

Mango: the block override language

Quick reference. See the *README* for the rest of the plugin.

Every lane has one set of knobs, but **each block can override them with a line of text**. That is how one delay lane plays a different time in every block, or a filter tracks the note you just played. Select a block and type into the **block overrides** field at the bottom right.

Syntax

key=value key=value key=value

Space-separated **key=value** pairs, up to 16 per block. Newlines count as spaces (press **Ctrl+Return** for a newline, **Return** to commit).

- Each effect reads only the keys it knows and ignores the rest. The panel above the field lists the keys the selected lane understands.
- A key you set here overrides that knob **for this block only**.
- **All or nothing:** if any part of the line does not parse, *none* of it is applied and the field turns red. Your text is kept so you can fix it.

Values

Form	Meaning	Example
number	a plain value	fb=0.6
mididur	length of one cycle of the last MIDI note, in seconds	dur=mididur
midifreq	pitch of that note, in Hz (= 1/mididur)	f0=midifreq
scaled	either magic word times or divided by a number	mididur*2, mididur/4, 2*midifreq
vowel letter	for v0 / v1 only	v0=a

MIDI tracking. Both follow the last note-on, sampled when the block starts: dur=mididur tunes a delay to the note, f0=midifreq points a filter at it.

The one unit trap

dur changes meaning depending on how you write it:

Written	Means	At 120 bpm
dur=0.25	a fraction of a whole note , follows host tempo	a quarter = 0.5 s
dur=0.125	eighth note	0.25 s
dur=mididur	a time in seconds , ignores tempo	1 cycle of the note

Every other key is in the same unit as its knob.

Keys

Key	Controls	Range
dur	rate / time (see above)	whole-note fraction, or seconds
mix	wet/dry of the effect	0–1 (0 = transparent)
att rel	attack / release length	0–1 = fraction of the shaped duration
attcurve relcurve	edge shape	0 slow · 0.5 straight · 1 very fast
fb	delay feedback	0–0.999
damp	delay damping	0–1
porta	delay time glide	1–50 (ms)

Key	Controls	Range
model	distortion model	0 Standard · 1 Dynamic · 2 Triode · 3 Class AB
drive	distortion drive	0–40 (dB)
bias	distortion bias	0–0.5
sag	supply sag	0–1
gain	distortion output gain	–24 to +24 (dB)
mode	filter mode	0 Lowpass · 1 Highpass · 2 Formant
mode	panner mode	0 Cycle -> · 1 Cycle <- · 2 Cycle <-> · 3 Random
q	filter resonance	0.3–12
f0 f1	start / end frequency	filter 20–20000, ring 0.5–10000 (Hz)
v0 v1	start / end vowel	a e i o u
bits	bit depth	1–24
down	downsample factor	1–64
amp	ring modulation amount	0–1 (this is the ring's mix)
fade	reverser seam fade	0–0.5
width	freeze stereo width	0–1 (1 wide, 0 mono)
aux1 aux2	aux send levels	0–1
pass	aux main passthrough	0–1 (this is the aux send's mix)
glide	panner travel time	0–1 = fraction of a step
w4 w8 w16 w32	duration weights	0–1 each
wstr wtrip wdot	straight / triplet / dotted weights	0–1 each

mode means different things on the filter and the panner (each lane only sees its own).

Which effect reads what

Effect	Keys
Gater	dur att rel attcurve relcurve mix + weights
Grain	dur att rel attcurve relcurve mix + weights
Delay	dur fb damp porta mix
Dist	model drive bias sag gain mix
Filter	dur mode q f0 f1 v0 v1 mix + weights
Quant	bits down mix
Ring	dur f0 f1 amp + weights
Rev	dur fade mix + weights
Freeze	mix width + weights
Aux	dur att rel attcurve relcurve aux1 aux2 pass + weights
Pan	dur mode glide mix + weights

weights = w4 w8 w16 w32 wstr wtrip wdot

Duration weights

Effects with a rhythmic rate do not take a fixed value: you weight how likely each note length is, and the rate is **drawn** at the start of each block. Setting dur pins it instead and skips the draw.

w4=1 w8=0 w16=0 w32=0	always a quarter
w16=1 w32=0.5	sixteenths, sometimes thirty-seconds
w8=1 wstr=1 wtrip=1	eighths, straight or triplet

Weights are relative, not percentages: w4=1 w8=0.5 makes a quarter twice as likely as an eighth. The draw depends only on the seed, the lane and the block, so a pattern always plays back the same way and the block picture shows exactly what you will hear.

Recipes

<code>dur=0.125 fb=0.6</code>	<code>delay: eighth-note repeats, more feedback</code>
<code>dur=mididur fb=0.99 damp=0.4</code>	<code>delay: plucked string tuned by MIDI</code>
<code>f0=midifreq f1=midifreq*2</code>	<code>filter: sweep the note to its octave</code>
<code>v0=a v1=u</code>	<code>filter: glide from "ah" to "oo"</code>
<code>mode=2 v0=i v1=o</code>	<code>filter: force formant mode, I to O</code>
<code>w16=1 w32=1 mix=0.5</code>	<code>gater: fast, half depth</code>
<code>dur=mididur/2 amp=1</code>	<code>ring: carrier at twice the note pitch</code>
<code>bits=3 down=8 mix=0.7</code>	<code>quant: crunchy, blended back</code>
<code>pass=0 aux1=1</code>	<code>aux: send this block away from the main mix</code>
<code>mode=3 glide=0</code>	<code>panner: random, hard jumps</code>
<code>w4=1 wdot=1</code>	<code>freeze: re-capture every dotted quarter</code>

Gotchas

- **Red field = nothing applied.** One bad key disables the whole line, not just that pair.
- **Unknown keys are an error**, not ignored: a typo like `feedback=0.6` turns the line red. Keys an effect does not *use* are fine; keys that do not *exist* are not.
- `mix=0` makes the lane transparent, so the block does nothing. On the ring modulator that key is `amp`, on the aux send it is `pass`.
- `dur` has no effect on Freeze: its retrigger rate comes from the weights only.
- A `mididur` expression is in seconds and **ignores the host tempo**. That is the point, but it means `dur=mididur` will not stay in time with the grid unless the note happens to line up.