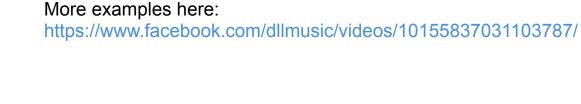
Version 0.5.4 **MIDI Poly 16** Poly & Mono interface + Sequencer + Arpeggiator This module converts MIDI notes (and basic controllers data) to CV, providing up to 16 independent "voices". It also has a Mono note output (lowest, highest or last played note) with Arpeggiator and a 16 step Sequencer. Poly 16 \bigoplus **MIDI** input Port Channel Reset Unison Mirror Display Restart Sea (Learn) Recycle IAC Driver B... (xLock (Lock Rotate Shift Drift **Transpose** • Vel Gate Seq Seq Vel **Gate**)Clock 120bpm Steps 16 First: 1 Ext Int MIDI Arpeggiator Trig Gate 90 150 180 210 30 Ratio Ratio **BPM** Auto Steps Reset BbØ Octaves Uctaves + Seq Arp Start Stop **First** Arcade Arpeg **Swing** Clock ReT ReT ReT Hold xLck Uppr Uppr Last Shift **Transpose** PBnd Mod The incoming MIDI notes are dynamically assigned to 16 "Pads", with independent 1V/Oct, velocity and gate outputs each. The Pads display the Note name (or MIDI note number), and briefly show the Velocity value when receiving a new note. (Pads can be clicked for quick preview of their output) The Pads work in 4 different modes. The dynamic or live polyphonic mode is the default setting. The Pads just play-through the incoming notes. On Sequencer mode, the Pads are played by the Sequencer. They ignore the incoming notes, thus reducing the number of "live" voices. The note assigned to them is memorized, and can be reassigned engaging the (Learn O) function. With Learn engaged, a clicked Pad will turn to "learning state" awaiting for the next MIDI note. Transpose After receiving and saving the note, the Pad goes back to its normal state. While on "learning state" the can also be transposed with the transpose buttons (note that the transpose display stavs on its value) To assign/unassign Sequencer mode, engage the Seg button and click the desired pad. On Locked mode, the Pads are locked to the assigned note, so they play when the incoming MIDI note matches. The incoming note also plays normally through the [Poly] pads. In locked mode, notes can also be assigned with the learn O To assign/unassign Locked mode, engage the **lock** button and click the desired pad. Locked Exclusive mode is similar to [Locked], but the matched note does not play through the [Poly] pads. This basically blocks that note out from the Poly section. To assign/unassign Locked Exclusive mode, engage the XLock button and click the desired pad. Poly Pads Voice assignment modes: **Restart**: use first available Poly notes 1v/o Recycle: repeat last used and Pad mode outputs Transpose Poly notes 1v/o outputs continue to next avaliable assignment buttons +/- 48 semitones. Shift +/- 48 semitones Rotate: use next available (Seq Learn xLock Lock) Notes remain nonlimited by Trim knob by transposed on the semitone steps Poly Voices Played of total Available Pad display (Modulation is not stepped) (depending on Pad modes) Pad display: Note names MIDI input port / channel and Reset or MIDI note number MIDIPUL Port MIDI input Reset Channel Unison Mirror Restart (Learn 🗨 Recycle IAC Driver B... (xLock (Lock Drift Rotate Shift **Transpose**• Poly Bender: ~ Unison ~ Mirror Each of the playing Poly notes is modulated up or down to match the Mono note Drift produces a random (which is automatically selected according to the Mono output voice setting) * ramp deviation on all the Unison occurs at halfway. After that the modulation continues until reaching the 1/Voct outputs mirrored note interval (with the Mono note being the axis) simulating a non-stable If a CV 0-10v input is connected, the Knob controls the Range of modulation (0v is analog source zero , 10v is Knob value) Sequencer 1v/o Sequencer Outputs with Gate outputs Transpose +/-Mono Outputs (with Gate mute preview (mute is not Locked Outputs (with mute preview) and MIDI 48 semitones Gate mute preview) saved) controllers Uppr Last Lowr 1 ReT Hold Uppr Last ReT xLck ReT Shift Lowr Transpose PBnd Mod AftT Sust Sequencer 1v/o Output Mono output voice ★Mono output voice Sustain include Modulation CC1. Hi-Res Re-Trigger Shift +/- 48 semitones from Locked Pads from Poly Pads notes hold xLock Channel Pitch Bend on every **Upper** bound **Last** limited by Trim knob by **Upper** bound **Last** Pads +/- 5v Aftertouch and step played or **Lower** semitone steps played or **Lower** bound Sustain CC64 bound (Modulation is not stepped) Sequencer & Arpeggiator Clock Run Sequencer BPM: 20 to Ratios: external Trigger/ 240 Quantized Half | Qrt dotted | Half Triplet | Gate options to integer. Qrt | 8th dotted | Qrt Triplet | Auto Reset to Knob value is 8th | 16th dotted | 8th Triplet | First Step on Run added to CV Pad Sequencer routing 16 th | 16 th Triplet | input so you Don't play (mute Step) 32nd | 32nd Triplet Clock can get Pad Outputs (with Play on Sequencer Output + CV inputs Source & decimals Gate mute preview) Play on Sequencer and EXT clock Pad Outputs input II aliohnor, שוווע Vel Gate Vel Gate Seq Clock 120bpm Eb1 Steps 16 First 1 **Ext Int MIDI Arpeggiator** Bb0 120 rig Gate 90 150 **Bb1** 180 210 30 Ratio Ratio **BPM** Auto Nt Nt Steps 12 Reset Octaves + Seq Arp **First** Arcade **Start Stop** Arpeg **Swing** <u>Clock</u> Start & Stop Sequencer Triggers and Swing Arpeggiator Octaves cycler Clock Outputs Applies + or - swing with Octave cylcler 0 -1 -2 -1 Oc | Nt and Arcade mode (fast scan according to the ratio 0 -1 -2 Cycle Octaves independent from BPM) selected. Sequencer 0 -1 then notes or Option to apply swing number of Steps 0 Cycle Notes then to **Triplets** and First step 0 + 1octaves option (offset) +CV 0 + 1 + 2inputs 0 + 1 + 2 + 1Poly Bender example: Here's a chord (E3 G#3 A3 C#4) processed with the Poly Bender, with different Mono settings. At half way all notes match the Mono note. Then they cointinue up/down until the mirrored chord



