be used with a Eurorack-compatible case and power supply.

Before Your Start

Before installing a new module in your case you must ensure your case's power supply has sufficient available capacity to power the module:

- Sum up the specified +12V current draw for all modules, including the new one. Do the same for the -12 V and +5V current draw. The current draw will be specified in the manufacturer's technical specifications for each module.

- Compare each of the sums to specifications for your case's power supply.

- Only proceed with installation if none of the values exceeds the power supply's specifications. Otherwise you must remove modules to free up capacity or upgrade your power supply.

You will also need to ensure you have enough free space (hp) as well as free power headers in your case to fit the new module.

You can use a tool like [ModularGrid](#) to assist in your planning. Failure to adequately power your modules may result in damage to your modules or power supply. If you are unsure, please [contact us](#) before proceeding.

Installing Your Module

When installing or removing a module from your case always turn off the power to the case and disconnect the power cable. Failure to do so may result in serious injury or equipment damage.

Ensure the 10-pin connector on the power cable is connected correctly to the module before proceeding. The red stripe on the cable must line up with the -12V pins on the module's power connector. The pins are indicated with the label -12V, a white stripe next to the connector, the words "red stripe", or some combination of those indicators.
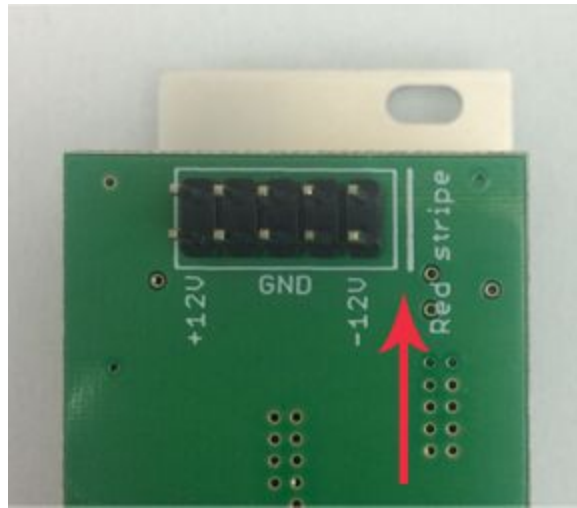
Most modules will come with the cable already connected but it is good to double check the orientation. Be aware that some modules may have headers that serve other purposes so ensure the cable is connected to the right one.

The other end of the cable, with a 16-pin connector, connects to the power bus board of your Eurorack case. Ensure the red stripe on the cable lines up with the -12V pins on the bus board. On Intellijel power supplies the pins are labelled with the label "-12V" and a thick white stripe:
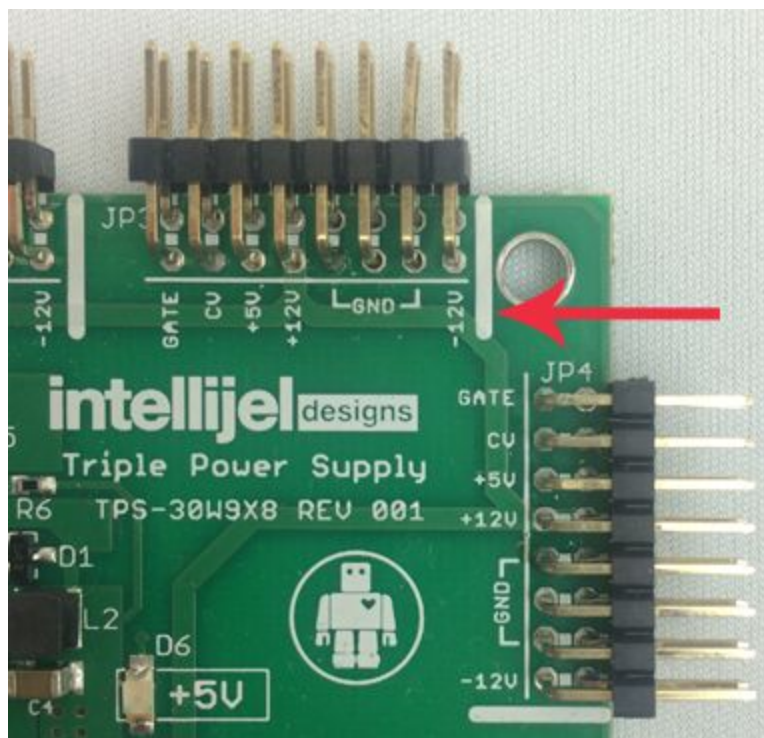
If you are using another manufacturer's power supply, check their documentation for instructions.

