BEAST-TEK INSTRUMENTS

AMOEBA USER MANUAL

MODE selects the current mode of operation

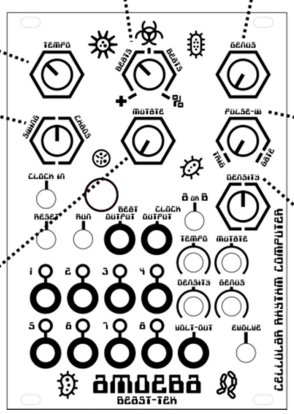
- Clock Counter Mode
- Regular Beat Mode
- Cellular Automation Beat Mode
- Glitchy/Irregular Beat Mode
- Clock Divider Mode

GENUS In Beat modes GENUS will select of of 32 beats within the current bank.
In Cellular Automation mode GENUS changes the shape used to select cells within the celluar grid.
In Counter and Divider modes GENUS is used to select different counter intervals or divisions.

TEMPO Selects the rate of the internal clock generator.

SWING/CHAOS In the center position both chaos and swing are disabled. Turning left (CCW) will select one of 12 different swing/shuffle patterns. In Turning right (CW) will introduce increasing amounts of chaos into the current pattern when beat mode is active.

MUTATE In beat mode mutate can be used to mutate the currently selected beat pattern.
In Counter, Divider and Cellular modes MUTATE can be used to rotate the trigger outputs.



PULSE WIDTH sets the pulse width of the trigger outputs. In the fully left (CCW) position a 1ms trigger will be generated. In the fully right (CW) position the pulse width will be a full 1/8th note at the current tempo.

DENSITY In the centre position the density of the generated beats will be normal/neutral.
Moving the density control to the left (CCW) will reduce the density/frequency of triggers across all channels.
Moving the density control to right (CW) will increase the density/frequency of triggers across all channels.

BEAT-OUTPUT 0-5v 50% duty cycle clock OUTPUT signal cycling once per beat.

CLOCK-OUTPUT 24 TPQN Clock Output.

CLOCK INPUT 8 (or 16) TPQN clock input to sync with other modules.

RESET Active high trigger input.
When a trigger occurs on the reset input the pattern and evolution is reset to the beginning on the rising edge of the next clock input.

RUN Active high gate input.

A or B Active high gate input..

TEMPO CV Bi-polar (-5v to +5v) CV Input

MUTATE CV Bi-polar (-5v to +5v) CV Input

DENSITY CV Bi-polar (-5v to +5v) CV Input

GENUS CV Bi-polar (-5v to +5v) CV Input

TRIGGER OUTPUTS
5v trigger outputs.
In "Beat" modes, the outputs are mapped as follows:

1 = Bass Drum
2 = Snare
3 = Low Tom
4 = High Tom
5 = Ride/Crash/Open Hi Hat
6 = Cow Bell
7 = Clap
8 = Closed Hi Hat

Note: Mappings are suggested only, experiment with different types of percussion on different outputs

EVOLVE Active high trigger input.

VOLT-OUT 0-5v output.

Mode is used to select the current mode of operation:

(Rotating) **Clock Counter Mode** can be used to count 1/4 notes, full beats and measures. In this mode, the Mutate control can be used to rotate the allocation of the counter stages and Genus is used to select 1 of 16 different counting programs.


With the Genus control to the left of the center position (12 o'clock) this will select one of 8 active high counting programs.


With the Genus control to the right of the center position (12 o'clock) will select one of 8 active low counting programs.

Regular Beat Mode There are 12 different "banks" or "branches" available between Clock Counter Mode and Cellular Automation Mode.

Cellular Automation Mode enables a special cellular automation mode which uses a cellular automation algorithm derived from Conway's game of life. In celluar automation mode Genus is used to select the sampling shape that is used to obtain the 8 trigger outputs from the cell grid (think Tetris shapes). Mutate selects the starting row from the cell grid from which the sampling is performed.

Glitch/Irregular Beat Mode There are 12 different "banks" or "branches" available between Cellular Automation Mode and Clock Divider Mode.

(Rotating) **Clock Divider Mode** can be used to get many different 1/4 note clock divisions. In this mode, the Mutate control can be used to rotate the allocation of the counter stages and Genus is used to select 1 of 16 different banks of clock divisions.

A or B is a 0-5v active high input. When running in Beat(s) Mode, each "GENUS" is a 64 step trigger sequence consisting of 2 separate 32 step parts. The first (or A part) is the base beat pattern while the second (or B part) is a more complex variation of the A part, intended as a fill. When nothing is connected to the A or B input, the sequecer cycles sequentially through the A and B parts, forming a 64 step sequence. The A or B input can be used to select the A part (when 0v or below) or the B part (approx 0.2v or above). This for example using a synced clock counter allows patching or "programming" of a "fill" on the Nth beat or Nth measure or connecting an asynchronous LFO allows for pseudo-random selection of A and B parts, creating a continually changing pattern. The A or B input is read/samples and latched each 8th note.

EVOLVE is a 0-5v active high trigger input. In Beat(s) Mode every time a trigger is recieved a "destructive" evolution in the beat pattern is triggered. The evolution is "destructive" in the sense that there is no way to return to the original beat unless a trigger signal is sent to the reset input. In Cellular Automation Mode every time a trigger is recieved, the shape used sample the cell grid to obtain the 8 trigger signals is changed/morphed which can have a dramatic effect on the trigger pattern.

Clock Input Takes a 8 tpqn clock if you want 16th notes or 16 tpqn clock if you want some 32nd note action

MIDI Output

Midi output of clock and note-on messages can be obtained by wiring a 5 pin DIN socket and 2 x 220 ohm resistors to the expand header as follows: