



ЗВУКОВОЙ ОБЪЕКТ

№ 5

MONOPHONIC
ANALOGUE
SYNTHESIZER



SO # 5 ORIGINAL EDITION



SOUND OBJECT # 5

ANALOGUE MONOPHONIC SYNTHESIZER

SOUND OBJECT #5

EURORACK EDITION

|User Manual



SO # 5 EURORACK EDITION



ЗВУКОВОЙ ОБЪЕКТ
SOUND OBJECT

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CREATING SOUNDS

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THE SYNTH ARCHITECTURE

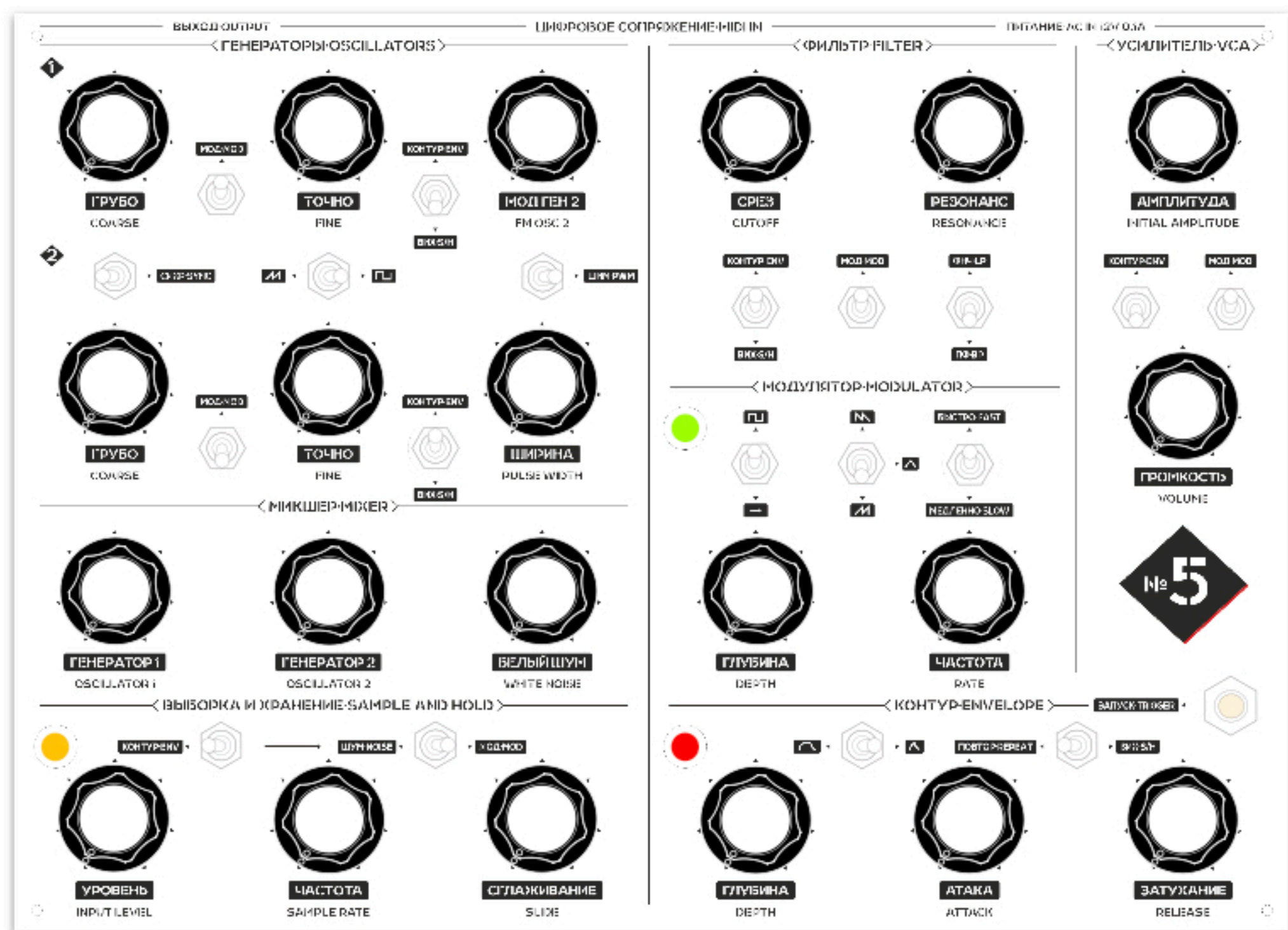
SOUND OBJECTS #5 : MONOPHONIC ANALOGUE SYNTHESISER

A COMPACT INSTRUMENT, WITH A WIDE RANGE OF POSSIBILITIES FOR OBTAINING VARIOUS SOUND EFFECTS AND TIMBRES. EURORACK EDITION OF THE SYNTHESISER HAS INPUTS AND OUTPUTS ON THE REAR PANEL, THAT PROVIDE SIGNAL EXCHANGE BETWEEN ANY EURORACK OR SEMI-MODULAR SYSTEMS AND THE SYNTH.

