

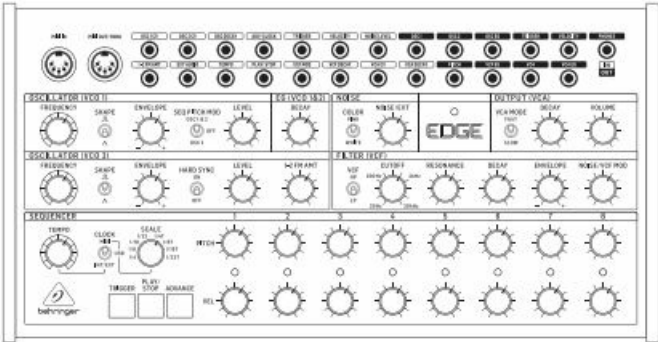


# behringer EDGE Analog Semi Modular Percussion Synthesizer User Guide

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## behringer EDGE Analog Semi Modular Percussion Synthesizer User Guide

### Quick Start Guide



### EDGE

Analog Semi-Modular Percussion Synthesizer with 2 Oscillators,  
Multi-Mode Filter, Dual 8-Step Sequencer and 16-Voice Poly Chain

## Important Safety Instructions

⚠ Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock. Use only high-quality professional speaker cables with ¼" TS or twist-locking plugs pre-installed. All other installation or modification should be performed only by qualified personnel.

⚠ This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure – voltage that may be sufficient to constitute a risk of shock.

⚠ This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

⚠ Caution To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside. Refer servicing to qualified personnel.

⚠ Caution To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.


⚠ Caution These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Use only attachments/accessories specified by the manufacturer.



12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.
16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.



17.  Correct disposal of this product: This symbol indicates that this product must not be disposed of with household waste, according to the WEEE Directive (2012/19/EU) and your national law. This product should be taken to a collection center licensed for the recycling of waste electrical and electronic equipment (EEE). The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office, or your household waste collection service.
18. Do not install in a confined space, such as a book case or similar unit.
19. Do not place naked flame sources, such as lighted candles, on the apparatus.
20. Please keep the environmental aspects of battery disposal in mind. Batteries must be disposed-of at a battery collection point.
21. This apparatus may be used in tropical and moderate climates up to 45°C.

