intellijel

Aux Mix 1U

Stereo Mixer with Auxiliary Output Bus

TABLE OF CONTENTS

COMPLIANCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by Intellijel Designs, Inc. could void the user's authority to operate the equipment.

Any digital equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

This device meets the requirements of the following standards and directives:

EMC: 2014/30/EU
EN55032:2015 ; EN55103-2:2009 (EN55024) ; EN61000-3-2 ; EN61000-3-3
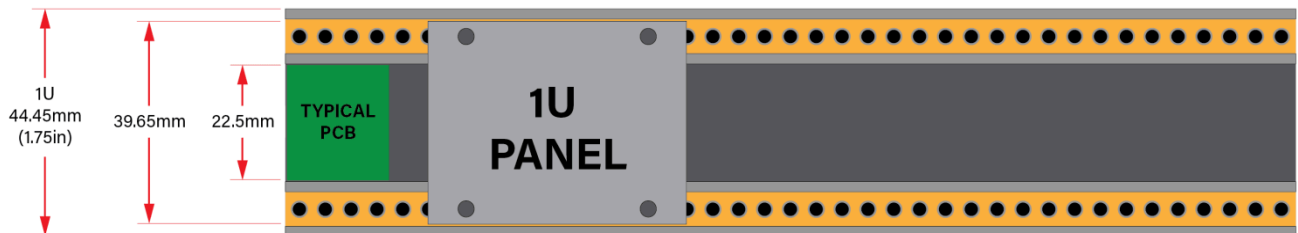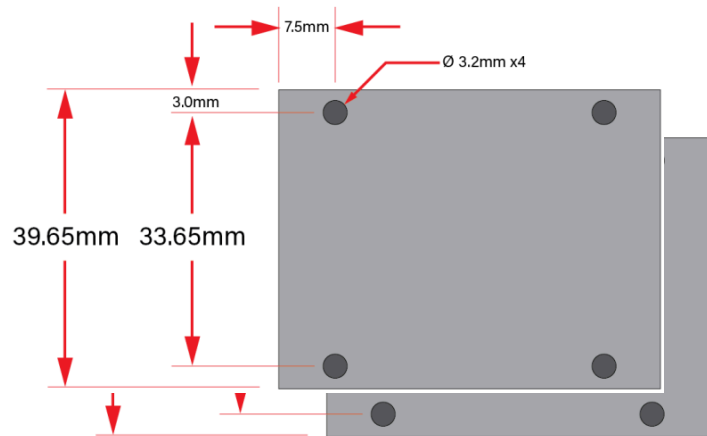
Low Voltage: 2014/35/EU
EN 60065:2002+A1:2006+A11:2008+A2:2010+A12:2011

RoHS2: 2011/65/EU

WEEE: 2012/19/EU

INSTALLATION

This module is designed for use within an Intellijel-standard 1U row, such as those contained within the Intellijel 4U, 7U, and Palette Eurorack cases. Intellijel's 1U specification is derived from the Eurorack mechanical specification set by Doepfer, which is designed to support the use of lipped rails within industry-standard rack heights.

Before You Start

Intellijel Eurorack modules are designed to be used with a Eurorack-compatible case and power supply. We recommend you use Intellijel cases and power supplies.

Before installing a new module in your case, you must ensure your power supply has a free power header and 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 the specifications for your case's power supply.

● Only proceed with the 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 your case has enough free space (hp) to fit the new module. To prevent screws or other debris from falling into the case and shorting any electrical contacts, do not leave gaps between adjacent modules, and cover all unused areas with blank panels. Similarly, do not use open frames or any other enclosure that exposes the backside of any module or the power distribution board.
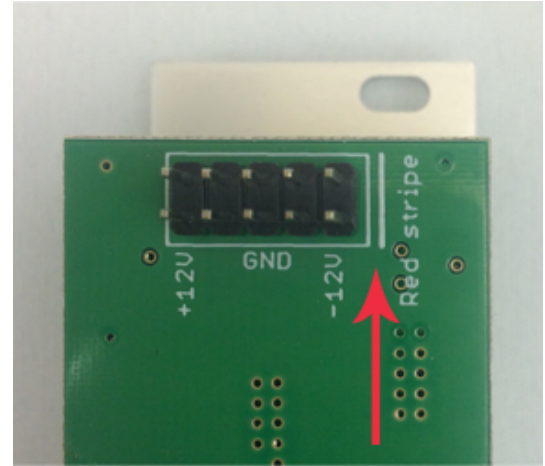
You can use a tool like [ModularGrid](#) to assist in your planning. Failure to adequately power your modules may result in damage to your modules or power supply. If you are unsure, please [contact us](#) before proceeding.
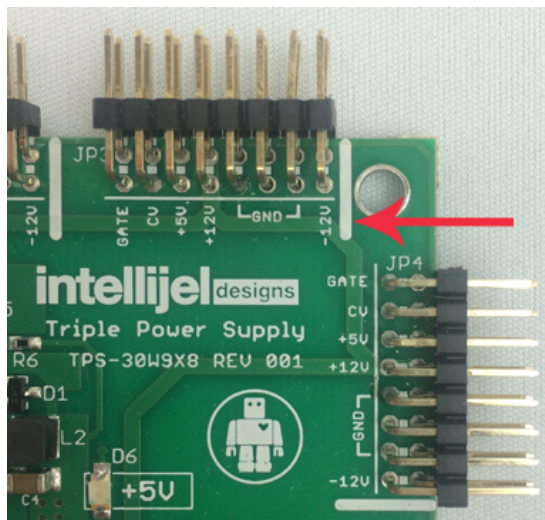
Installing Your Module

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. On Intellijel power supplies the pins are labeled with the label "-12V" and a thick white stripe. Sometimes the connectors are shrouded, ensuring the cable can only be oriented in one direction.
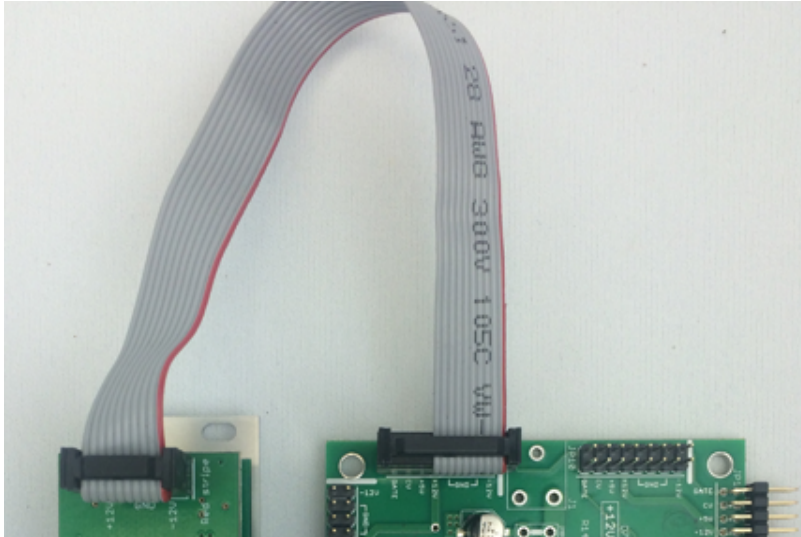

Most modules will come with the cable already connected but it is good to double check the orientation. Be aware that some modules may have headers that serve other purposes so ensure the cable is connected to the right one.

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 labeled with the label "-12V" and a thick white stripe. Sometimes the connectors are shrouded, ensuring the cable can only be oriented in one direction.

If you are using another manufacturer's power supply, check their documentation for instructions.

Once connected, the cabling between the module and the 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 backward 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.

OVERVIEW

Aux Mix 1U is a 3-channel stereo mixer module with a stereo auxiliary (Aux) send bus. The routing options on this mixer module make using **Aux Mix 1U** for Send FX, Parallel Processing, Feedback Mixing, and more possible. It is designed for audio signals only (not for mixing CV). It is AC-coupled and uses audio-grade, logarithmic attenuators for a smooth, even response across the entire volume range.
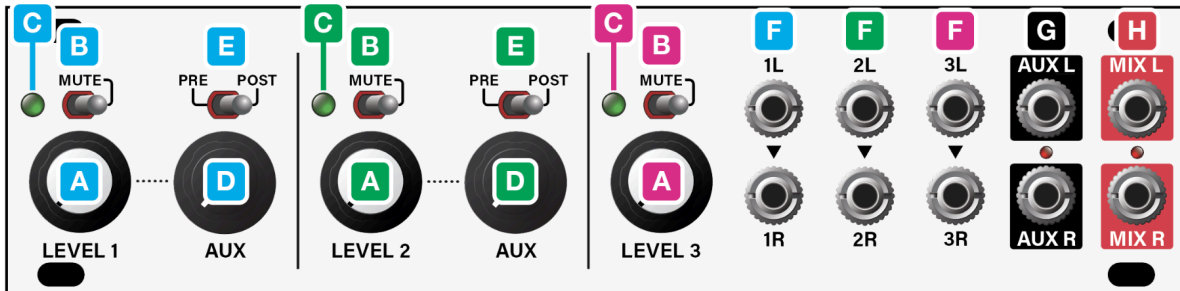
Each channel has a dedicated pair of inputs for stereo audio sources. The left channel inputs are normalled to the right for mono audio sources. All 3 channels feature a precise Level attenuator, a Mute switch, and an LED input level indicator. The three stereo channels are mixed and summed to the Main Outputs, where they can be patched out to a wider Eurorack system or external pro-audio equipment. The output stage features soft-clipping diodes for smoother saturation when signal levels are very high.

In addition to the main mix controls, channels 1 and 2 also feature an Aux Level attenuator with a Pre / Post switch. These can be used to create an independent Aux Mix which is routed to another pair of outputs, separate from the Main mix. The Aux output stage also features the same soft-clipping diodes as the Main output. **Aux Mix 1U** has four 3-pin connectors on the rear side for directly routing audio between other Intellijel Cases and Modules - without the need for patching cables. Connections include Aux In, Aux Out, Chain In and Chain Out. This also allows you to chain multiple Aux Mix 1U modules together to form even bigger mix chains.

For further tips, tricks and instructional videos - check out our **Aux Mix 1U** playlist on YouTube: https://intellijel.com/go/aux-mix-videos
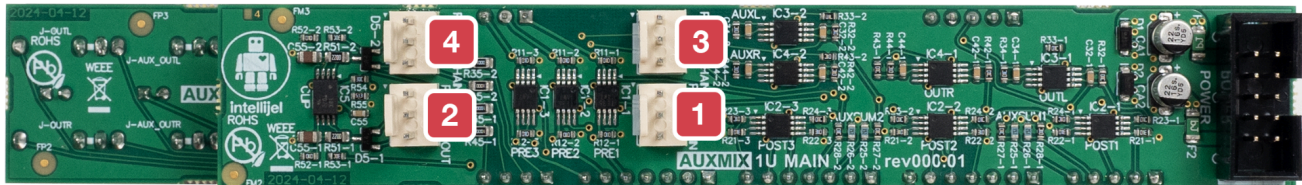
FRONT PANEL

Features with blue labels correspond to Channel 1, green to Channel 2, and magenta to Channel 3.

