

# BEELINE MUTANT

## MANUAL



## WHAT IS THE BEELINE MUTANT?

Welcome to the Beeline Mutant User Manual. The Mutant is a Max MSP audio effect based on the famous 90s hardware unit - the Mutronics Mutator. The original Mutator was a popular audio effect at its time of conception, finding its way into many studios and onto many recordings. As with the original Mutator- the Mutant is a stereo envelope follower and filter. Two individually functioning channels can be used to affect any external sound source. Filter cut-off can be controlled by separate low-frequency oscillators (L.F.O.), by the envelope follower, or both. In simple terms, the Mutant acts as a kind of synthesizer filter bank for any audio.

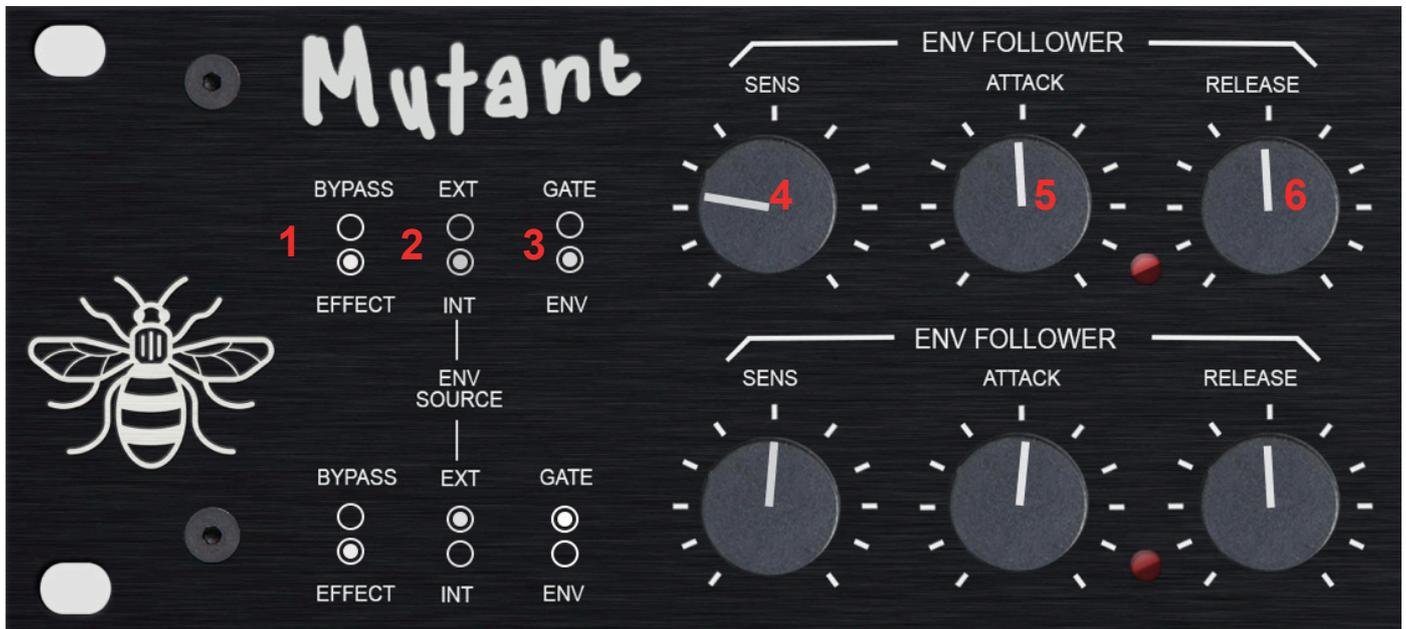
The envelope follower traces the contours of a waveform from either the source material (int) or, much like a key input, an external sound source (ext). Thus, the contour of any source material can be used to control the filter cut-off of the Mutant, such as a drum loop contour superimposed onto the filter cut-off signal of a guitar solo.

As well as the envelope follower, a gate may be used to control the filter. This can be selected via the gate/ENV switch in the ENV FOLLOWER section.

