Dubmix

Quad Input Stereo VC Mixer

Manual Revision: 1.0

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Overview

The Dubmix series of modules provides a complete expandable CV-controlled mixing system for your modular. Each core Dubmix module can be expanded ribbon cables with one Aux Expander and one Mini Expander. A Dubmix can also be connected via a ribbon cable to an audio out module such as the µJack for convenient interfacing with other equipment. Multiple Dubmix units can be chained via ribbon cables to mix their L and R busses.

The Dubmix Mini Expander allows for voltage control of input levels, as well as providing direct outs and an additional pair of inputs directly in to the main mixer bus.

The Dubmix Aux Expander adds two additional auxiliary busses with full voltage control over levels.

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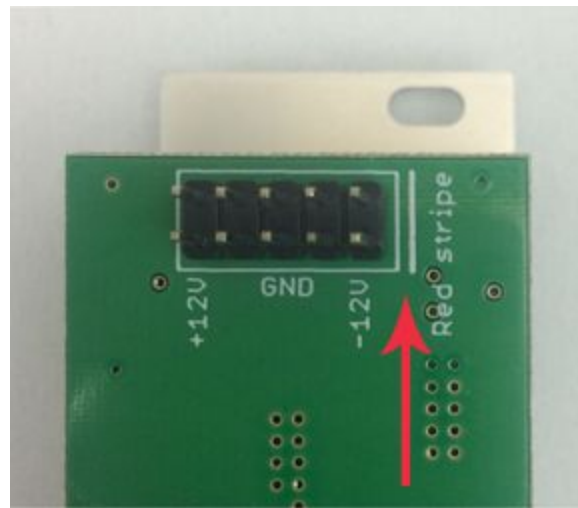
Most modules will come with the cable already connected but it is good to double check the orientation. Be aware that some modules may have headers that serve other purposes so ensure the cable is connected to the right one.

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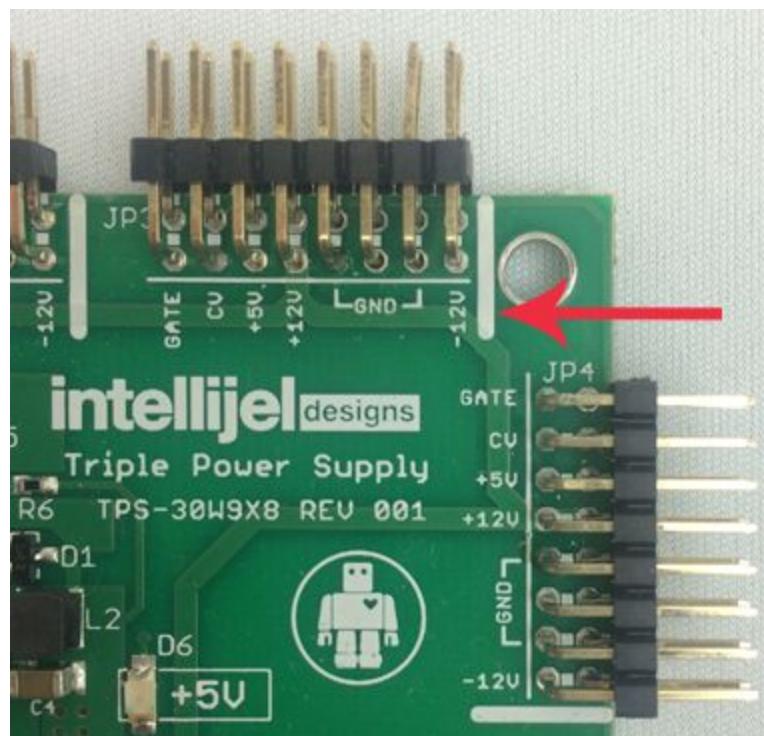
If you are using another manufacturer's power supply, check their documentation for instructions.

