

BANG MANUAL

LIVESTOCK ELECTRONICS
THANKS YOU
FOR YOUR PURCHASE



"IT ALL HAS TO START SOMEWHERE RIGHT?!"

A long long time ago, in the earliest days of Livestock there was a "Bang". This "Bang" generated all the components needed for the creation of sound.

The sound of this "Bang" could be so delicate and soft at times, but was mostly just harsh and noisy.

This "Bang" really was the trigger to start it all!

BANG is a Lo-Fi digital wavetable oscillator inspired by classic game consoles such as the Commodore 64 and Gameboy DMG.

These classic game consoles have limited audio possibilities, and force a composer to be more creative when it comes to sound design. A trick often used is to create sounds that can be interpreted as part of multiple voices.

BANG takes a new approach to this concept; it switches between two selectable waves within a cycle. Creating a mix of the two waves with sustained sample values. The result is an amplitude modulation type sound that is similar to sounds made by these classic game consoles.

BANG comes with a free application for PC and MAC to create your own wave libraries. Which allows you to create your own building blocks for the Bang waveshaping algorithm.



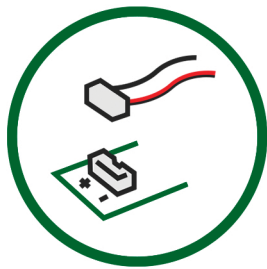


SETUP

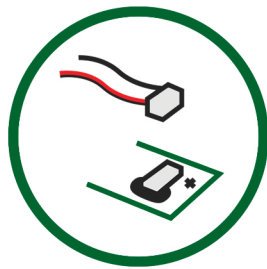
Turn power off before connecting the module!

Use the ribbon cable to connect the module to your busboard. Make sure the red line of the ribbon cable is connected to -12V of the busboard and -12V of the module.

BUSBOARD



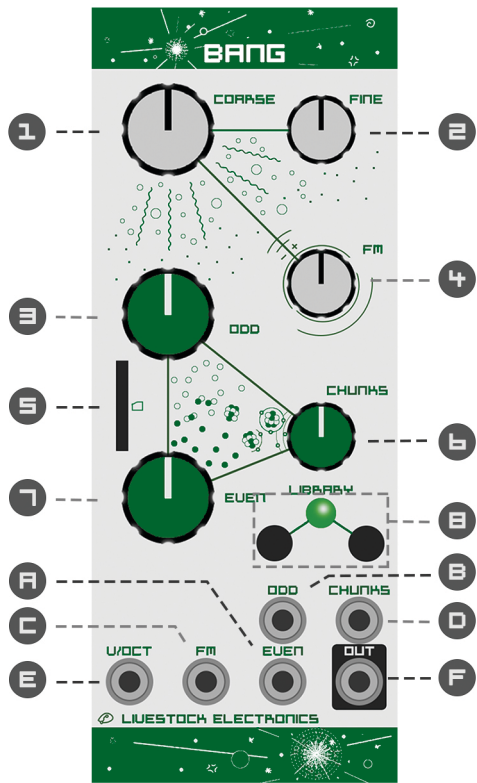
MODULE



SPECIFICATIONS

Format	3U (Eurorack)
Width	10 HP
Depth	25mm (Skiff friendly)
Height	25mm
Weight	133g
Power consumption	75mA @ +12V 30mA @ -12V
Samplerate	44.1 kHz
Bit depth	12 Bit
SPC	1024 samples







- 1 Coarse knob changes the pitch drastically
- 2 Fine knob changes the pitch more accurate
- 3 Odd knob changes the wave selected for odd indexes
- 4 FM attenuverter changes gain and direction of FM input
- 5 SD card input for wavelibraries
- 6 Chunks knob changes the amount of chunks per cycle
- 7 Even knob changes the wave selected for even indexes
- 8 Library buttons switch between libraries
- 9 Even input changes the wave selected for even indexes
- A Odd input changes the wave selected for odd indexes
- C FM input changes the pitch according to the FM attenuverter
- D Chunks input changes the amount of chunks per cycle
- E V/Oct input changes the pitch within 5 octave range
- F Output generates banging sounds