[A]   **LEVEL:** Attenuates the level of a signal patched into its respective **Channel IN [F]**, routed to the Main Mix. Use all 3 to establish the desired mix balance at **MIX OUT [H]**.

[B]   **MUTE:** Silences the channel at **MIX OUT [H]**. For Channels **1** and **2**, if **PRE / POST [E]** is set to "POST", **MUTE** will also silence the channel at the **AUX OUT [G]**.

[C]   **LED:** Indicates the input signal strength at **Channel IN [F],** before **LEVEL [A]** and **MUTE [B]** settings. The LED brightness indicates signal strength: brighter = stronger.

[D]   **AUX LEVEL:** Attenuates the level of a signal patched into its respective **Channel IN [F]**, routed to the Aux Mix. Use both to establish the desired mix balance at **AUX OUT [G]**

[E]   **PRE / POST:** Determines whether **AUX LEVEL [D]** of a channel is affected by the **LEVEL [A]** and **MUTE [B]** settings.

- When set to "PRE", **AUX LEVEL [D]** level is independent of **LEVEL [A]** and **MUTE [B]** settings.
- When set to "POST", **LEVEL [A]** determines the attenuation range of **AUX LEVEL [D]** and **MUTE [B]** will silence the signal to **AUX OUT [G]**

[F]   **CHANNEL IN:** Left and right input jacks for stereo input channels 1-3. When nothing is inserted into the right jack input, e.g. a mono source, the left input signal is duplicated at the right input through an internally normalled connection.

[G]   **AUX OUT:** Left and right Aux mix output, as set by **AUX LEVEL[D]** controls. The red LED between the two output jacks is an overload indicator. Soft-clipping diodes on the Aux outputs prevent hard clipping at higher output levels.

[H]   **MIX OUT L/R:** Left and Right Main mix output, set by **LEVEL [A]** and **MUTE [B]** controls on channels 1-3. The red LED between the two output jacks is an overload indicator. Soft-clipping diodes on the Mix outputs prevent hard clipping at higher output levels.

BACK PANEL CONNECTIVITY

It is possible to expand the connectivity of **Aux Mix 1U** using the four 3-pin connectors on the rear side of the module. These connectors can be used with compatible Intellijel Modules and Cases. **Aux Mix 1U** comes with two 3-pin connector cables included.

[1]   **CHAIN-IN:** Adds 1x stereo input, summed to the **MIX OUT [H]**.

[2]   **CHAIN-OUT:** Outputs a duplicate feed from **MIX OUT [H]**.

[3]   **AUX_CHAIN-IN:** Adds 1x stereo input, summed to the **AUX OUT [G]**.

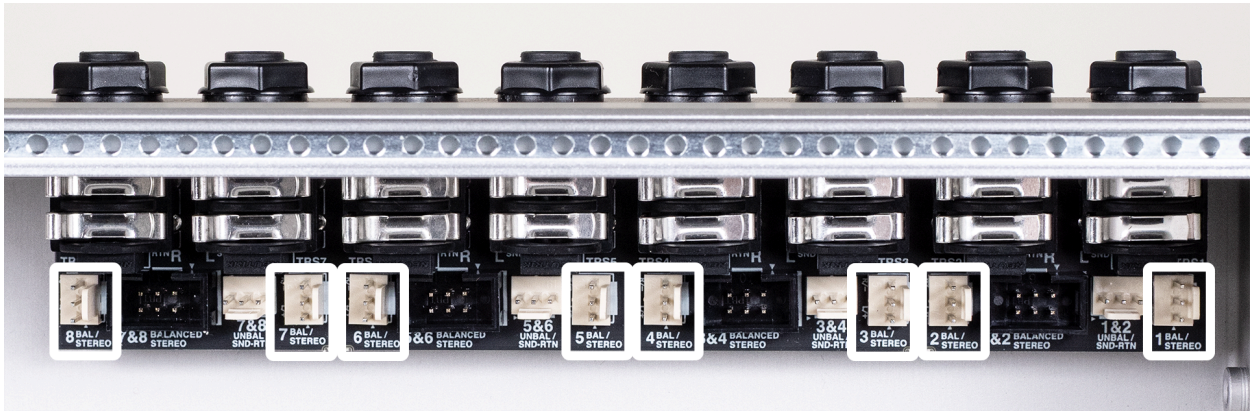**[4]**   **AUX_CHAIN-OUT:** Outputs a duplicate feed from **AUX OUT [G]**.