Both channels of selectable L.F.O.s may be controlled either separately, or if required together (using channel one as the master). This is done by stereo linking both channels of the Mutant (via the link IN switch in the L.F.O. section). When the L.F.O.s are linked a stereo-pan effect can be achieved by selecting the invert switch.

The Mutant is a radical and versatile sound shaping effect. Perhaps the best results are achieved by having fun and playing with the settings. Several presets are included with the software, with explanations added to the end of this manual.

# CONTROLLING THE MUTANT



## EVELOPE FOLLOWER SECTION

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- 1. The BYPASS/EFFECT switch.** The Mutant is bypassed when the BYPASS button is selected and on when EFFECT is selected.
- 2. ENV SOURCE switch.** Selects the control signal for the envelope follower. With EXT selected the control signal is taken from an external source, with INT selected the control signal is taken from the same source as the sound being affected.
- 3. ENV/GATE switch.** With ENV selected the control signal is routed through an envelope follower. When GATE is selected the control signal is routed through a gate and is either on or off.
- 4. SENS dial.** Controls the sensitivity of the control signal input. For optimal input level, this dial should be adjusted until the ENV FOLLOWER LED glows red.
- 5. ATTACK dial.** Controls the envelope/gate attack time - ranges from 1 - 500ms.
- 6. RELEASE dial.** Controls the envelope/gate release time - ranges from 3 - 2000ms.



## LFO SECTION

**7. The LFO RATE dial.** Controls LFO rate - ranges from 0.03 - 33Hz.

**8. The WAVEFORM selector switch.** Selects Triangle, Square, Ramp, or Sawtooth waveforms.

**9. The DEPTH dial.** Selects the depth of LFO applied to the signal - for VCA (tremolo) VCF (filter) or both. LED blink displays rate.

**10. LINK NORMAL/INVERT switch.** Changes the polarity of channel one (in or out of phase). With INVERT selected stereo pan effects can be created.

**11. LINK OUT/IN switch.** With IN selected channel one controls both channels of the Mutant (stereo link). With OUT selected, both channels work independently of each other.

**12. VCA/BOTH/VCF switch.** Applies the depth function to either the VCA (tremolo), VCF (filter) - or BOTH.

**13. ENV/LFO/BOTH switch.** Sends either the LFO, ENVelope follower/gate, or BOTH to the filter section of the Mutant.



## FILTER SECTION

**14. The ENV SWEEP dial.** Creates a longer (+) or shorter (-) sweep time (0 -500ms) as the envelope/gate hits the filter - experiment with this for a wah, sweep, or bubbling effect.

**15. The CUT OFF dial.** Changes the frequency cut-off value of the filter input (LFO, Envelope, or Gate). Ranges from 43Hz - 21kHz (see write-up for SVF~ limitations).

**17. VCA OUT/IN dial.** Toggles the VCA off/on (not particularly necessary as this can be achieved using the VCA/BOTH/VCF switch, and is included in homage to the original unit. This switch might be changed in a later revision so that the Mutant operates in filter-only mode (ie. no VCA or VCF signal).

***Note:** VCA's and VCF's are redundant in the digital domain where filters/amplitude are controlled by numbers/signal rather than analog voltage control. This nomenclature is included to remain faithful to the original analog unit.*

## PRESET EXAMPLES

Here is a brief explanation of the preloaded presets - play with them, explore the Mutant, and more importantly have FUN!

1. Guitar solo through LFO's, mess about with the **RATE** and **CUT OFF** dials for effect.
2. Combining **LFO** and external envelope madness (a drum loop), to make more crazy guitar sounds.
3. Drum loop - envelope triggered by itself (INT). Try moving the **ENV SWEEP, CUT OFF and SENS** dials.
4. Bubbly keyboard sounds using an EXT drumloop as a control signal. Turn **SWEEP** dial fully toward - for strange bubbles.
6. Psychedelic wobbly Trumpets using lfo and Env on separate channels.
7. Keyboards again, This time a gated **LFO** effect. Try the **INVERT** switch for auto pan and play with the filter **CUT OFF** knob for sweeping sounds.

For presets 8 onwards - try dragging your own audio file into the blank 'External' space to make your own sounds.

