

AI001 Multiple USER MANUAL

Introduction

The AI001 Multiple Eurorack Synthesizer Module is a 1×7 or a 2×4 passive multiple in only 2hp! It is critically important to be able to split and distribute your modular's signals to multiple destinations with the AI001 Multiple Eurorack Synthesizer Module. Because the module takes up only 2HP, they can be placed anywhere.

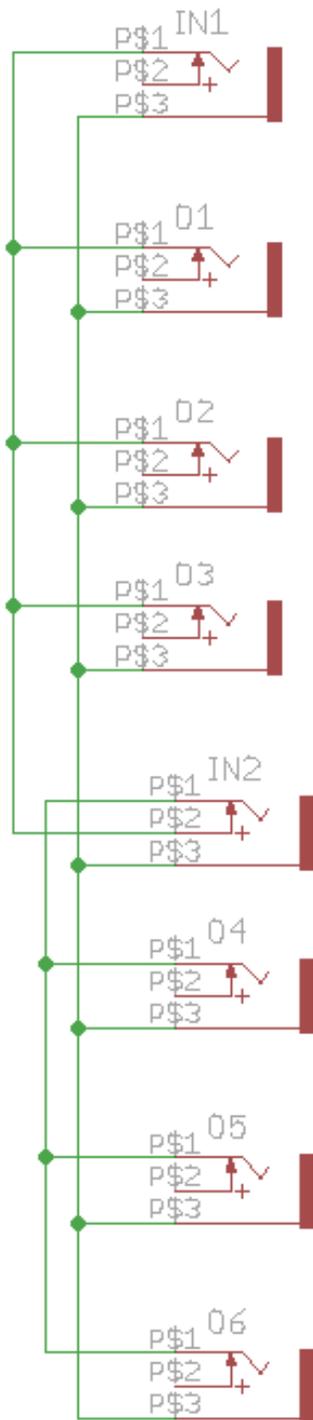
The Multiple Eurorack Synthesizer Module can be used as either a 2×4 passive multiple, or a 1×7. The first set of four are linked together, and if nothing is plugged into the 5th jack, then that signal continues to the 6th, 7th, and 8th as well. If a cable is plugged into the 5th jack, then those signals are distributed to the 6th, 7th, and 8th jacks and it functions as a 2×4 multiple.

This Multiple Eurorack Synthesizer Module kit will not only teach you how to solder, and teach you about Grounding and Signal flow, it will also add a key Multiple utility module to your DIY Modular Synthesizer.

This is an ideal kit for a beginner learning DIY electronics, and requires no wiring at all! All parts are soldered directly to the PCB for ease of building. We recommend this Multiple Eurorack Synthesizer Module kit as the first DIY module you build.

It is easy, and can be built in a single 5 minute sitting. If it works, you are ready to build other modules. We suggest the [AI002 Mixer Synthesizer Module](#).

Schematic



Each jack has three lugs: 1 is the ground, 3 is the signal, and 2 is a switch. When no jack is inserted, pin 2 is connected (or “normalled” to pin 3).

In our AI001 DIY Synthesizer Multiple Module, only In2 uses this switched jack. When no jack is inserted into In2, signal passes from In1, O1, O2, and O3 onto O4, O5, and O6. Inserting a jack into In2 breaks this switch, and so the signal from In2 passes to O4, O5, and O6.

We say this unit is passive, because it requires no power to operate. Because the AI001 DIY Synthesizer Multiple Module is passive, each time a signal is “tapped,” it will be slightly weaker.

In the case of distributing gate, audio, or control voltage signals where v/octave control is not needed, the effect should be fairly negligible. In the use case of distributing pitch voltage (to multiple oscillators) a different “buffered” multiple module should be used. A buffered multiple requires power and uses Operational amplifiers to distribute voltage without any signal drop.

Nonetheless, this passive DIY Synthesizer Multiple Module is an indispensable module, and its thin space means it can be easily included next to envelopes, clocks, gate generators, and other modules that benefit from voltage distribution.

Patch Examples

1. Clock Distribution

Connect a clock in to In 1.

Distribute this clock to a sequencer via Out 1.

Distribute the same clock to an envelope Generator via Out 2.

Distribute the same clock signal to a clock multiplier via Out 3.

Plug nothing into In2, in order to continue distributing the same clock signal.

Distribute the same clock signal to a clock divided via Out 4.

2. Dual Envelope Distribution

Connect the output of an ADSR, AR, or LFO to In 1.

Distribute this voltage signal to a filter via Out 1.

Distribute the same voltage signal to a VCA via Out 2.

Connect the output of a second ADSR, AR, or LFO to In 2.

Distribute this voltage signal to a filter via Out 4.

Distribute the same voltage signal to a VCA via Out 5.

3. Oscillator Distribution

Connect an Oscillator signal to In 1.

Distribute this to a VCF input via Out 1.

Distribute the same Oscillator signal into a second oscillator's PWM input via Out 2.

etc....

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