### LEGAL DISCLAIMER

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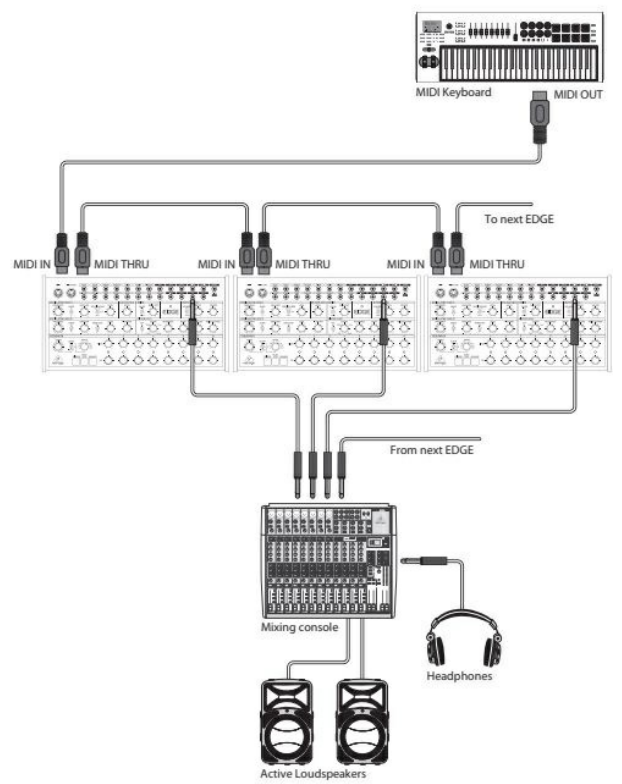
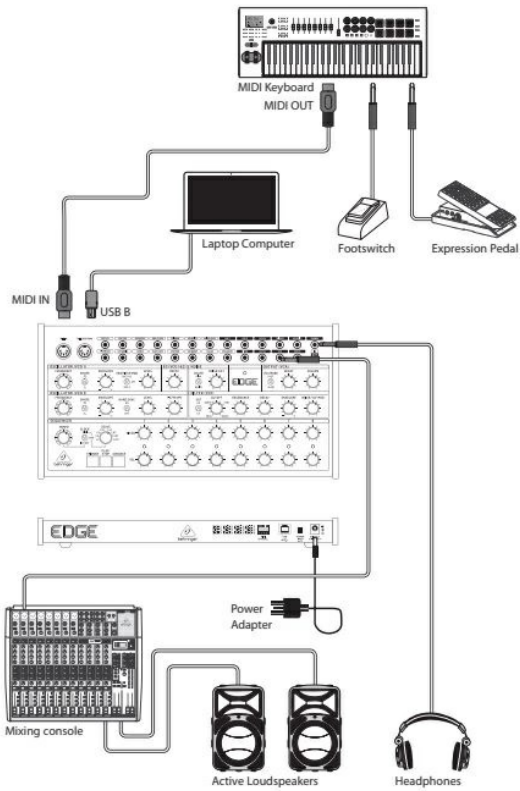
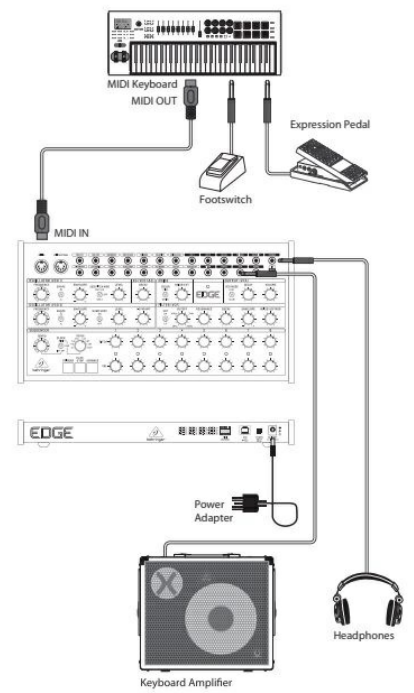
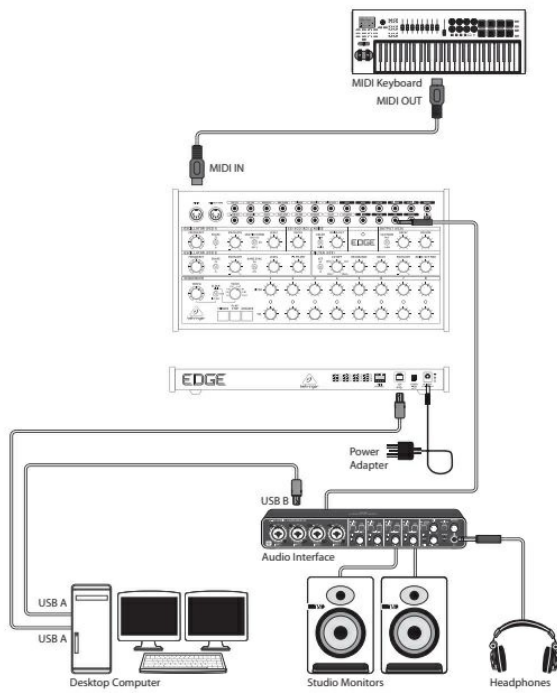
### LIMITED WARRANTY

For the applicable warranty terms and conditions and additional information regarding Music Tribe's Limited Warranty, please see complete details online at [community.musictribe.com/pages/support#warranty](https://community.musictribe.com/pages/support#warranty).