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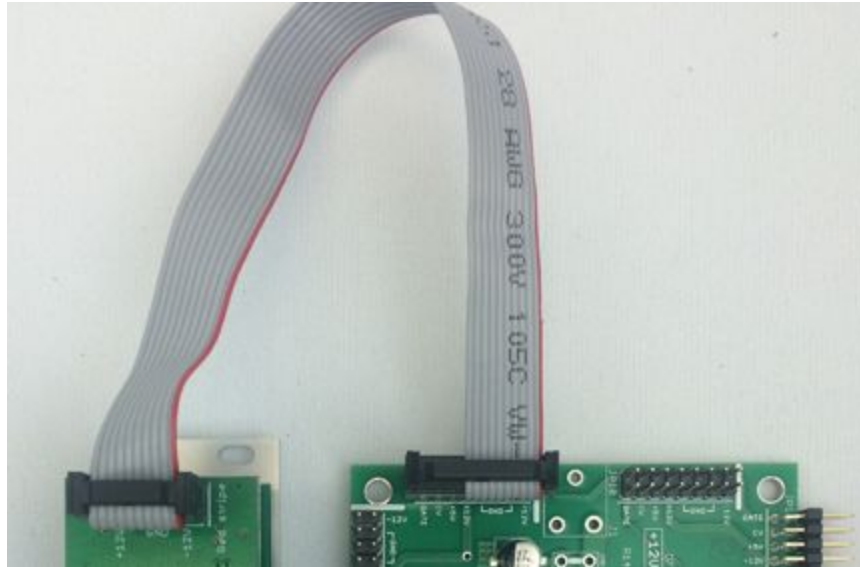
Before reconnecting power and turning on your modular system, double check that the ribbon cable is fully seated on both ends and that all the pins are correctly aligned. If the pins are misaligned in any direction or the ribbon is backwards you can cause damage to your module, power supply, or other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

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Dubmix Front Panel

The Dubmix is the main module in the series, to which all the others attach.

The description of the functionality below is divided in to separate descriptions for the centre master section, and then common functionality for each channel strip.

Dubmix Master Section

Dubmix Master Controls

1. **MASTER -** This knob controls the final output level of the **L** and **R** outputs.
2. **L/MUTE -** This switch toggles the function of the meter between displaying the level of the L bus and the mute bus.
3. **R/AUX A -** This switch toggles the function of the meter between displaying the level of the R bus and Aux A bus.

4. **AUX A SEND -** This knob controls the overall level of the signals sent to the Aux A send output.
5. **AUX A RETURN L -** This knob controls the level of the **AUX A RETURN L** input mixed back in to the L bus.
6. **AUX A RETURN R -** This knob controls the level of the **AUX A RETURN R** input mixed back in to the R bus.

Dubmix Master Inputs & Outputs

A. **MASTER CV -** This CV input controls the overall output level of **OUT L** and **OUT R**. The input voltage is summed with the **MASTER** knob.
B. **AUX A CV -** This CV input controls the overall level of the **AUX A SEND** output.
C. **AUX A RETURN L + R -** This audio input mixes the return signal from an Aux A send in to the L and R mixer busses. If nothing is connected to the **AUX RETURN R** jack then the signal from **AUX RETURN L** is sent there.
D. **L -** This jack outputs the audio from the L mixer bus.
E. **R -** This jack outputs the audio from the R mixer bus.
F. **AUX A -** This is the mix output for the AUX A bus.
G. **MUTE -** This audio output provides a post-fader mix of all the muted mixer channels.

Dubmix Channel Strip
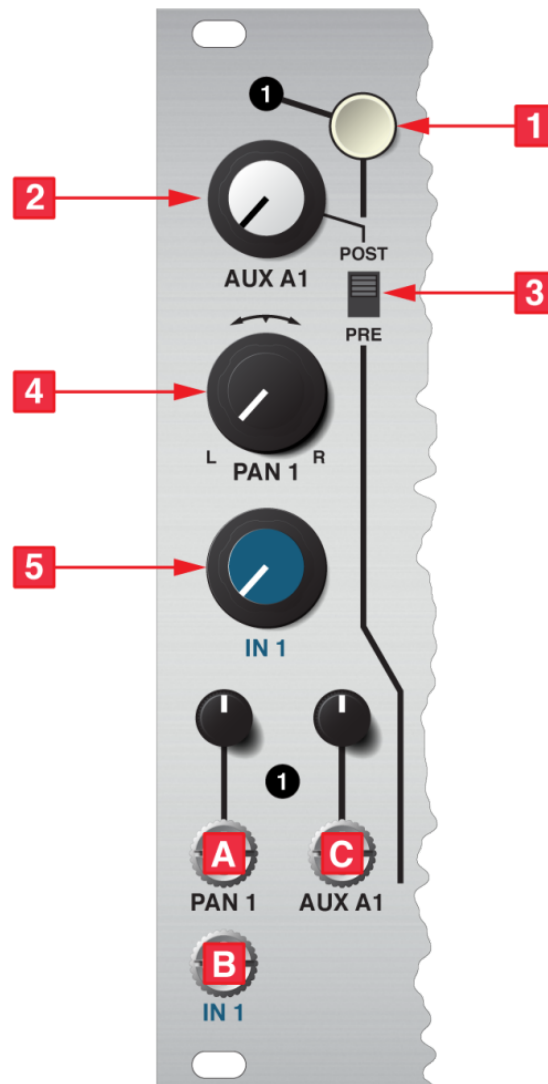
Dubmix Channel Strip Controls

The per-channel controls are labelled above. The descriptions below describe one channel but the functionality is the same for channels 1 through 4.