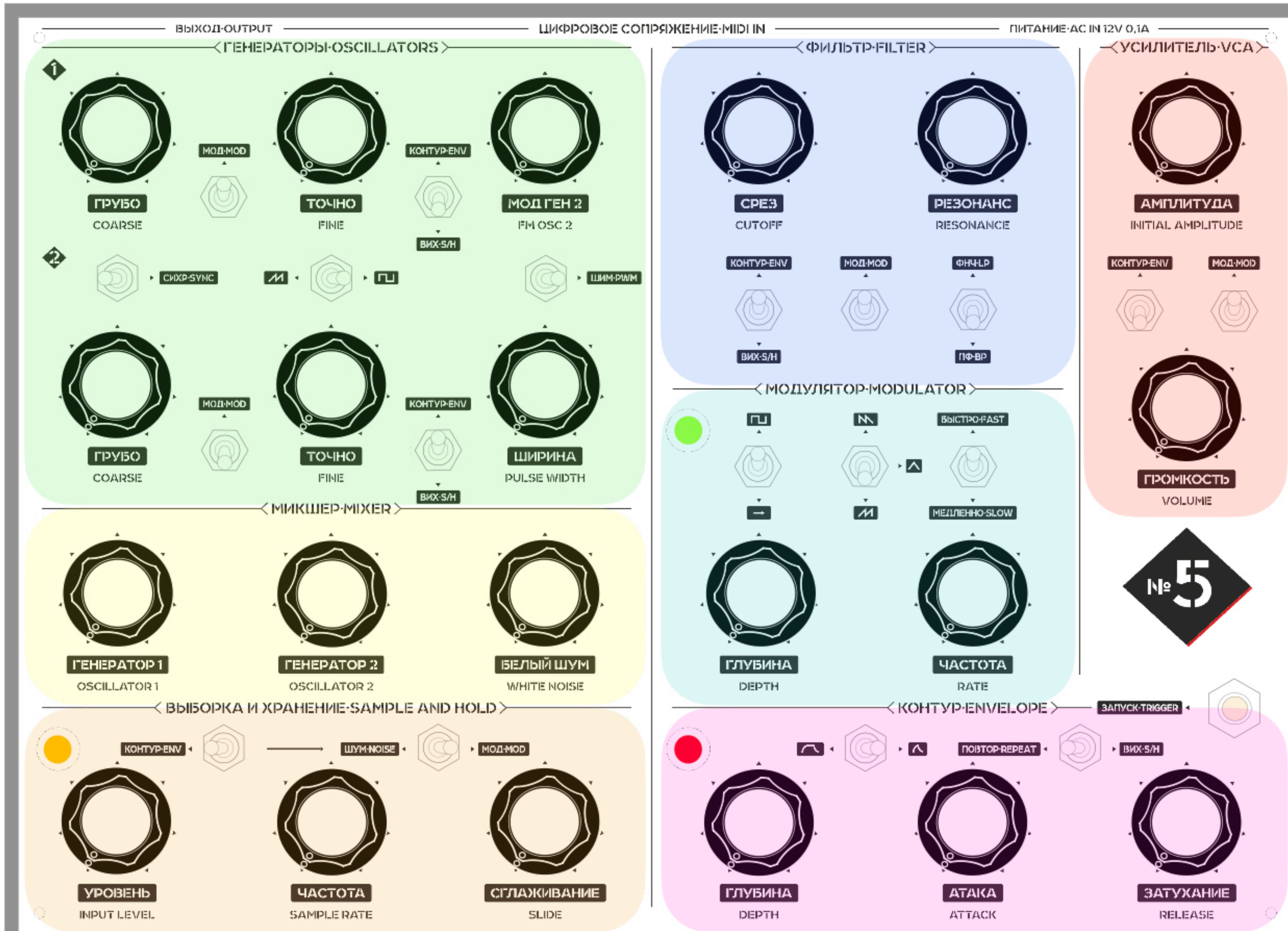
SOUND OBJECT #5 IS A PREWIRED SUBTRACTIVE TYPE SYNTHESISER WITH A POLYVOX STYLE FILTER. TWO OSCILLATORS, FM, WHITE NOISE GENERATOR, FILTER, ADVANCED S&H AND LFO, ENVELOPE GENERATOR AND AMPLIFIER (VCA) ARE THE BUILDING BLOCKS OF THE SYSTEM.