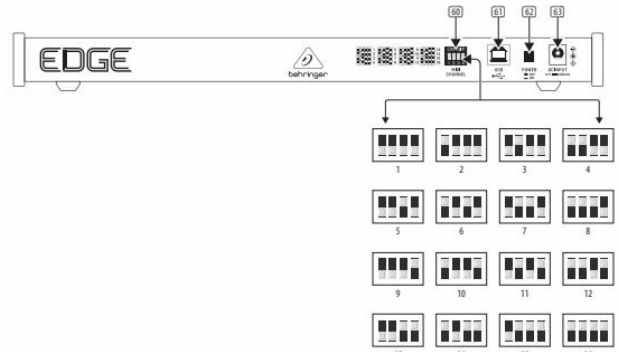
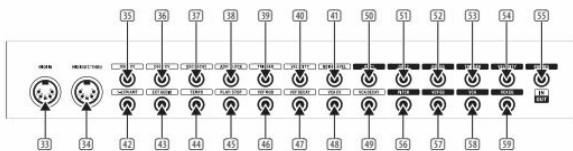
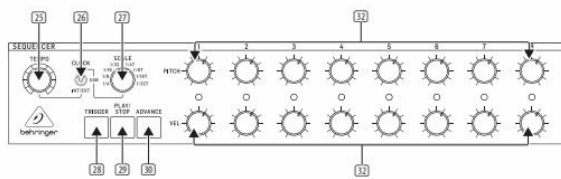
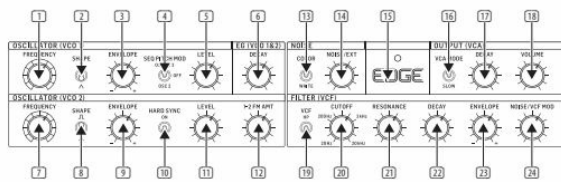
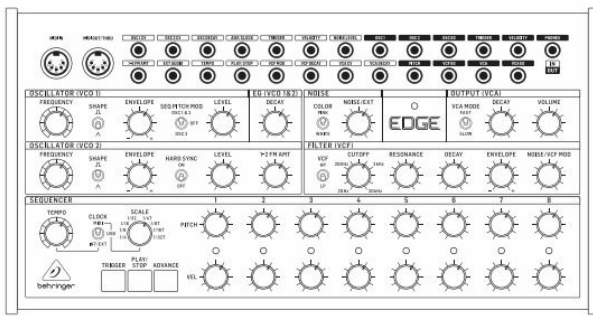
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## EDGE Hook-up



## EDGE Controls



## Step 2: Controls

1. FREQUENCY (VCO 1) control the frequency  $\pm 5$  octave (10 octave range).
2. SHAPE select Square or Triangle waveform.
3. ENVELOPE this bipolar control increases pitch modulation when turned to the CW (Clock-wise). Turning left applies negative Envelope Modulation giving a slide pitch effect.
4. SEQ PITCH MOD this 3 way switch selects if the Pitch Sequencer is sent to OSC 1&2, to OSC 2 only or off.
5. LEVEL this sets the volume for VCO 1.
6. EG (VCO 1&2) DECAY this control modulates the pitch of both Oscillator's. Turning CW increases the amount of modulation added.
7. FREQUENCY (VCO 2) control the frequency  $\pm 5$  octave (10 octave range).
8. SHAPE select Square or Triangle waveform.
9. ENVELOPE this bipolar control increases pitch modulation when turned to the CW (Clock-wise). Turning left applies negative Envelop Modulation giving a slide pitch effect.
10. HARD SYNC switch On to force OSC 2 to match the phase of OSC 1. Can be used for complex metallic sounds or flanged sounds.
11. LEVEL this sets the volume for VCO 2.
12. 1-2 FM AMT modulate the pitch of OSC 2 with OSC 1, turn CW to increase the effect.
13. NOISE COLOR select Pink or White noise. White noise is bright while pink noise is darker sounding.
14. NOISE/EXT set the amount of NOISE or the level of EXT AUDIO added into the signal.
15. POWER LED indicates the unit is on. Turns red if poly mode is activated.
16. VCA MODE Fast sets the VCA EG to around 1ms. Slow sets the attack time of the VCA EG to 100ms.
17. DECAY sets the decay time of the VCA envelope.