*IMPORTANT: Never use the 3-wire Link cable to directly connect an **Aux Mix 1U** module to an Intellijel **Pedal I/O** module. Although both modules use this same cable/connector — they serve different purposes and carry different signals.*

Connecting to 7U Performance Case Audio Jacks GEN-2

This section refers to the **7U Performance Case Gen-2** (post December 2025). You can connect **Aux Mix 1U** to the Audio Jacks board in the case using any of the 3-pin headers. There are two routing options available:

Stereo - Single TRS Output

Connect the 3-pin headers on **Aux Mix 1U** to any of the eight 3-pin headers (*shown above*) for unbalanced stereo through a single TRS jack socket. Jack socket numbers are labelled so you can easily identify which sockets you are connecting to.
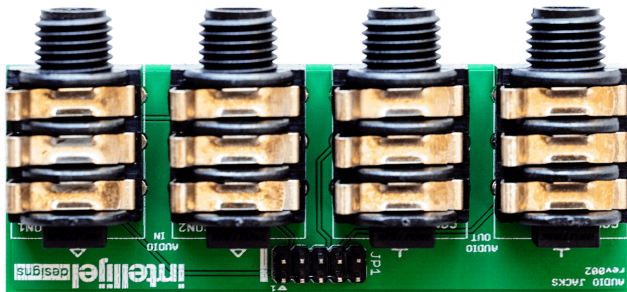
Stereo - Dual TS Output

Connect the 3-pin headers on **Aux Mix 1U** to any of the four 3-pin headers (*shown above*) for unbalanced stereo through a pair of jack sockets. Jack socket pairs are labelled, and each socket will use "Tip" for signal, and "Sleeve" for ground. Odd numbered channels are Left, and Even numbered channels are Right (or Normalled Left if nothing is patched to the Right).
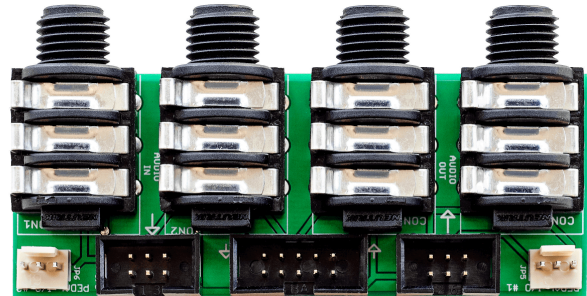
Connecting to 7U Performance Case Audio Jacks GEN-1 (Legacy)

This section refers to the 7U Performance Case Gen-1 (previous to December 2025). Cases between 2019-2025 had a 2nd generation Audio Jacks board installed (*below right*). It is possible to connect **Aux Mix 1U** to the ¼" Jacks using 3-Pin connector cables.

Previous to 2019, cases had a 1st generation Audio Jacks board which can be identified by the single 10-pin connector (*below left*). Aux Mix 1U cannot interface with the Gen-1 Audio Jacks board. Examples below refer to Gen-2 configurations.
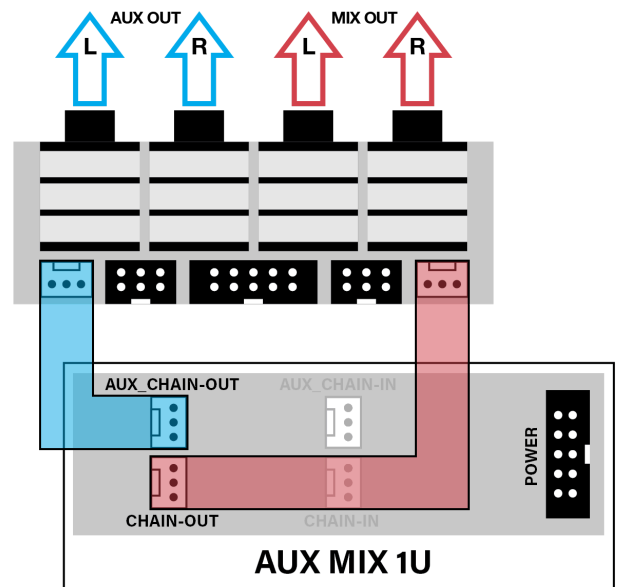

1st GENERATION AUDIO JACKS

2nd GENERATION AUDIO JACKS

Example A.1: Mix and Aux Output Connections

Here's a typical connection example of **Aux Mix 1U** to a **7U Performance Case.** The left pair of audio jacks is connected to the Aux mix output, and the right pair is connected to the Main mix output. Both outputs are unbalanced and unattenuated.

1. Connect one end of the supplied 3-pin link cable to the **CHAIN-OUT** on your **Aux Mix 1U**.

2. Connect the other end to the 3-pin connector on the right-hand side of the Audio Jacks board. This is now linked to the right pair of ¼" audio jacks.

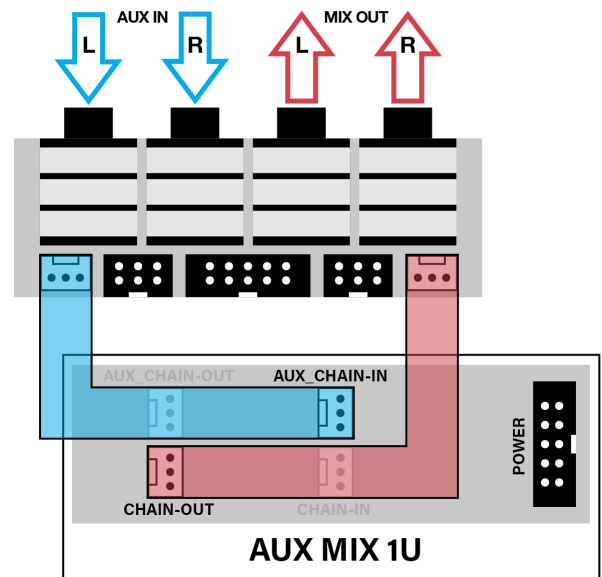3. In the same way, connect the **AUX_CHAIN-OUT** link to the 3-pin connector on the left of the Audio Jacks board.

