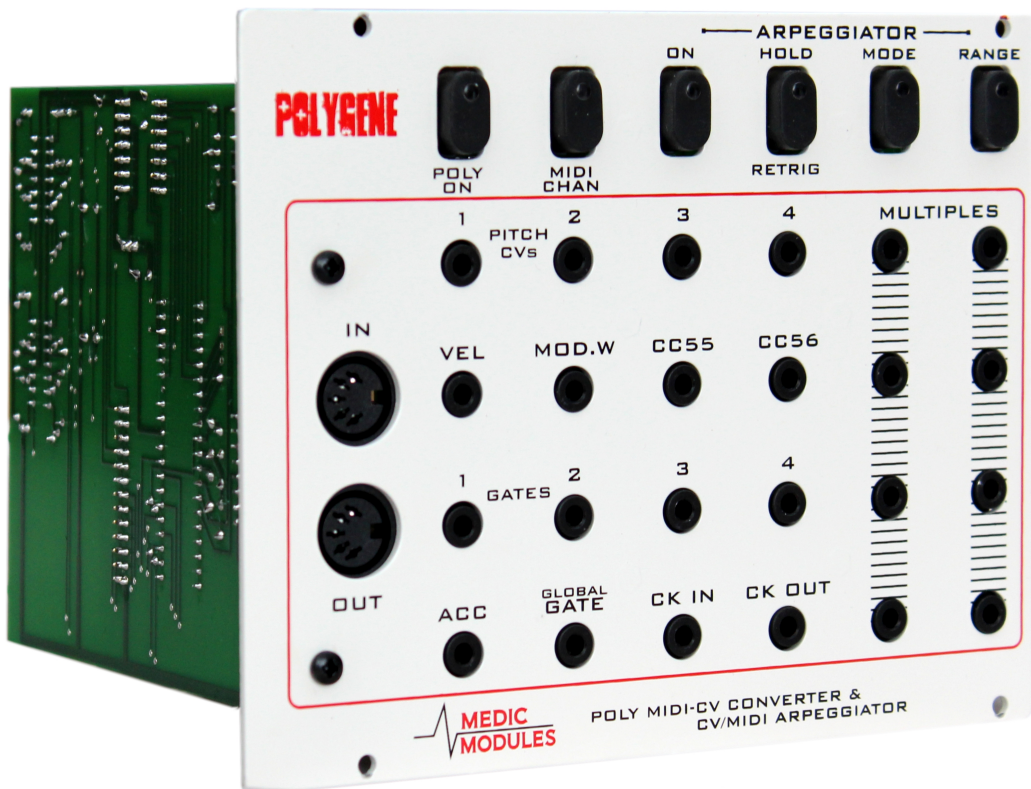


Polygene

user manual
preliminary



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Introduction

Congratulations on buying the Polygene advanced MIDI converter. Polygene is part of the Medic Modules range of Eurorack modules.

WHAT IS IT?

Polygene is a eurorack polyphonic MIDI to CV converter - 4 voice output that can be used to play your CV synths / modules as a 4 voice polysynth.

Main Features

- Control 4 CV synths as one 4 voice poly
- Or, play them all at once in Unison
- 16 note arpeggiator that doubles as a 16 note digital sequencer
- 4 pitch CVs, 4 Gates
- Velocity, Mod Wheel, Controller 55, and 56 CV outputs
- Accent, Global Gate, Clock In and Clock Out digital IOs
- MIDI Out transmits Arpeggiator as MIDI notes.
- 2 Multiples
- Hold, Mode, Range, Note Retrigger

WHY DO I NEED THIS MODULE? WHAT'S SO SPECIAL?

Simple to use, it's the perfect way to have MIDI control 4 CV synths, to play together as one poly synth.

Connect to 4 mono synths, e.g. Analogue Solutions Nyborg

Or, connect to Eurorack modules set up as 4 synth voices.

The Arpeggiator has no nonsense operation harking back to the days of early Roland synths such as the Jupiter 8 and SH101.

The Arpeggiator can also be used as a simple 16 note step sequencer. The arpeggiator also plays back the velocity amount that was used.

The Arpeggiator will control CV synths, but the note info is also sent to the MIDI Out socket as MIDI notes, so you can have it play a MIDI synth.

Specification

Rack width: 32HP

Depth: 120mm

Weight:

Power: +/-12V

General Buttons

POLY ON/OFF

When the LED is on, the module is in Poly mode. A chord of up to 4 notes can be played. The 4 channels are each assigned a note.