18. **VOLUME** controls the main overall volume.
19. **VCF SELECT** choose either High Pass HP or Low Pass LP filter modes.
20. **CUTOFF** adjust the filter cut-off point depending which mode is selected (20 Hz to 20 kHz).
21. **RESONANCE** – adjusts the resonance of the filter. This emphasizes the frequencies around the cut-off point.
22. **DECAY (FILTER)** determines how quickly the change in timbre returns to its original value over time.
23. **ENVELOPE (FILTER)** turning CW from 12 o'clock increases filter envelope modulation. Turning counter clockwise (CCW) applies negative envelope modulation to the filter cut-off frequency.
24. **NOISE/VCF MOD** turning the NOISE/VCF MOD CW governs how much the Filters Cut-off Frequency is being modulated by the Noise source. By patching into the VCF MOD input on the patch bay, any control signal can modify the Filter's Cut-off Frequency.
25. **TEMPO** Tempo can be set from 10 to 10,000 when set to internal (INT). Via MIDI and USB the range is 10-300 BPM.
26. **CLOCK** Clock can be set to MIDI, USB or INT/EXT. Use the ADV/CLOCK patch point to clock externally.
27. **SCALE** this sets the timing of the sequencer against the incoming MIDI or USB CLOCK. Choose from 1/4, 1/8, 1/16, 1/32 straight rhythm or 1/4T, 1/8T, 1/16T and 1/32T triplet feel.
28. **TRIGGER** – With the Sequencer stopped, pressing the TRIGGER button will play the current Sequencer Step (shown by the LED) without advancing to the next step. This makes it easy to fine-tune settings for a specific step by playing it as many times while changes are made.
29. **PLAY/STOP** this button stops and starts the sequencer at the current step.
30. **ADVANCE** move step by step through the 8 steps of the sequencer.
31. **PITCH** These 8 controls adjust pitch values. CW of centre adds to the VCO Frequency control. Moving CCW from the 12 o'clock position lowers the pitch for that step. The controls have around a 10-octave range.
32. **VEL** these 8 controls adjust the velocity of each. They control the amplitude of the VCO Envelope, Filter Envelope/ Decay and the VCA Decay. Turn CW to raise the value from 0 V to 5 V.
33. **MIDI IN** this MIDI DIN input can be used to play sounds via an external MIDI device and also allow MIDI clock to be used.
34. **OUT/THRU** MIDI DIN can be used as an output or a thru.
35. **OSC 1 CV** oscillator 1 pitch CV, at 1 V/octave.
36. **OSC 2 CV** oscillator 2 pitch CV, at 1 V/octave.
37. **OSC DECAY** input determines the Decay Time of the OSC Decay and is useful for adding pitched dynamics to tuned percussion sounds.
38. **ADV/CLOCK** When the input of a clock's rising edge is detected, the Sequencer pattern is shifted by one step. In this mode, the Tempo control has no use.
39. **TRIGGER** This input will Trigger all three Envelope Generators at the currently selected Sequencer Step Velocity level without advancing to the next step. This is useful when connecting to external sequencers.
40. **VELOCITY** controls the maximum amplitude of the Envelope Generators and is one of the keys to a highly dynamic and expressive sound.
41. **NOISE LEVEL** input modulates the value of the NOISE / EXT LEVEL control regardless of whether it is controlling the Noise level, or the level of an External Audio Signal connected via the EXT AUDIO input jack.
42. **1-2 FM AMT** This input modulates the value of the 1-2 FM AMT control to determine the amount of modulation applied to Oscillator 2 by Oscillator 1.
43. **EXT AUDIO** Inserting an External Audio source into this jack removes Noise from the signal path and replaces it with the External Audio Signal. The volume of this input is then controlled by the NOISE / EXT LEVEL control.

44. TEMPO This input provides 1V/Octave control of the Sequencer Clock VCO speed.
  45. PLAY/STOP allows an external voltage to start and stop the Sequencer.
  46. VCF MOD inserting a control voltage replaces the Noise Generator as a hardwired modulation source for the Filter. The maximum amount of modulation applied to the Filter will still be controlled by the NOISE / VCF MOD control.
  47. VCF DECAY This input controls the Decay Time of the VCF EG and is useful for creating large variations in sound.
  48. VCA CV This input allows a control voltage to be applied to the output VCA offering another way of modulating the overall volume.
  49. VCA DECAY This input regulates the Decay Time of the VCA EG and is useful for adding variations to non-pitched percussion patterns.
  50. OSC 1 direct out of Oscillator 1. Can be used as a modulation or audio output.
  51. OSC 2 direct out of Oscillator 2. Can be used as a modulation or audio output.
  52. OSG EG this output duplicates the control voltage used to modulate both Oscillator's internally.
  53. TRIGGER provides a pulse from the Sequencer Clock that can be used as a clock source for synchronizing to external instruments, or as a Trigger signal.
  54. VELOCITY provides a voltage that varies based on the Velocity setting of the current Sequencer step.
  55. PHONES 3.5 mm headphone output controlled by the volume control (18).
  56. PITCH provides a voltage that changes based on the Pitch setting of the current Sequencer step.
  57. VCF EG – This output is a duplicate of the control voltage used to modulate the Filter internally.
  58. VCA This is the main audio output, set by the Volume control.
  59. VCA EG – This output provides a copy of the control voltage used to modulate the VCA internally.
- Rear Panel
60. MIDI CHANNEL SELECT a MIDI channel from 1 to 16 is selectable using the dip switches.
  61. USB connect to a computer using standard A to B USB cable.
  62. ON/OFF power switch.
  63. DC INPUT attach supplied PSU only, 12 V 1000 mA.