Once connected, the cabling between a module and power supply should resemble the picture below:
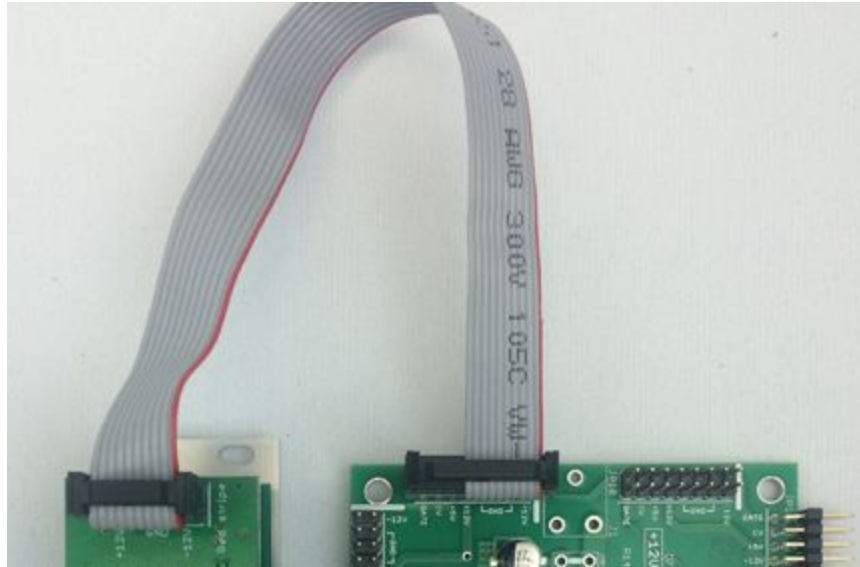
Before reconnecting power and turning on your modular system, double check that the ribbon cable is fully seated on both ends and that all the pins are correctly aligned. If the pins are misaligned in any direction or the ribbon is backwards you can cause damage to your module, power supply, or other modules.

After you have confirmed all the connections, you can reconnect the power cable and turn on your modular system. You should immediately check that all your modules have powered on and are functioning correctly. If you notice any anomalies, turn your system off right away and check your cabling again for mistakes.