Channel assignment is cyclic! That means if you just play single notes, the converter will in turn cycle through channels 1 to 4.

When off, the module is in Unison/Mono mode. All 4 channels will be active and each will play the same note on the same MIDI channel. Note, you cannot assign separate MIDI channels to each CV channel in Unison.

MIDI CHAN

To change the MIDI channel, push and hold this button then play some MIDI notes. The module will set itself to the same channel as the received notes.

RETRIG

Note, this setting can only be changed when the arpeggiator is switched off.

Toggleing this button turns on and off Gate Re-Trig. This changes the way the Gate outputs behave when notes are overlapped.

When on, the Gate output will briefly turn off when overlapping notes. The reason for this is so that your Envelopes will re-trigger.

Arpeggiator Buttons

ON

Turns on the Arpeggiator.

Note: for the Arpeggiator to work, the module must be receiving some sort of clock signal at the CK IN socket, and, be receiving MIDI notes (of the correct channel!)

See notes on CK socket later.

HOLD

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This will hold any MIDI notes received. The notes played will continue to play as if you are still holding the keys.

You can continue to add up to 16 notes.

Turning off HOLD (or the Arpeggiator) will release and forget all notes.

MODE

This changes to order the notes are played.

There are 3 modes:

UP - LED off - notes are played in the order they were initially pressed.

DOWN - LED on - notes are played in reverse order.

UP and DOWN - LED flashing - notes are played up, then down.

Note: When we say UP we mean in order, when we say DOWN we mean reverse order, in which the notes were initially played in (by your hand).

Polygene will playback the notes in whatever order they were initially received, not in order of pitch (note number).

This means that you can use Polygene as a 16 note step sequencer!

VELOCITY CV

Polygene also remembers the velocity that was used for each note and will play that back also through the VEL CV socket.

RANGE

The octave range of the Arpeggiator playback can be extended. There are 3 settings

Normal - LED off - just plays the notes back as they were initially received.

+1 LED on - the notes play back once normally, then a 2nd time one octave up.

-1 - LED flashing - the notes will play back normally, then 1 octave up, then 1 octave down.

Note: The CV range is approx 0-5V. Notes played out of range will just play as the highest, or lowest note and no further.

Sockets

MULTIPLES

There are two multiples.
Use these to split CV signals.

PITCH CVS

Each is 1V/Octave, 5 octaves range. Playing outside this range will just give a static unchanging pitch. Usually patch these into your Pitch CV inputs.

GATES

5V positive gate signals. Usually you patch these into your Envelope trigger inputs.

VEL

0-5V signal with MIDI velocity as source. Ideal for controlling filter cut-off or other module CV inputs.

MOD.W

0-5V signal with Mod Wheel as source. Patch to filter cut-off or pulse width CV inputs, for example.

CC55 / CC56

0-5V signals using controllers 55 and 56. Additional CVs to control your synth.

ACC

When MIDI velocity of over 80 is received, this output will pulse a 5v signal. Use this to clock sequencers, for example.

GLOBAL GATE

This gate output goes high when any one of the 4 channels is played.

CK IN

Use a 5v clock signal in here to clock the Arpeggiator. 1 pulse per note. CK OUT could be used.

CK OUT

MIDI Sync is converted to a 5v analogue clock.

MIDI IN

Just a MIDI In - connect your DAW or keyboard into here.

MIDI THRU / OUT

Plays out a copy of what comes into the In socket. It will also output the Arpeggiator pattern as MIDI notes.

THE ARPEGGIATOR NEEDS A CLOCK SIGNAL TO WORK.

To use MIDI clock, patch CK Out to CK In. Your DAW must be transmitting MIDI Sync.

Or patch in an LFO to use that as a clock source.
Or generally and typical gate signal should work.

Warranty

Polygene comes with a 1 year (from purchase date) back to base warranty, (i.e. customer must arrange and pay for carriage to and from Analogue Solutions or the dealer from which purchased).

This warranty shall not apply where the product has been subject to alteration, misuse accident, neglect (such as extremes of temperature and/or moisture) or to wear resulting from normal use.

At the sole discretion of Analogue Solutions, the warranty is deemed to be void should the unit be or considered to have been opened or any other modifications or tampering be carried out by unauthorised parties.

CE COMPLIANCE

This unit complies with EU Directives 73/23/EEC and 89/336/EEC.
Standards: EN55103-1, EN55103-2, EN60065