SO#5 HAS FREQUENCY MODULATION (FM) OF VCO 1 BY VCO 2 ON BOARD, COMPLEX MODULATORS WITH A RANGE OF SWITCHES, THAT AFFECT THE SIGNAL, FILTER AND THE AMPLITUDE.

SOUND OBJECT #5 IS A UNIVERSAL ANALOGUE SONIC STATION, CREATED IN ROSTOV-ON-DON, RUSSIA.



Front Panel



Sound Object #5 Building Blocks

- OSCILLATOR 1
- OSCILLATOR 2
- WHITE NOISE
- MIXER
- SAMPLE&HOLD
- FILTER
- MODULATOR
- ENVELOPE
- VCA

Rear Panel



**AC input
12V 0.1A**

EURORACK INPUTS

- VCO 1 Pitch Input
- VCO 2 Pitch Input
- CV input
- VCF input
- Gate Input

MIDI In

EURORACK OUTPUTS

- VCO 1 Output
- VCO 2 Output
- Noise Output
- Modulator Output
- Envelope Output
- S&H Output

**Monophonic
Audio Output**

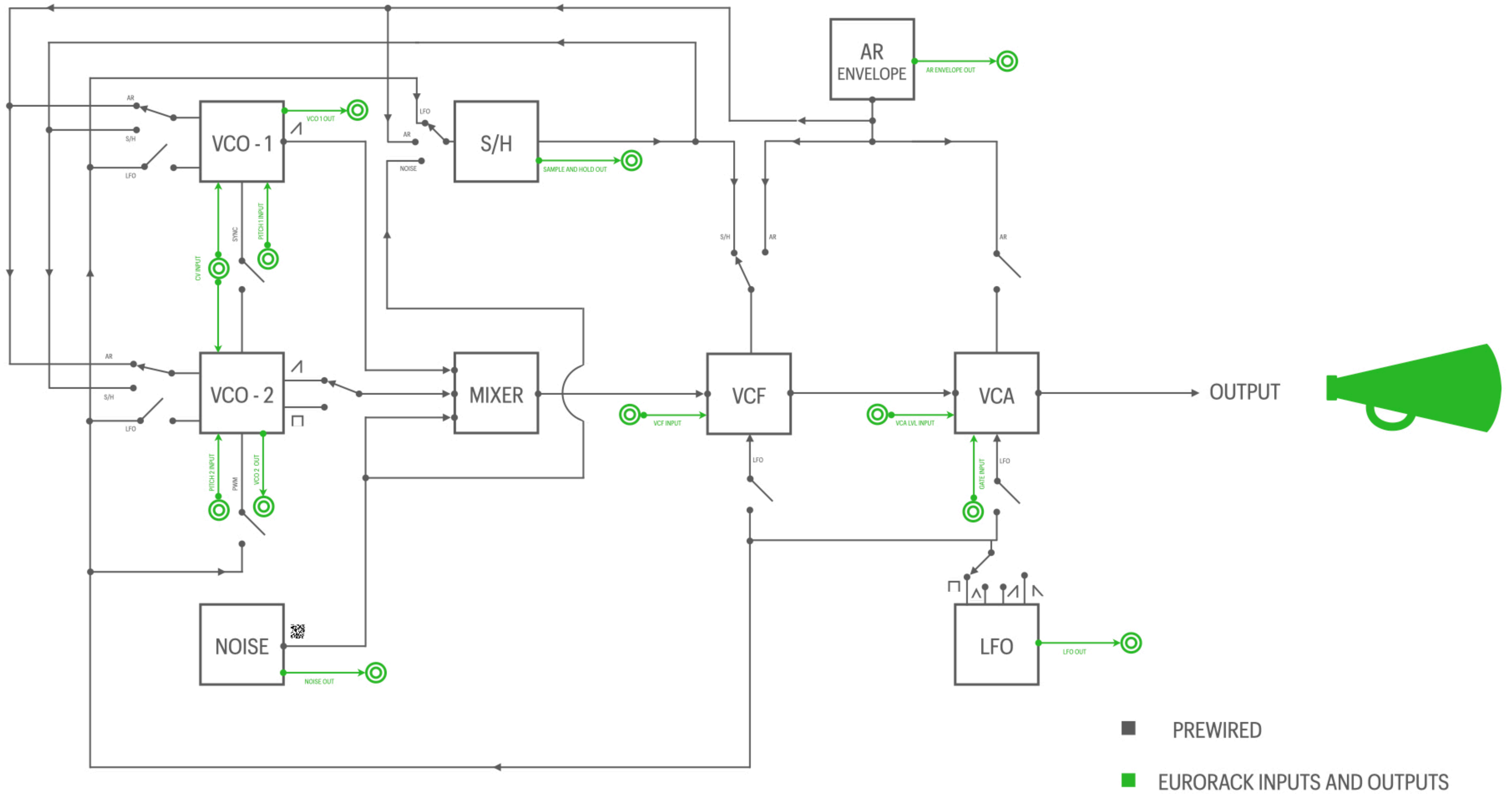
SIGNAL FLOW + BUILDING BLOCKS

SOUND OBJECTS #5 : SIGNAL FLOW

TO UNDERSTAND ANY SYNTHESISERS ARCHITECTURE, IT IS ADVISED TO UNDERSTAND IT'S SIGNAL FLOW MAP. SIGNAL FLOW IS THE PATH THE ELECTRICITY TAKES, OR TRAVELS THROUGH, IN ORDER TO BE MODULATED, AND WITH IT, CREATE NEW TIMBRES OR CREATE NEW TYPE OF SOUNDS. BUILDING BLOCKS ARE INTERCONNECTED AND ACCORDING CONTROLS ARE PRESENTED ON THE FRONT PANEL OF THE SYNTH, AS SWITCHES AND POTENTIOMETERS.

HERE WE WILL LOOK THROUGH EVERY BUILDING BLOCK, IT'S INTERCONNECTION AND BLOCKS THAT INFLUENCE THE CURRENT FUNCTION. AT ONCE, WE WILL SEE HOW THE BLOCKS LOOK LIKE FROM THE FRONT PANEL, AND THIS WILL HELP US TO UNDERSTAND THE ARCHITECTURE OF THE SOUND OBJECTS # 5.

SIGNAL FLOW



SOUND OBJECTS #5 : SIGNAL FLOW

ANY SYNTH IS STARTING WITH A BASIC BUILDING BLOCKS THAT GENERATE SOUND. THOSE ARE CALLED SOUND GENERATORS. THEY GENERATE WAVEFORMS LIKE SINE, TRIANGLE OR SAWTOOTH. GENERATED SIGNAL TRAVELS THROUGH OTHER BUILDING BLOCKS (LIKE FILTER AND VCA) AND IS OPENED TO FURTHER MODULATION BY OTHER BLOCKS LIKE SAMPLE&HOLD AND LFO, AR.