Front Panel
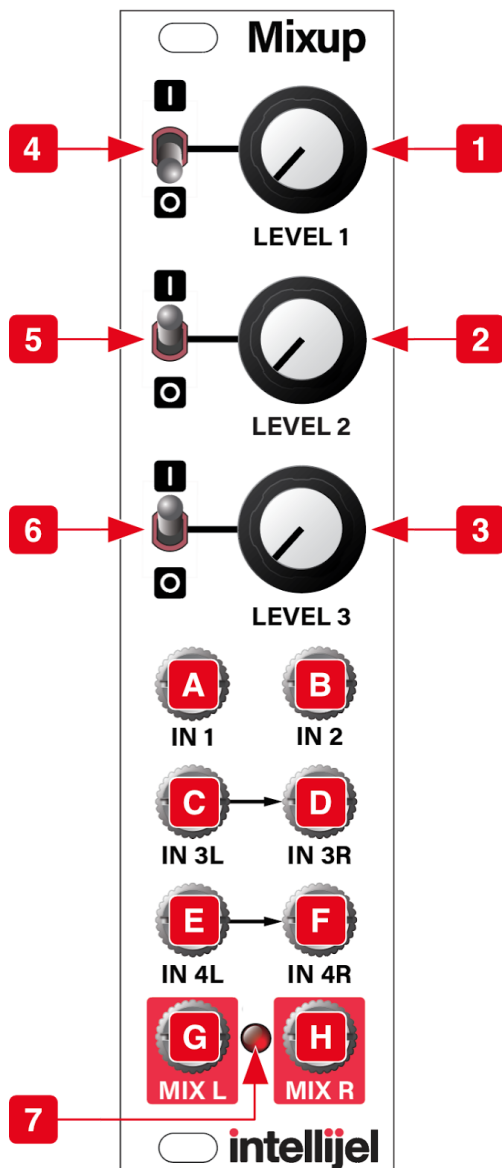
Controls

1. **LEVEL 1** - This attenuator reduces the **IN 1** mono audio level sent to both **MIX** outputs.

2. **LEVEL 2** - This attenuator reduces the **IN 2** mono audio level sent to both **MIX** outputs.

3. **LEVEL 3** - This attenuator reduces the **IN 3L** and **IN 3R** stereo audio level sent to the **MIX** outputs.

4. **MUTE 1** - In the down position, this switch mutes **IN 1** — removing it from the **MIX** outputs.

5. **MUTE 2** - In the down position, this switch mutes **IN 2** — removing it from the **MIX** outputs.

6. **MUTE 3** - In the down position, this switch mutes both **IN 3L** and **IN 3R** — removing them from the **MIX** outputs.

7. **CLIP LED** - This LED lights when the sum of all the inputs (from the front panel jacks plus the rear panel serial bus) causes either side of the stereo **MIX** output to clip. Obviously, the more inputs you feed into Mixup (or the more Mixups you feed into each other), the greater the potential to overdrive the Mix bus. So if the CLIP LED lights, consider reducing the various **LEVEL** knobs to maintain a clean output (unless you want distorted audio, of course).
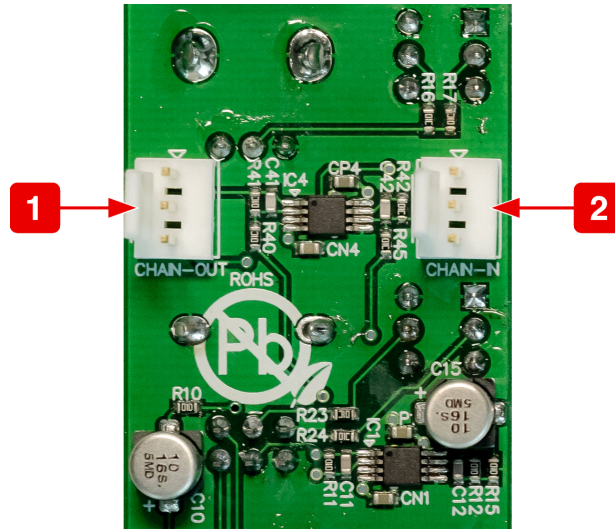
Inputs & Outputs

A. **IN 1** - Mono audio input 1. Mixup routes the audio from **IN 1** to both the **MIX L** and **MIX R** outputs. It can be muted with the **MUTE 1** switch, and its audio level is determined by the **LEVEL 1** knob.

B. **IN 2** - Mono audio input 2. Mixup routes the audio from **IN 2** to both the **MIX L** and **MIX R** outputs. It can be muted with the **MUTE 2** switch, and its audio level is determined by the **LEVEL 2** knob.

C. **IN 3L** - This is the left side of stereo audio input 3. Mixup routes the audio from **IN 3L** to the **MIX L** output. It can be muted (along with **IN 3R**) using the **MUTE 3** switch, and its audio level (along with **IN 3R**) is determined by the **LEVEL 3** knob. If nothing is plugged into **IN 3R**, then **IN 3L** acts like a mono input, and Mixup routes its signal to both the **MIX L** and **MIX R** outputs.