*NOTE: The output is an unattenuated modular signal level. Most pro audio devices can handle higher signal levels. If you're connecting your modular synth to consumer-grade audio gear (or if you're running balanced audio cables), Intellijel recommends using something like the **Audio I/O** module, or the **Stereo I/O 1U** module.*

Example A.2: Aux Input and Mix Output

It is also possible to use the ¼" audio jacks in the **7U Performance Cases** as inputs.

In this scenario, the left pair of audio jacks is connected to the Aux mix input, and the right pair is connected to the Main mix output. Both outputs are unbalanced.
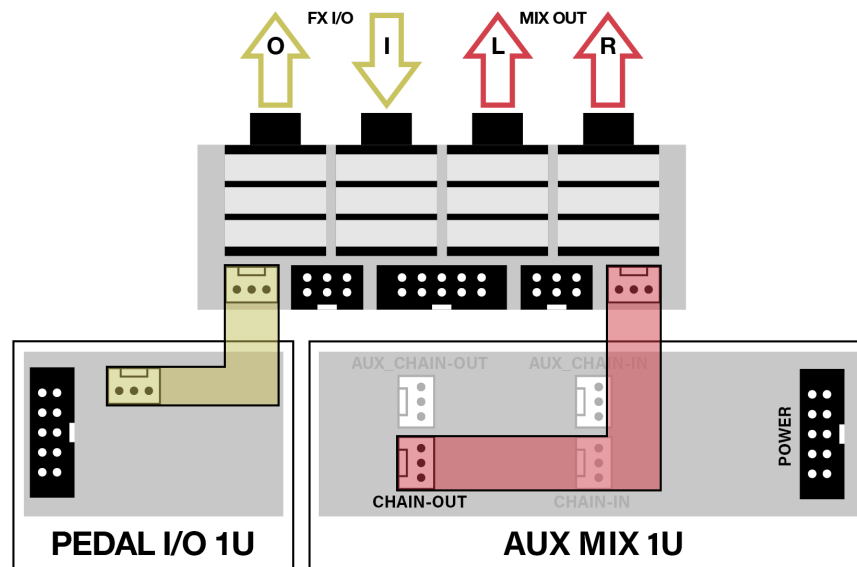
Follow the instructions from the previous example, but then connect the **AUX_CHAIN-IN** to the 3-pin connector on the left of the Audio Jacks board instead.

Example A.3: Combining Modules in the Performance Case

With the **7U Performance Cases**, it's also possible to link 2 modules to the Audio Jacks board. You could connect 2x **Aux Mix 1U** modules, or combine with other modules such as **Mixup** or **Pedal I/O 1U**.

In the example below, the left pair of Jacks is linked to **Pedal I/O 1U's SEND-RETURN**, and the right pair is connected to Aux Mix 1U's **CHAIN-OUT**.
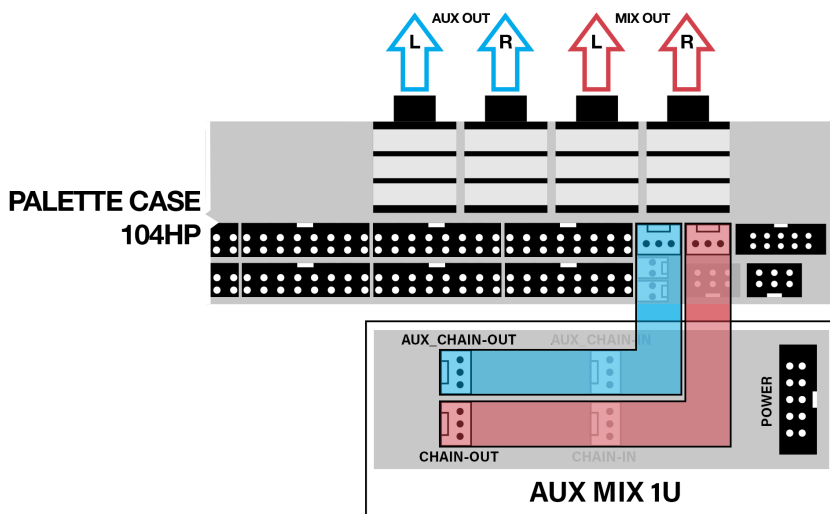
Connecting to Palette Case Audio Jacks

If you have an **Intellijel Palette Case**, you can connect the **Aux Mix 1U** directly to a pair of ¼" audio jacks on the top of the Palette (1x pair on the **Palette 62**, and 2x pairs on the **Palette 104**). Either pair can be used for audio input or audio output connections.
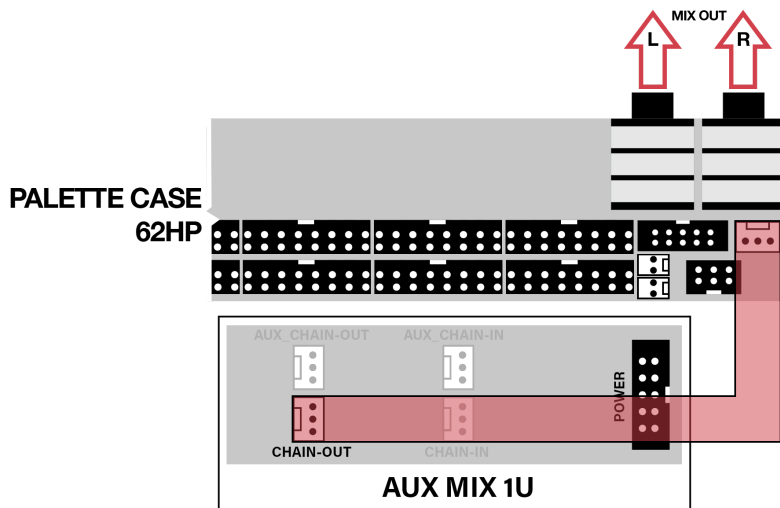
*NOTE: The output is an unattenuated modular signal level. Most pro audio devices can handle higher signal levels. If you're connecting your modular synth to consumer-grade audio gear (or if you're running balanced audio cables), Intellijel recommends using something like the **Audio I/O** module, or the **Stereo I/O 1U** module.*