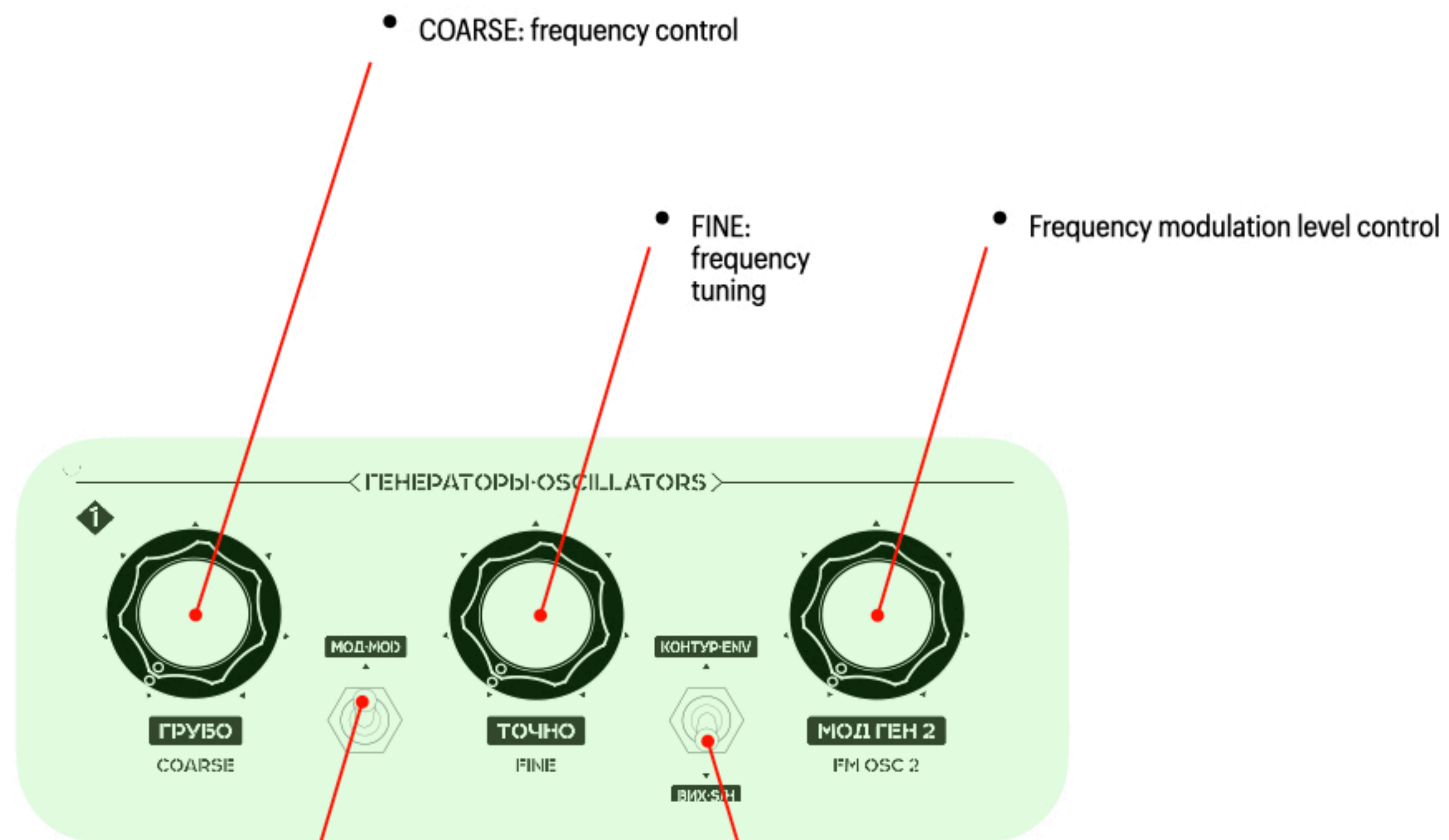
SOUND OBJECT #5 IS SUBTRACTIVE SYNTHESIS METHOD, HAVING 2 SOUND GENERATORS, WHITE NOISE GENERATOR, FILTER AND 2 MODULATORS: SAMPLE AND HOLD AND LFO; AS WELL AS ENVELOPE GENERATOR AND VCA. FREQUENCY OF VCO 1 CAN BE MODULATED BY VCO 2, REPRESENTING FM (FREQUENCY MODULATION) SYNTHESIS METHOD.

LET'S LOOK THROUGH EACH BLOCK ONE BY ONE AND SEE IT'S FRONT PANEL. WE WILL START WITH VCO 1, VCO 2 AND NOISE. VCO 1 AND 2 ARE SOUND GENERATORS. VCO 1 GENERATES SAWTOOTH WAVEFORM, CAN BE MODULATED BY ENVELOPE GENERATOR OR S&H AND/OR LFO. VCO 2 GENERATES SAW TOOTH AND SQUARE WAVEFORM AND CAN BE MODULATED BY EG OR S&H AND/OR LFO.

BOTH OSCILLATORS TRAVEL TO THE MIXER WHERE WHITE NOISE CAN BE ADDED. FROM THERE THE SIGNAL OR THE MIX OF SIGNALS IS SENT INTO FILTER, THAT CAN BE SWITCHED BETWEEN BAND PASS AND LOW PASS MODES. THE FILTER'S CUT OFF SLOPE CAN BE MODULATED BY ENVELOPE GENERATOR, SAMPLE AND HOLD AND/OR LFO. VCA, AS AN OUTPUT MODULE, CAN BE MODIFIED BY ENVELOPE GENERATOR AND/OR LFO. THIS IS THE BASIC ORIGINAL CONFIGURATION.

EURORACK EDITION OF THE SYNTH HAS INPUTS AND OUTPUTS ON THE REAR PANEL, THAT PROVIDES EXCHANGE OF SIGNALS WITH EURORACK TYPE SYSTEMS. ORIGINAL WIRING ON THE FLOW DIAGRAM IS COLOURED RED, EURORACK INPUTS AND OUTPUTS ARE COLOURED GREEN.