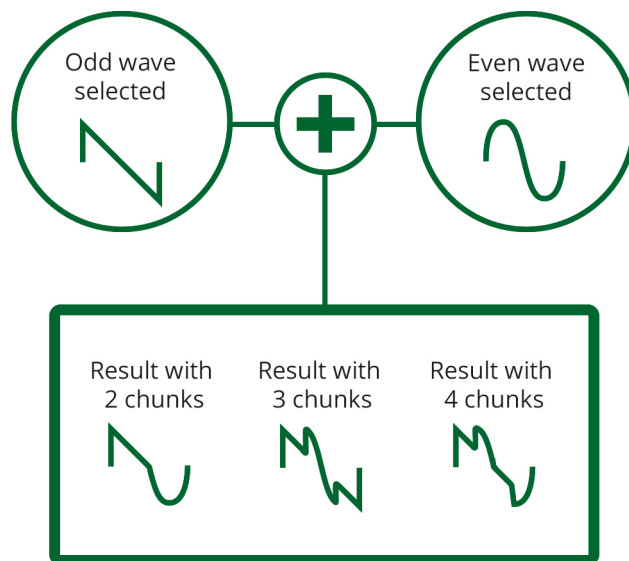


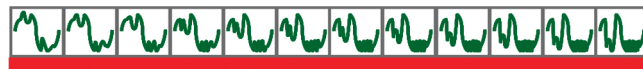


THE BANG ALGORITHM

The algorithm allows you to divide the wave into several chunks. Each chunk is either odd or even according to their index number. The index count starts with odd (index 1) and a minimum of two chunks.

EXAMPLE





The six libraries are color coded and can be changed by inserting the sd card to your computer. Drag, drop and replace the file of the desired library color. You need to use the color as file name and add .txt if necessary. For example: cyan.txt

Download the Bang application to create your own wavelibraries.

The application, application manual and other wave libraries can be found at: livestockelectronics.com/bang





Green: Standard waves, octaves and noises

1. Sine
2. Saw
3. Square
4. Triangle
5. Double Sine
6. Double Saw
7. Double Square
8. Double Triangle
9. 16 chunks Noise
10. 32 chunks Noise
11. 128 chunks Noise
12. 1024 chunks Noise

Yellow: Harmonic series

1. 1 Sine per cycle
2. 2 Sines per cycle
3. 3 Sines per cycle
4. 4 Sines per cycle
5. 5 Sines per cycle
6. 6 Sines per cycle
7. 7 Sines per cycle
8. 8 Sines per cycle
9. 9 Sines per cycle
10. 10 Sines per cycle
11. 11 Sines per cycle
12. 12 Sines per cycle





Red: Tone and ripples

1. Sine tone +50DC and 0.5 ripple
2. Sine tone +40DC and 1 ripple
3. Sine tone +30DC and 2 ripples
4. Sine tone +20DC and 3 ripples
5. Sine tone +10DC and 4 ripples
6. Sine tone +5DC and 5 ripples
7. Sine tone 0DC and 6 ripples
8. Sine tone -10DC and 7 ripples
9. Sine tone -20DC and 8 ripples
10. Sine tone -30DC and 9 ripples
11. Sine tone -40DC and 10 ripples
12. Sine tone -50DC and 11 ripples

Magenta: Pulse Width Modulation!

1. Pulse 1/13
2. Pulse 2/13
3. Pulse 3/13
4. Pulse 4/13
5. Pulse 5/13
6. Pulse 6/13
7. Pulse 7/13
8. Pulse 8/13
9. Pulse 9/13
10. Pulse 10/13
11. Pulse 11/13
12. Pulse 12/13





Blue: Chunky Noises

1. 16 chunks Noise
2. 32 chunks Noise variation 1
3. 32 chunks Noise variation 2
4. 32 chunks Noise variation 3
5. 64 chunks Noise variation 1
6. 64 chunks Noise variation 2
7. 64 chunks Noise variation 3
8. 128 chunks Noise variation 1
9. 128 chunks Noise variation 2
10. 256 chunks Noise
11. 512 chunks Noise
12. 1024 chunks Noise

Cyan: High Frequency Sines and Noises

1. 8 Sines in cycle
2. 16 Sines in cycle
3. 32 Sines in cycle
4. 64 Sines in cycle
5. 128 Sines in cycle
6. 256 Sines in cycle
7. 256 chunks Noise variation 1
8. 256 chunks Noise variation 2
9. 512 chunks Noise variation 1
10. 512 chunks Noise variation 2
11. 1024 chunks Noise variation 1
12. 1024 chunks Noise variation 2





WARRANTY

All Livestock Electronics modules are guaranteed to be tested before shipping. They are also protected to the fullest for incorrect usage. However warranty may be dismissed if damage is caused by incorrect usage. If you have a malfunctioning module please read the Livestock Electronics warranty terms at: livestockelectronics.com/terms

-  No water
-  No fire
-  No physical damage
-  Return in original box
-  Two year warranty

SUPPORT

Tutorials and other manuals can be found on the module page of the Livestock Electronics website: livestockelectronics.com/bang
For any questions related to: bugs and hardware please refer to the Livestock forum: livestockelectronics.com/forum
or send a mail to: info@livestockelectronics.com

DISPOSAL

Livestock Electronics recommends to never throw a module away! If you however wish to dispose of the module: All the modules comply to the EU guidelines and are manufactured ROHS conforming without the use of: lead, mercury, cadmium and chrome. Still disposal in household waste is not recommended and this device should be thrown away according to your local waste management.