1. **Mute Button -** This button controls the muting of each channel. It illuminates red when a channel is muted.
2. **AUX A# -** This knob controls the level of the channel's signal mixed in to the **AUX A** output. If the channel is set to post-fader, the level is first modified by the **IN#**knob.

3. **POST/PRE Switch -** This switch controls whether the level of signal sent to Aux A is pre- or post- fader. In pre-fader mode the full signal is always sent to the aux bus and the level is controlled solely by the **AUX A#** knob. In post-fader mode the signal level is controlled first by the **IN#** knob and then further attenuated by the **AUX A#** knob.
4. **PAN# -** This knob controls the panning of the channel. In the 12 o'clock position the signal is sent to both the left and right bus of the mixer at equal levels. Turning it in either direction increases the level of the signal to the corresponding bus while decreasing the level in the other.
5. **IN# -** This is the channel fader which controls the overall signal level of the channel. At full clockwise the signal has a gain of 6 dB with a soft saturation.

Dubmix Channel Strip Inputs & Outputs

The descriptions below describes one channel but the functionality is the same for channels 1 through 4.

A. **PAN # -** This input provides voltage control over the channel pan. The range is +/- 5 V. Negative values pan the signal left while positive values pan it right.
B. **IN # -** This is the modular-level audio input to the corresponding mixer channel.
C. **AUX A# -** This CV input provides voltage control over the channel aux send. The CV is summed with the position of the **AUX A#** knob.

Dubmix Mini Expander

The Dubmix Mini Expander adds CV control over the input levels of the main Dubmix unit, as well as direct post-fader outputs and an additional pair of inputs to mix in to the L and R busses.


Dubmix Mini Expander Inputs & Outputs

A. **MASTER INPUT L + R** - These audio inputs sum directly in to the L and R busses of the Dubmix.

B. **DIRECT OUTPUTS 1 – 4** - These audio outputs provide a direct post-fader out of each of the four channels of the Dubmix.

C. **LEVEL 1 – 4** - These CV inputs provide control over the level fader of the Dubmix. The voltage here is summed with the position of the **IN** knob on the main unit.

Dubmix Aux Expander

The Dubmix Aux expander extends the auxiliary send capabilities of the Dubmix with two additional busses.

Dubmix Aux Expander Channel Strip Controls
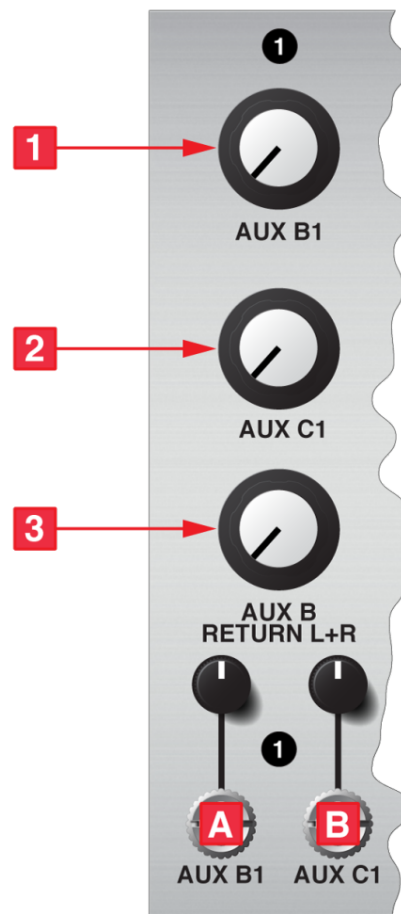
The description here is for a single channel but the functionality of the controls is the same for each channel 1 through 4.
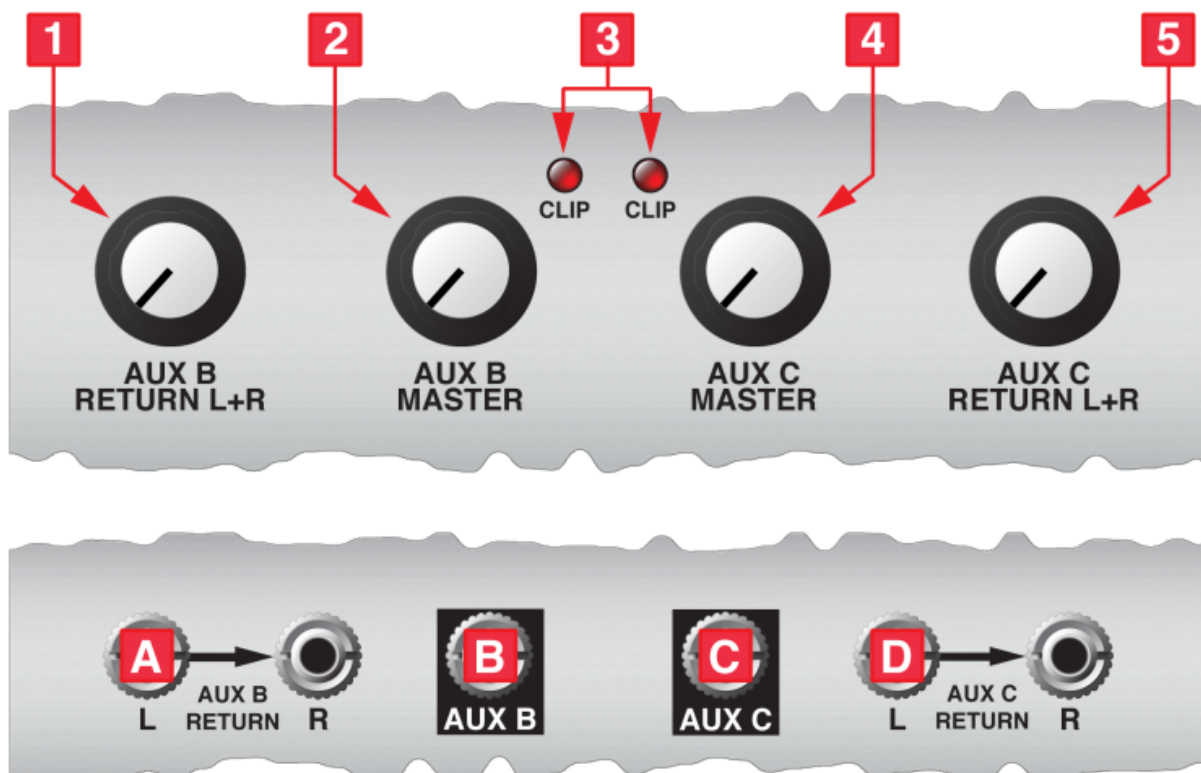
1. **AUX B#** - This knob controls the level of the channel's post-fader signal mixed into the **AUX B** send.
2. **AUX C#** - This knob controls the level of the channel's post-fader signal mixed into the **AUX C** send.

Dubmix Aux Expander Channel Strip Inputs & Outputs

This describes the per-channel inputs and outputs. The functionality of the controls is the same for each channel 1 through 4.

 A. **AUX B#** - This CV input provides voltage control over the channel's send to Aux B. The voltage is summed with the position of the **AUX B#** knob.

 B. **AUX C#** - This CV input provides voltage control over the channel's send to Aux C. The voltage is summed with the position of the **AUX C#** knob.

Dubmix Aux Expander Master Controls

 1. **AUX B RETURN L + R** - This knob controls the levels of the **AUX B RETURN L + R** inputs mixed back into the L and R busses.

 2. **AUX B MASTER** - This knob controls the master level of the mix being sent to the **AUX B** output.

 3. **CLIP LEDs** - The clip LEDs indicate when aux send B or C master sends are clipping.

4. **AUX C MASTER** - This knob controls the master level of the mix being sent to the **AUX C** output.
5. **AUX C RETURN L + R** - This knob controls the levels of the **AUX C RETURN L + R** inputs mixed back in to the L and R busses.

Dubmix Aux Expander Master Inputs & Outputs

A. **AUX B RETURN L + R** - This audio input mixes the return signal from an Aux B send in to the L and R mixer busses. If nothing is connected to the **AUX B RETURN R** jack then the signal from **AUX B RETURN L** is sent there.
B. **AUX B SEND** - The audio output for the Aux B bus. All channels are mixed in to this output based on their **AUX B#** fader level and CV input.
C. **AUX C RETURN L + R** - This audio input mixes the return signal from an Aux C send in to the L and R mixer busses. If nothing is connected to the **AUX C RETURN R** jack then the signal from **AUX C RETURN L** is sent there.
D. **AUX C SEND** - The audio output for the Aux C bus. All channels are mixed in to this output based on their **AUX C#** fader level and CV input.

Technical Specifications

Width	28 hp
Maximum Depth	47 mm
Current Draw	280 mA @ +12V 275 mA @ -12V