BUILDING BLOCKS



- MOD SWITCH: applies LFO on frequency of VCO 1

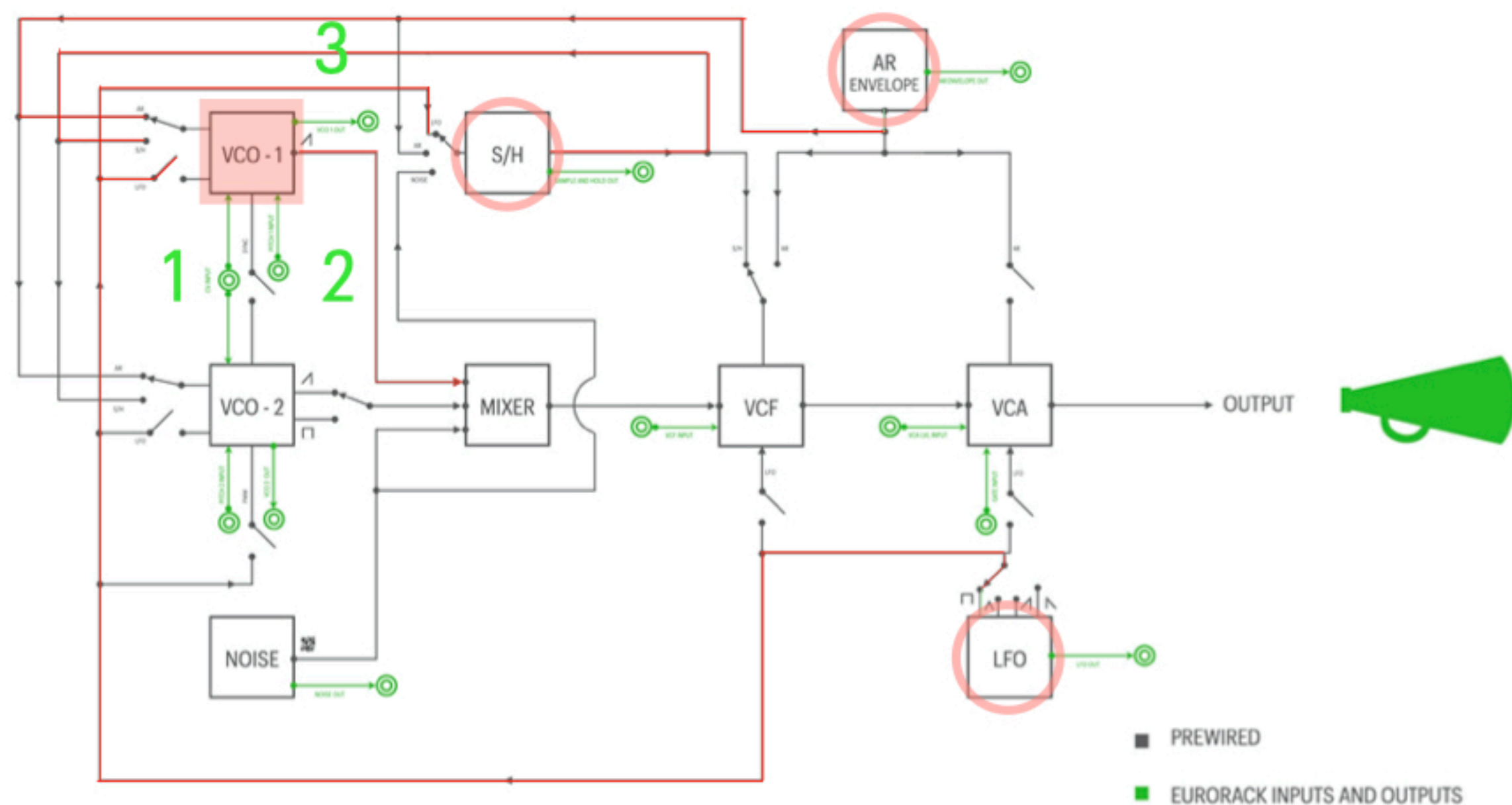
- ENV to S&H switch: changes modulator mode from ENVELOPE (AR) TO S&H. Middle position of the switch means absence of modulation.

VCO 1

Oscillator 1: Sawtooth wave generated in frequency range between ≈ 20 Hz - 20 kHz. Coarse control and fine for more precise tuning of VCO 1 pitch. Modulation level control for FM (frequency modulation), where VCO 2 is the modulator.

Mod Switch to turn modulator on will send LFO to frequency modulation, creating tremolo. The switch between Envelope to Sample and Hold will adjust the waveform according to Envelope settings or modulate it according to S&H settings.