## EDGE Getting Started

### Step 3: Getting Started

OVERVIEW This 'getting started' guide will help you set up the EDGE and briefly introduce its capabilities.

#### CONNECTION

To connect the EDGE to your system, please consult the connection guide earlier in this document.

△ SOFTWARE SETUP The EDGE is a USB Class Compliant MIDI device, and so no driver installation is required. The EDGE does not require any additional drivers to work with Windows and MacOS.

HARDWARE SETUP Make all the connections in your system. Keep the EDGE power turned off when making any connections. Ensure your sound system is turned down. Turn on the EDGE before turning on any power amplifiers and turn it off last. This will help prevent any turn on or turn off "pops or thumps" in your speakers.

WARM UP TIME We recommend leaving 15 minutes or more time for the EDGE to warm up before recording or live performance. (Longer if it has been brought in from the cold.) This will allow the precision analog circuits time to reach their normal operating temperature and tuned performance.

**OSCILLATOR (VCO) SECTION** The EDGE has two main voltage controlled oscillator (VCO). The VCO waveforms can be selected from pulse or triangle. The frequency can be adjusted up or down over ten octaves and allow fine tuning to other instruments. The VCO may be modulated in frequency. The source of the modulation can either be the envelope as detailed below, or via the OSC 1&2 CV input in the patch bay. The amount or depth of VCO envelope modulation can be adjusted using the ENVELOPE or EG DECAY (VCO 1&2) control. Use the LEVEL control to adjust the mix between the internal VCO. The internal noise generator can be added by running the NOISE/EXT CW. If an external input signal is present at the EXT AUDIO input, then this will take the place of the noise in the mix.

## **FILTER (VCF) SECTION**

Play with the cut-off frequency, and resonance controls, and listen to their effects on the sound.

The classic 24 dB/octave high pass and low pass filters allow a great deal of control over the sounds created by EDGE.

The high-pass filter reduces the level of signals that are below the cut-off frequency. It effectively reduces the level of the fundamental, and lower order harmonics.

The low-pass filter reduces the level of signals that are above the cut-off frequency. It reduces the levels of the higher-order harmonics.

The resonance control gives an enhancement to the signals at the crossover frequency.

The amount of VCF modulation can be varied with the NOISE/VCF MOD control. This will add noise if no audio is preset in the EXT AUDIO input in patch bay.

The VCF ENVELOPE is dedicated to modulating the Cut-off Frequency of the Filter. The Decay time of this envelope is set using the VCF DECAY control. This value may also be affected by the Sequencer 8 VELOCITY controls. The 8 levels are connected to the Velocity inputs of the Envelope, providing an extra source of control to both the amount and decay time of the Filter envelope.

All these features, in addition to using the patch bay, allows for a great deal of flexibility in sound creation.

## **PATCH BAY SECTION**

This section allows you the versatility to create many different sounds, with an endless variety of options and configurations. Below are 3 patch ideas to try:

OSC 1 Out to OSC 2 CV IN for some interesting modulation.

VELOCITY OUT to 1-2FM AMT. This now adds FM tones at varying amounts using the velocity sequencer.

PITCH OUT to VCA DECAY IN. This adds variation into the decay controlled by the sequencer PITCH levels.

Caution: Do not overload the 3.5 mm inputs. They can only accept the correct level of voltages as shown in the specification tables. The 3.5 mm outputs should only be connected to inputs capable of receiving the output voltages. Failure to follow these instructions may damage the EDGE or external units.

## **FIRST SOUNDS**

The following steps will help you start making sounds from your new synthesizer once connected:

Turn up the volume control.

Set the clock to INT.

Set all controls to the default patch levels in the diagram.

Press PLAY/STOP.

You should now hear a repeating pattern.

## **FIRMWARE UPDATE**

Please check the behringer.com website regularly for any updates to the Behringer SYNTHTRIBE app.

The app looks for the latest firmware file which can then be downloaded and used to update the EDGE.

## **EDGE SYNTHTRIBE**

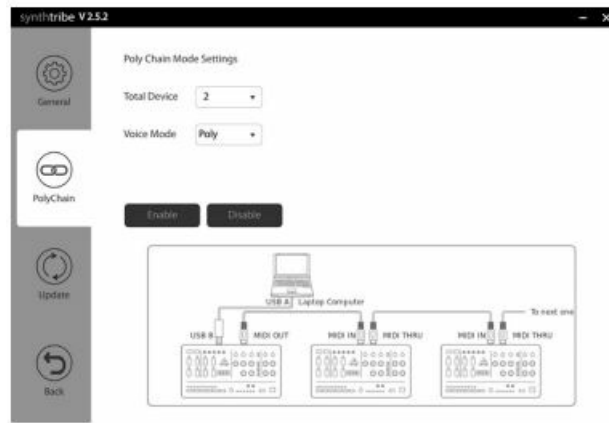
The SYNTHTRIBE application allows you to select the MIDI channel number and to set and adjust various parameters

of the EDGE to suit your preferences. Connect the EDGE to your computer via USB and run the application (PC or MacOS).

Check our website regularly for any updates to SYNTHTRIBE or EDGE documentation.