Example B.1: Palette Case 104HP Mix and Aux Outs

In this example, **CHAIN-OUT** from **Aux Mix 1U** is connected to the right pair of ¼" Audio Jacks with the 3-Pin link connector, and **AUX_CHAIN-OUT** is connected to the left pair. You could exchange either of these with the **CHAIN-IN** or **AUX_CHAIN-IN** for module input.

Example B.2: Palette Case 62HP Mix Out

The **62HP Palette Case** only has 1x pair of ¼" Audio Jacks. In this example, **CHAIN-OUT** is connected to the Audio Jacks via a 3-pin connector.
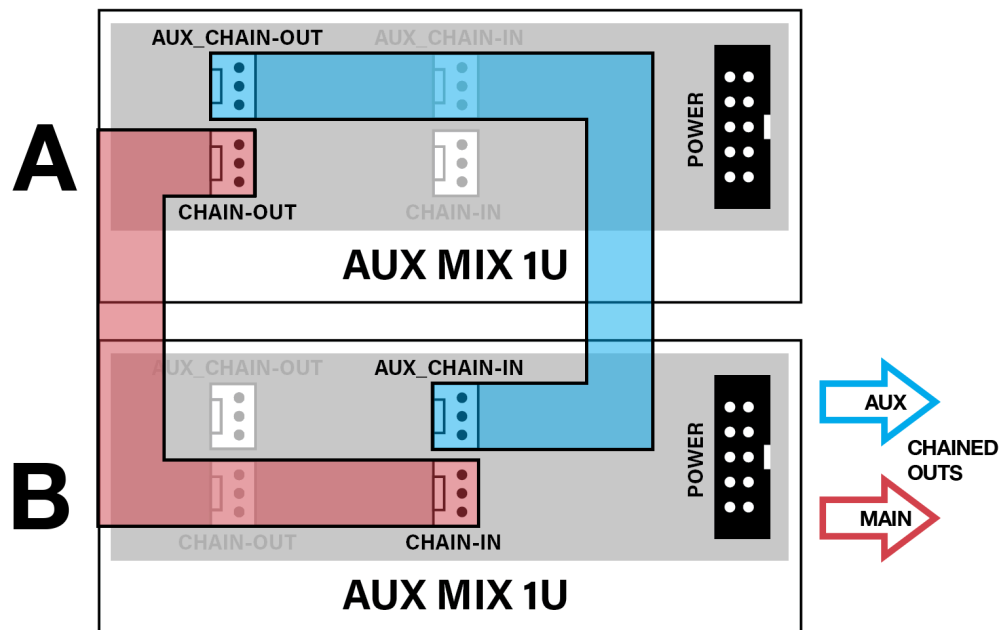
You could also connect the ¼" audio jacks to the **AUX_CHAIN-OUT**, **AUX_CHAIN-IN,** or **CHAIN-IN.**

Connecting Two Aux Mix 1Us as a Chained Mixer

You can chain together two **Aux Mix 1U** modules to create a larger mixer with six stereo channels and four aux sends. In the diagram below, we have two units - **A** and **B**