Mono Upper

(Highest

from Poly

=C#4)

C#4

G#3

A3

E3

A#4

F#4

C#4

F4

C#4

G#3

A3

E3

Mono Last

(Last note

played from

Poly. = A3)

Based on: Core MIDI-To-CV

MIDI input Port

MIDI input channel

Latest lower note

Lower note Gate

previous one

MIDI control-

and aftertouch

change controllers

velocity played (CV)

Lowest MIDI note being

played converted to CV

Gate retriggers if the incoming

Upper note is higher than the

incoming Upper note change

Gate retriggers on every -

selection

Lower and Upper notes being played

D4

Bb3

A3

F3

C#4

A3

E3

MIDI to dual CV interface

Simulates a duophonic keyboard sending 2 CVs / Vel / Gate (reTriggered) for

... if only one note is played Lower and Upper CVs are the same (Useful for

MIDI to Dual CV 🛨

Reset

IAC Driver B...

1V/0ct

Vel

Gate

ReTrig

Lo 🔾

Legato

Common Gate

PitchBend

BreathCtl

Sustain

Aftertouch (

moDllz

https://www.sequencer.de/synth/index.php/Duophonic

TwinGlider

It limits the rate of change of the incoming signal with independent Rise and

TwinGlider

Link

Mode

▼Trig

Hold

Gate

There's also different options to retrigger Lower/Upper Gates independently.

unison / separate OSC with optional RingMod / Oscillator sync)

G#3

Mono Last

(Last note

played from

Poly. = G#3)

C4

Ab3

G3

Eb3

MIDI reset

Highest note being

Latest upper note velocity played (CV)

Upper note Gate

previous one

Common Gate.

PitchBend CV range.