SIGNAL GENERATORS: VCO 1



VCO 1 is working in sawtooth mode. Modulator switch turns LFO on/off. Second switch turns on either S/H or the envelope AR on. VCO 2 modulates the frequency of VCO 1, level of modulation can be adjusted by modulator level knob (FM OSC 2).

- VCO 1 sends audio signal to the Mixer.
- S/H modulates the waveform of VCO 1, patterning the signal.
- The ENVELOPE controls the waveform of VCO 1, shaping the signal from percussive till long key pressed feeling.
- LFO controls the pitch of VCO 1, creating vibrato.

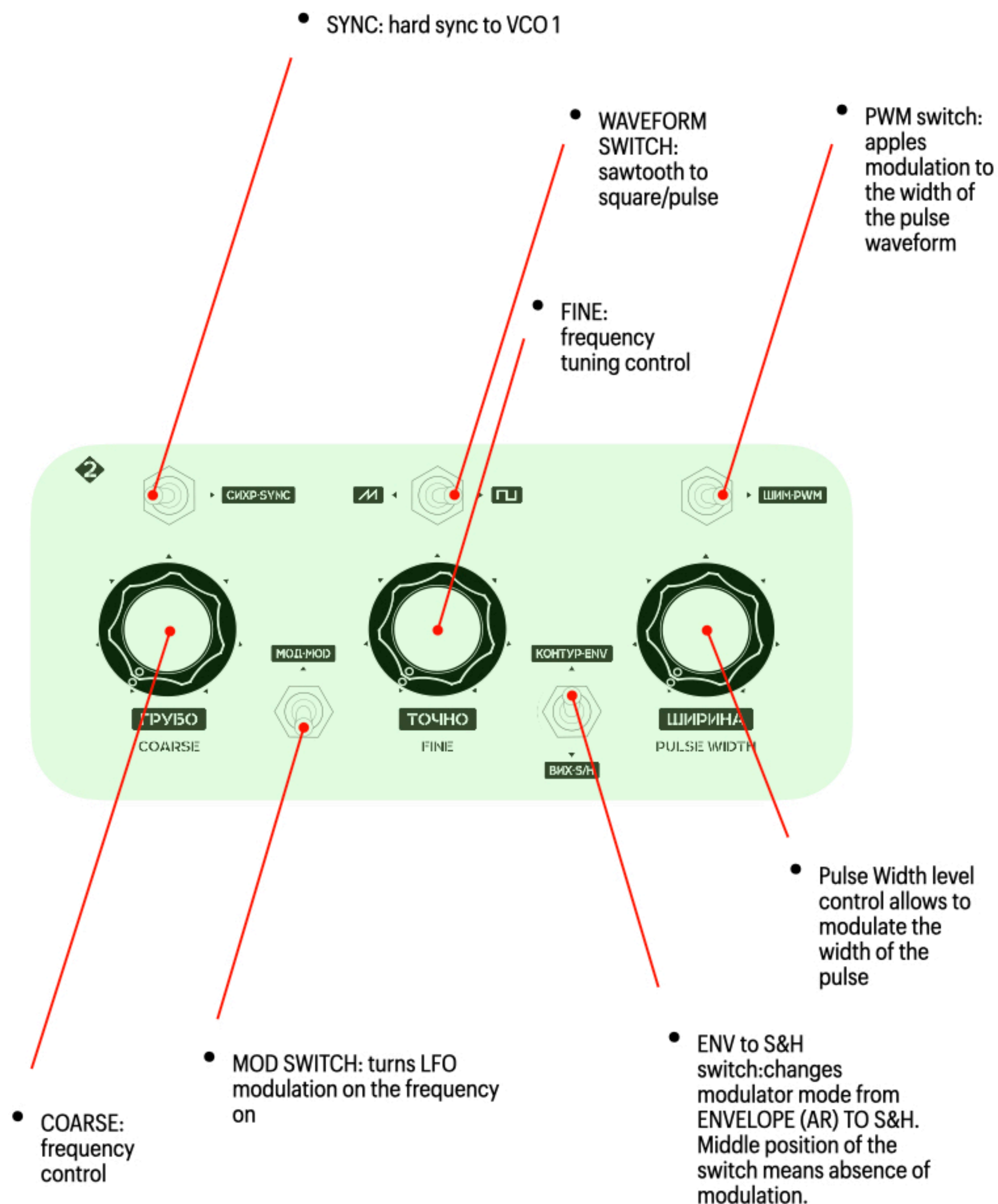
Eurorack outputs and inputs:

1: CV input to feed the VCO1 with gate (0-5V) to control the waveform

2: Pitch input to VCO1 (equals 1V/Oct input) to create melodic algorithms of the VCO 1

3: Output of VCO 1 sawtooth waveform (0-9V) - allows to send VCO 1 to any destination in Eurorack type system.