Typical Synthtribe image

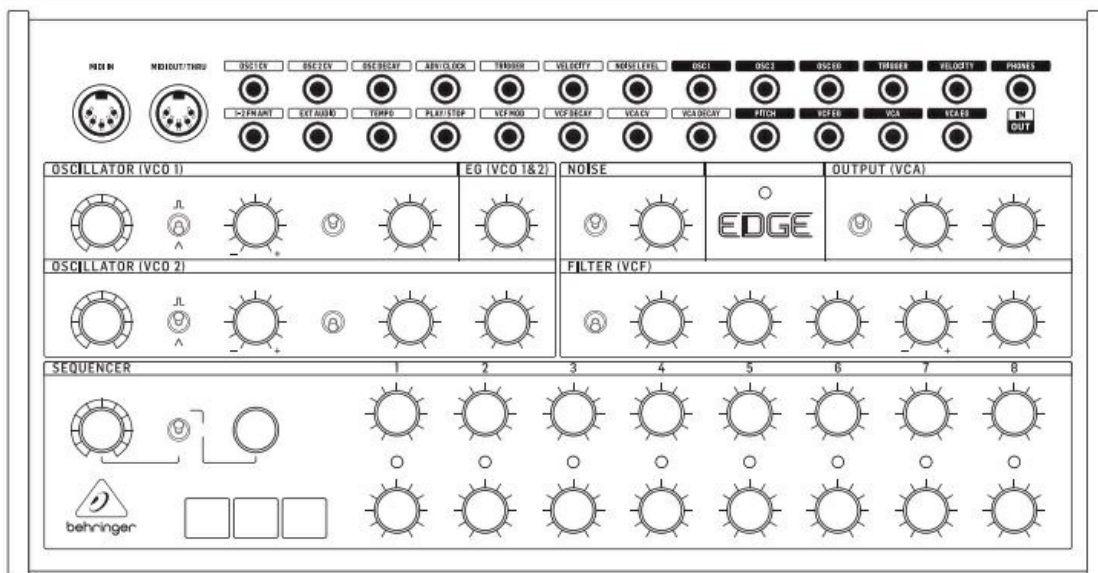


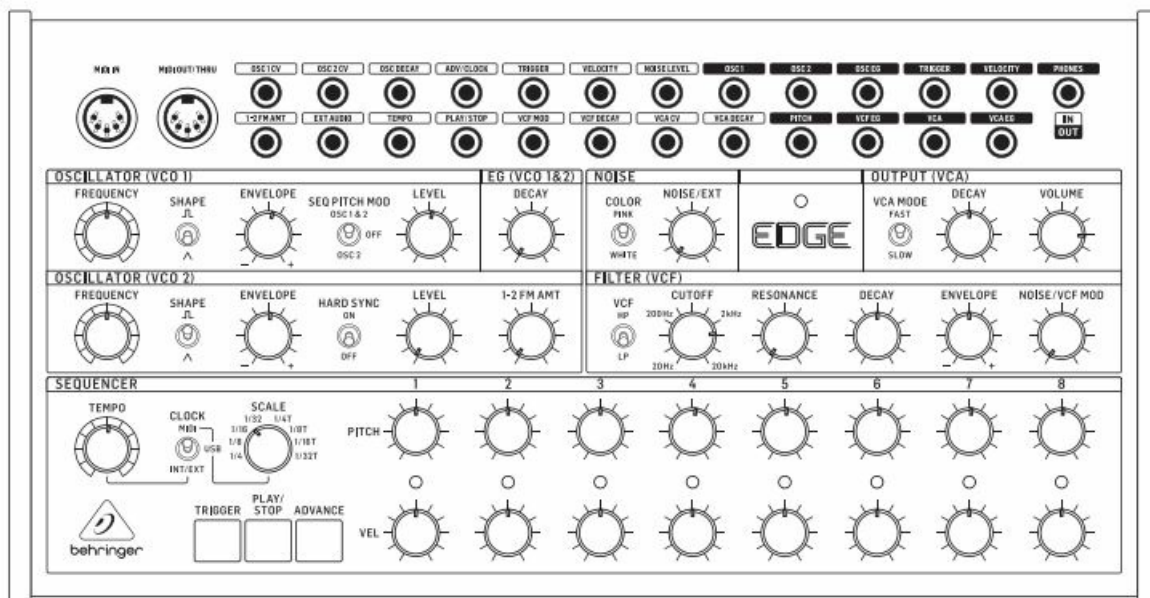


## EDGE Patch Sheet

Patch Number

DATE:	AUTHOR:	TITLE:
NOTES:		





## Specifications

Synthesizer Architecture	
Number of voices	Monophonic
Type	Analog
Oscillators	2
VCF	1 HP/LP 4-pole (-24dB/Oct) ladder filter
Envelope	1 per VCO, 1 VCA decay, 1 VCF
Noise	White, pink
Connectivity	
Power input	DC input connector
Power switch	Push button on / off
USB (MIDI)	USB 2.0, type B
MIDI In / Out / Thru	2 x 5-pin DIN / 16 channels
Output	VCA output: 3.5 mm TS, unbalanced, max +14.5 dBu
Headphones	3.5 mm TRS, max. 450uW @ 64 Ω
Headphones output impedance	470 Ω
Inputs	
Type	3.5 mm TS
OSC 1 CV	-5 V to +5 V
OSC 2 CV	-5 V to +5 V
OSC decay	-5 V to +5 V
ADV/clock	more than 3.2 V (10 V max)
Trigger	0 to +5 V Pulse or Gate signal (+10 V max)
Velocity	0 V to 5 V
Noise level	0 V to 8 V
1-2FM AMT	0 V to 8 V
Ext audio	10 V max
Tempo	-5 V to +5 V
Play/stop	more than 3.2 V (10 V max)
VCF mod	-5 V to +5 V
VCF decay	-5 V to +5 V
VCA CV	0 V to 8 V