D. **IN 3R** - This is the right side of stereo audio input 3. Mixup routes the audio from **IN 3R** to the **MIX R** output. It can be muted (along with **IN 3L**) using the **MUTE 3** switch, and its audio level (also along with **IN 3L**) is determined by the **LEVEL 3** knob. If you wish to use input 3 for mono instead of stereo, simply plug a mono signal into the **IN 3L** jack, and leave the **IN 3R** jack unconnected.

E. **IN 4L** - This is the left side of stereo audio input 4. Mixup routes audio directly from **IN 4L** to the **MIX L** output, and has neither a mute switch nor a level knob. If nothing is plugged into **IN 4R**, then **IN 4L** acts like a mono input — appearing at both the **MIX L** and **MIX R** outputs.

F. **IN 4R** - This is the right side of stereo audio input 4. Mixup routes audio directly from **IN 4R** to the **MIX R** output, and has neither a mute switch nor a level knob. If you wish to

use input 4 for mono instead of stereo, simply plug a mono signal into the **IN 4L** jack, and leave the **IN 4R** jack unconnected.

G. **MIX L** - This is the mixed audio output of all audio on Mixup's left bus. This includes audio from **IN 1**, **IN 2**, **IN 3L**, **IN 4L**, plus all left-channel audio from other Mixups you might connected to its back panel **CHAIN-IN** connector.

H. **MIX R** - This is the mixed audio output of all audio on Mixup's right bus. This includes audio from **IN 1**, **IN 2**, **IN 3R** (or **IN 3L** if **IN 3R** is not connected), **IN 4R** (or **IN 4L** if **IN 4R** is not connected), plus all right-channel audio from other Mixups you might connect to its back panel **CHAIN-IN** connector.

Back Panel

Each Mixup module features a pair of rear panel connectors, which enable you to serially connect multiple Mixups to create a larger mixer with more inputs.

1. **CHAIN OUT** - This connector taps into the Left and Right **MIX** bus outputs. Use the supplied link cable to connect the **CHAIN OUT** of one Mixup to the **CHAIN IN** connector on another Mixup.

2. **CHAIN IN** - This connector adds another pair of inputs directly to the Left and Right **MIX** bus. Use the supplied link cable to connect the **CHAIN IN** of one Mixup to the **CHAIN OUT** connector on another Mixup. The **CHAIN IN** connector is essentially another input much like "Input 4."