Defaults to +/- 5v

Gate(s) held by

sustain pedal

(default)

Link Fall Time/Rate, CVin and Mode to Rise values

Fall Time/Rate

Fall Time/Rate

knob value)

Glide Mode:

input jump)...

jump)...

signals

is done).

clocks.

ramp is active

CVin (delimited by

constant **Time**: (ramp

time independent from

constant **Rate** (ramp time directly related to input

High Rate for processing

Fall Gate +10v while Fall

audio (fast changing)

Fall Trigger: Triggers

when Fall ramp is done

disregarded until the ramp

When Clock is connected

sampled on every clock, and disregarded between

SCOPE

vev

SCOPE

TRIG

INT

EXT

 \odot

TIME

the input signal is

No retrigger

played converted to CV

Gate retriggers if the incoming Upper note is higher than the

Gate retriggers on every

incoming Upper note change

C#4

A3

E3

G#3

E3

C3

B2

G2

Mono Lowr

(Lowest

note from

Poly. = E3)

Hi Res (14bit) PitchBend Expression Commonly used

Duophonic Wiki...

Twin Glider is a dual linear glide/portamento module.

▲Gate

Gate

Rise Time/Rate

Rise Time/Rate

knob value)

CVin (delimited by

Fall ramp is active

Rise+Fall Trigger:

Triggers when any

ramp is done

Rise Gate +10v while

Rise Trigger: Triggers-

when Rise ramp is done

Gate in: When connected, the Rise/Fall ramps are

active only if a Gate is

received. Connect note

Example usages:

Gate Out)

"Slow" noise...

vev

EXT CLK

CLOCK

Gate up/down triggers...

RESET

SEQ-3

STEPS

Note portamento (1v/oct Input > Out to VCO)

Wave shaping "filter" (signal Input: HiRate mode)

Envelope Follower (Audio Input: with Fall time

SCOPE

Based on : Befaco Slew

Fall times.

gates here to produce portamento on legato notes only

Clock input for Sample to clock event and Glide

Clock event and Glide

Sample & Glide: (Without connected Clock) The input signal is sampled only when ramp is not active (Input is diagrams and adjustified to prove the clock event and Glide).

♦Iriq

moDUz

Get "slow" noise signals for random modulation (noise Input : S&G, Time mode)

(not the Gate input) zero times (ramps inactive) > rise+fall Trig Out)

Generate Trigger signals at the beginning and ending of a Gate (Gate to Main Input

Generate Gates from Trigger (Trigger Input: with Rise (or Fall) time > Rise (or Fall)

<u>TwinGlider</u>

ririq

pp 17.66 max 09.42 min -08.23 Mode ▲Triq \$Trig ▼Trig REC pp 00.00 max 00.00 min 00.00 GAUS X SCL Y SCL TIME X SCL Y SCL TIME TRIG Link ABS Mode X POS X POS INT Y POS X/Y INT Y POS X/Y О XXY EXT ▼ Gate XXY EXT OUT 0 I S νεν νεν moDllz ZO Wave shaping... <u> TwinGlider</u> VCO-1 SCOPE SCOPE FREQ . max 05.11 min -05.09 HARD ANLG DIGI SOFT FINE P. WIDTH ▲Trig **\$**Trig ▼Trig 00.00 max 00.00 min 00.00 00.00 max 00.00 min 00.00 Gate Clock FM CV PWM CV X SCL Y SCL TIME TRIG TRIG X SCL Y SCL TIME X POS Y POS X POS Y POS X/Y INT ■ X/Y INT V/OCT XXY EXT EXT loody

TwinGlider

▲Trig **\$Trig ▼Tri**g

SNARE

CR-78

LNDrum

X SCL

 HR-16 ● SP-12 X POS Y POS DMX TRIG IN OUT VEV VEV Envelope follower... TwinGlider SCOPE SNARE Trigger pp 13.26 max 13.26 min 00.00 808 ▼ Gate 909 ▲Trig \$Trig ▼Trig CR-78 pp 21.53 max 13.19 min -08.35 MiniPoops Y SCL X SCL TIME TRIG LNDrum HR-16 X POS Y POS SP-12 O DMX TRIG IN OUT ▲Trig \$Trig ▼Trig vev

moDIIz Example patches...
https://github.com/dllmusic/VCV_moDIIz/blob/master/patches/moDIIzVCVpatches.zip?raw=true