Outputs	
Type	3.5 mm TS
OSC 1	± 5 V
OSC 2	± 5 V
OSC EG	0 V to 8 V
Trigger	0 to +5V Pulse
Velocity	0 to +5V
Pitch	± 5 V
VCF EG	0 V to 8 V
VCA EG	0 V to 8 V
USB	
Type	Class compliant USB 2.0, type B
Supported operating systems	Windows 10 or higher / Mac OS X 10.14 or higher
Oscillator (VCO) 1 Section	
Controls	Frequency ± 5 octave (10 octave range)
	Envelope: -5 to +5
	Level: 0 to 10
	EG (VCO 1&2) decay 0 to 10
Switches	Shape: pulse, triangle
	Seq pitch mod: osc 1&2, off, osc 2
Oscillator (VCO) 2 Section	
Controls	Frequency ± 5 octave (10 octave range)
	Envelope: -5 to +5
	Level: 0 to 10
	1-2 FM amt 0- 100%
Switches	Shape: pulse, triangle
	Hard sync on/off
Noise Section	
Controls	Noise/ext 0-100%
Switch	Color: pink/white
Output (VCA) Section	
Controls	Decay 0 to 10
	Volume: 0 to 10
Switch	VCA mode: fast/slow
Filter (VCF) Section	
Controls	Cutoff frequency: 0 to 10 (20 Hz - 20 kHz)
	Resonance: 0 to 10
	Decay: 0 to 10
	Envelope: -5 to +5
	Noise/VCF MOD: 0 to 10
Switch	VCF: HP/LP
SEQUENCER	
Controls	Tempo 0% - 100%
	Scale 1/4, 1/8, 1/16, 1/32, 1/4T, 1/8T, 1/16T, 1/32T
	8 Pitch controls ± 5 V
	8 Velocity controls 0 to 5 V
Switch	Clock: MIDI, USB, INT/EXT
LED	Active step indication
Buttons	Trigger, play/stop, Advance
Power Requirements	
External power adapter	12 V DC 1000 mA
Power consumption	4 W max
Indicator	Power LED
Environmental	
Operating temperature range	5° C – 40° C (41° F – 104° F)
Physical	
Dimensions (H x W x D)	45 x 321 x 164 mm (1.77 x 12.64 x 6.46")
Weight	1.4 kg (3.1 lbs)

## Other important information

1. Please register your new MusicTribe equipment right after you purchase it by visiting [musictribe.com](https://musictribe.com).

Registering your purchase using our simple online form helps us to process your repair claims more quickly and efficiently.

Also, read the terms and conditions of our warranty, if applicable.

2. **Malfunction.** Should your MusicTribe Authorized Reseller not be located in your vicinity, you may contact the MusicTribe Authorized Fulfiller for your country listed under “Support” at [musictribe.com](https://musictribe.com). Should your country not be listed, please check if your problem can be dealt with by our “Online Support” which may also be found under “Support” at [musictribe.com](https://musictribe.com). Alternatively, please submit an online warranty claim at [musictribe.com](https://musictribe.com) BEFORE returning the product.

3. **Power Connections.**

Before plugging the unit into a power socket, please make sure you are using the correct mains voltage for your particular model. Faulty fuses must be replaced with fuses of the same type and rating without exception.

## **FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION**

Responsible Party Name: Music Tribe Commercial NV Inc.

Address: 122 E. 42nd St.1,

8th Floor NY, NY 10168,

United States

Email Address: [legal@musictribe.com](mailto:legal@musictribe.com)

EDGE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Important information:

Changes or modifications to the equipment not expressly approved by Music Tribe can void the user's authority to use the equipment.

Hereby, Music Tribe declares that this product is in compliance with Directive 2014/35/EU, Directive 2014/30/EU, Directive 2011/65/EU and Amendment 2015/863/EU, Directive 2012/19/EU, Regulation 519/2012 REACH SVHC and Directive 1907/2006/EC.

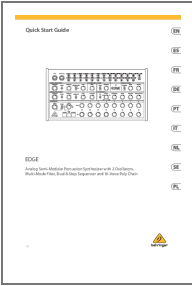
Full text of EU DoC is available at <https://community.musictribe.com/> EU Representative: Music Tribe Brands DK A/S

Address: Gammel Strand 44, DK-1202 København K, Denmark






UK Representative: Music Tribe Brands UK Ltd.

Address: 6 Lloyds Avenue, Unit 4CL London EC3N 3AX,  
United Kingdom

Documents / Resources

	<p><a href="#">behringer EDGE Analog Semi Modular Percussion Synthesizer</a> [pdf] User Guide EDGE Analog Semi Modular Percussion Synthesizer, EDGE, Analog Semi Modular Percussion Synthesizer, Percussion Synthesizer, Synthesizer</p>
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References

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