NOTE: Never use the 3-wire link cable to connect a *Mixup* module to an Intellijel *Pedal I/O* module. Although both modules use this same cable/connector — they serve different purposes and carry different signals.
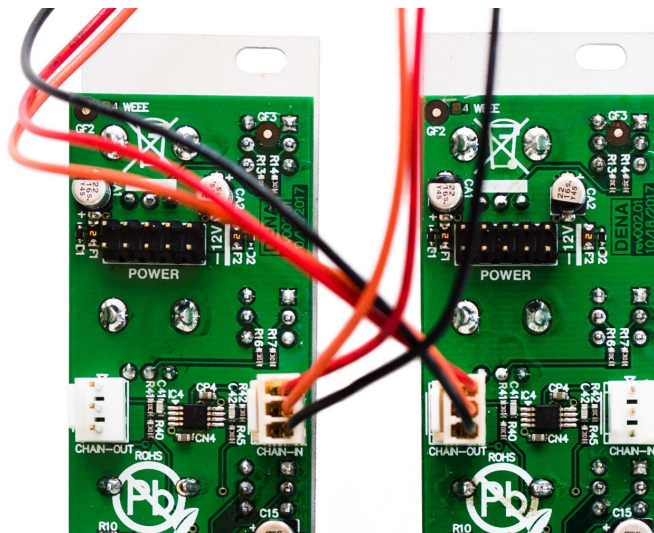
Architecture
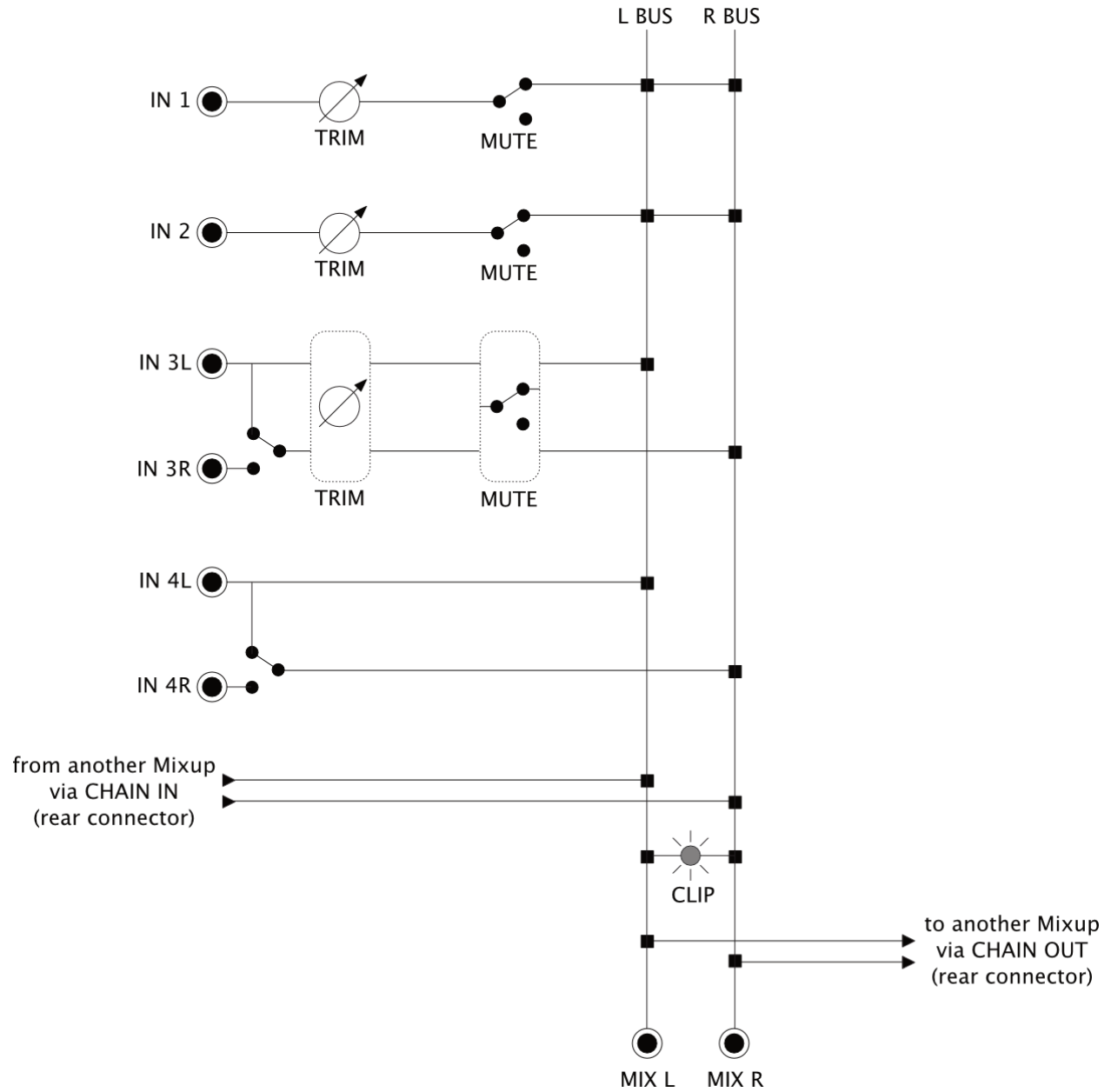
Technical Specifications

Width	6 hp
Maximum Depth	29 mm
Current Draw	15 mA @ +12V 16 mA @ -12V