1. Connect **AUX_CHAIN-OUT** of **A** to **AUX_CHAIN-IN** of **B** using the 3-pin connector cable
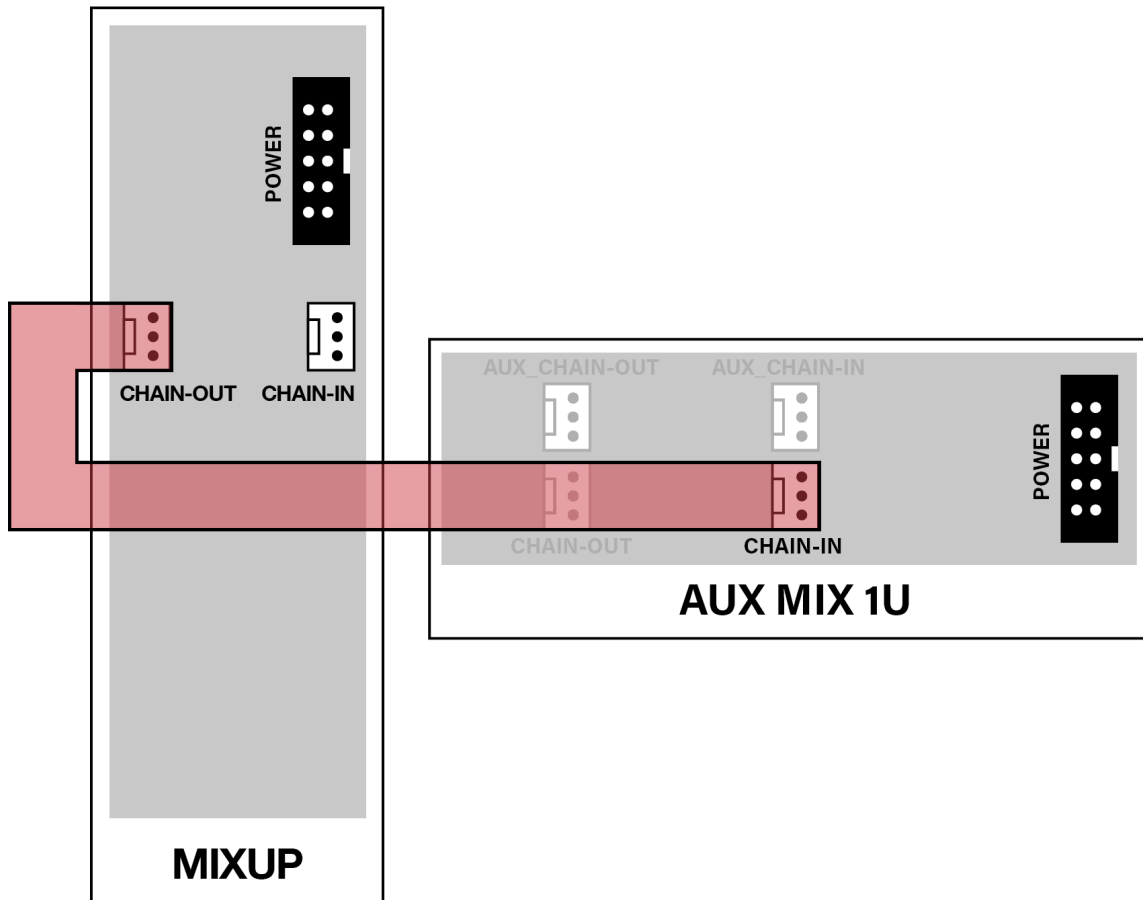2. Connect **CHAIN-OUT** of **A** to **CHAIN-IN** of **B** using another 3-pin connector.

The combined channels from each module will exit through B's Mix Out and Aux Out.

Connecting Aux Mix 1U to Intellijel Mixup Module

Intellijel Mixup has CHAIN-IN and CHAIN-OUT connections on the back, allowing you to chain into or out from **Aux Mix 1U**. In the example below, **Mixup** adds four channels (2x Mono, 2x Stereo) to **Aux Mix 1U's** main mix. Level and mute controls still work as they would from the main out of **Mixup**.

1. Connect one end of the 3-pin link cable to the **CHAIN-OUT** of **Mixup.**
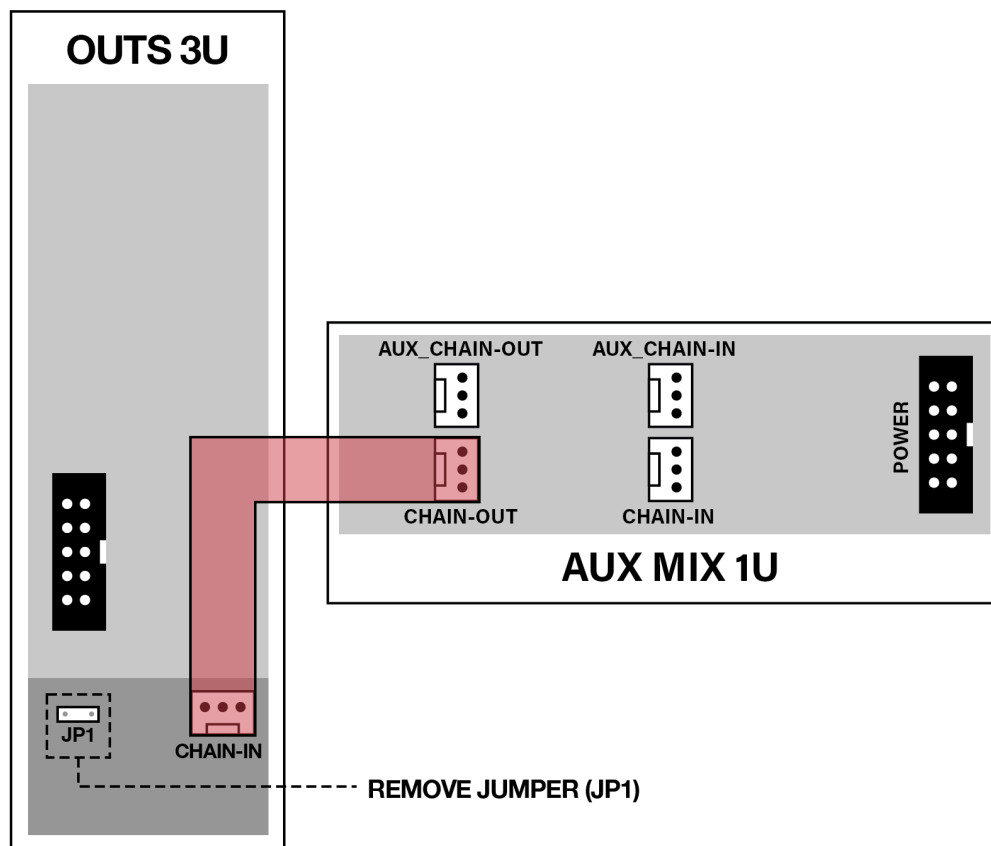2. Connect the other end of the cable to **CHAIN-IN** on **Aux Mix 1U.**

Connecting Aux Mix 1U to an Intellijel Outs Module

If you own an **Intellijel Outs** module, you can connect it directly to the **Aux Mix 1U** using the included 3-pin link cable. In this scenario, **Aux Mix 1U's** main mix output is connected to the audio jack and headphone sockets on your **Outs** module without patching the front panels.

1. **IMPORTANT!** On the back of the **Outs** module, **remove the JP1 jumper connector and put it in a safe place**.

   The jumper normalizes the Left input to the Right input on **Outs**. Since the **Aux Mix 1U** has its own Left-to-Right normaling, 3-pin link connections require the removal of this jumper to achieve the expected operation and optimum sonic fidelity.

2. Connect the 3-pin link cable to the **CHAIN-OUT** connector on the **Aux Mix 1U**

3. Connect the other end to the 3-pin **CHAIN-IN** connector on the **Outs** module
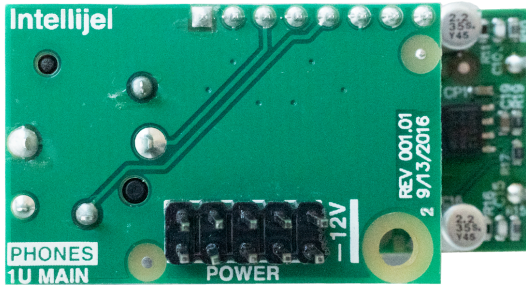
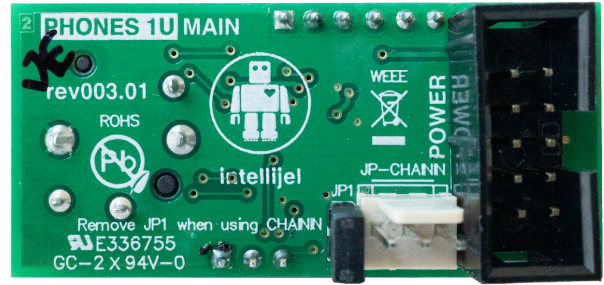# Connecting Stereo Mix 1U to a v2 Headphones 1U Module

If you own a **Intellijel Headphones 1U (Version 2)** module, you can connect it directly to the **Aux Mix 1U** using the included link cable. To do so:

1. Confirm you have a **Headphones 1U** module that is **Version 2**.

   Version 2 modules, in production since August 2019, have a 3-pin Link connector and a jumper on the rear panel. Version 1 modules do not.

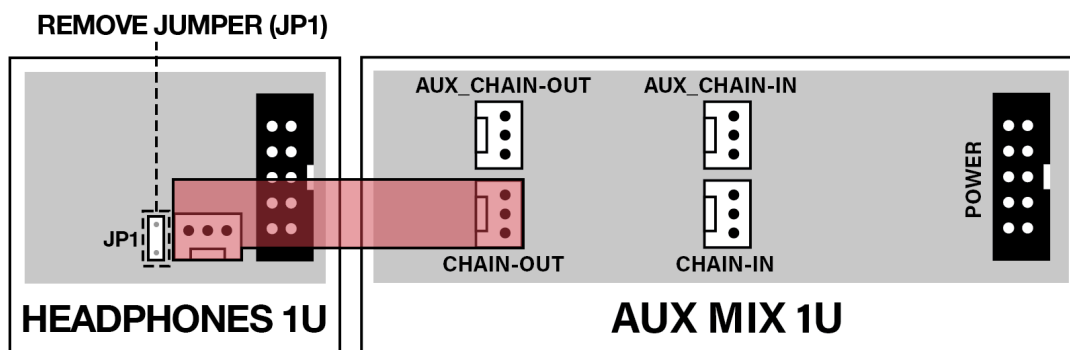| VERSION 1 variations have only a single power connector on the rear panel | VERSION 2 has power, plus a 3-pin Link Connector (and normaling jumper) on the rear panel |

2. **IMPORTANT!** On the back of the **Headphones 1U** module, **remove the JP1 jumper connector and put it in a safe place**.

   This jumper normals the **Headphones 1U** module's Left input to its Right input. Since the **Aux Mix** module has its own Left-to-Right normaling, 3-pin Link connections require removal of this jumper to achieve expected operation and optimum sonic fidelity.

3. Connect one end of the included 3-pin link cable to the **CHAIN-OUT** connector on **Aux Mix 1U.**

4. Connect the other end to the 3-pin input connector on the **Headphones 1U** module.

Aux Mix 1U's Main mix output feeds into your **Headphones 1U** module without patching.

TIP: Connect the AUX_CHAIN-OUT to Headphones 1U to create a Cue or Monitor mix.

TECHNICAL SPECIFICATIONS

Width	32 hp
Maximum Depth	42 mm
Current Draw	48mA @ +12V 42mA @ -12V

3-pin Link Compatible Modules and Cases

Intellijel Case / Module	In > Aux Mix 1U	Aux Mix 1U > Out	No. of Connections
7U Performance Case Gen-2	Yes	Yes	4
7U Performance Case Gen-1	Yes	Yes	2
104HP x 4U Palette Case	Yes	Yes	2
62HP x 4U Palette Case	Yes	Yes	1
Outs 3U	No	Yes	1
Audio I/O 3U	Yes	Yes	2
Mixup 3U	Yes	Yes	2
X-Fade 1U	Yes	No	1
Stereo Mixer 1U	Yes	Yes	2
XY I/O 1U	Yes	Yes	1 or 2
Headphones 1U (V2)	No	Yes	1