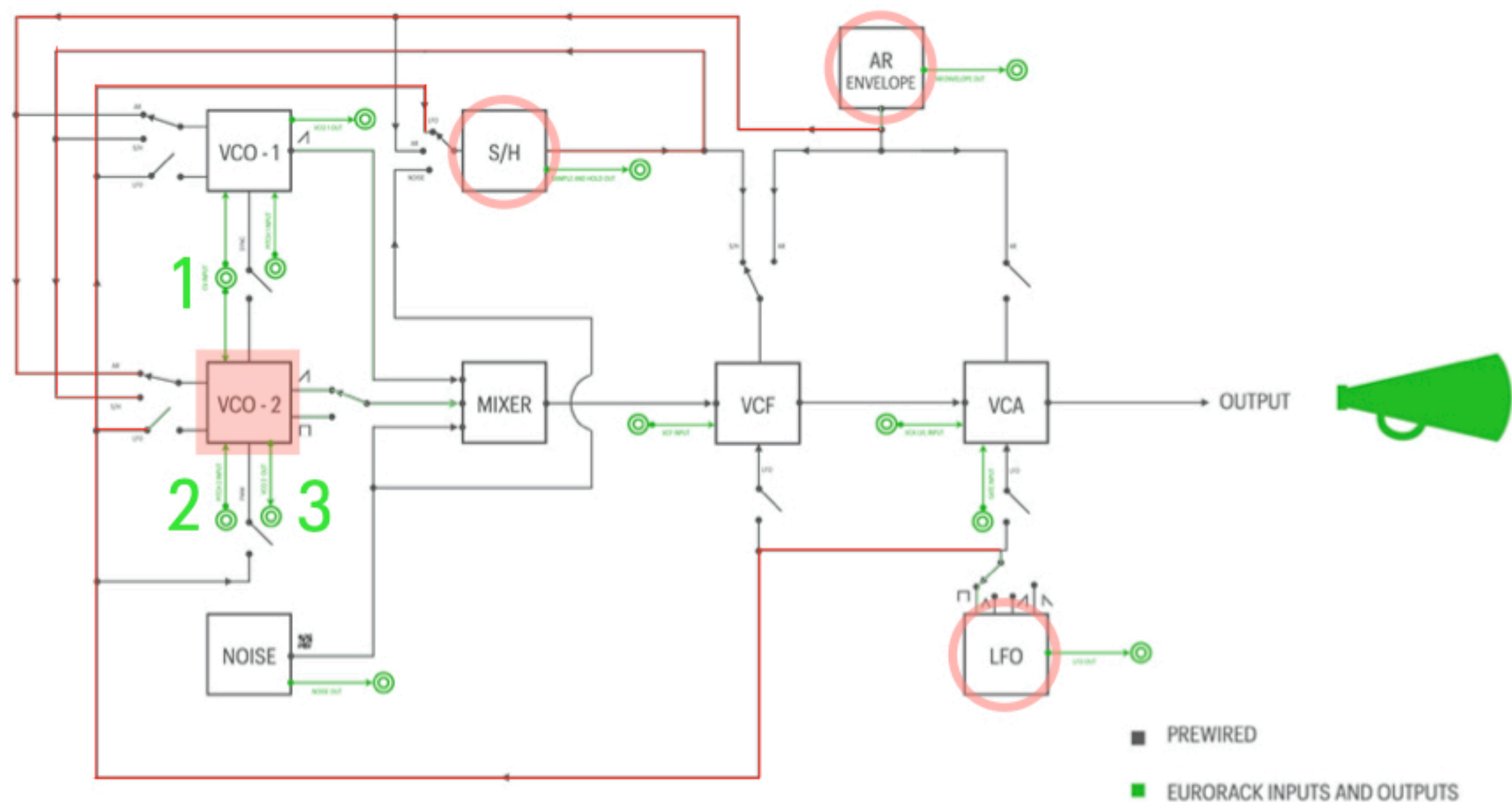
BUILDING BLOCKS



VCO 2

Oscillator 2: Sawtooth or Square (Pulse) waveforms are generated in frequency range between ≈ 20 Hz - 20 kHz. Coarse control and fine for more precise tuning of VCO 2 pitch. VCO 2 secondary function is modulator for VCO 1, as FM (frequency modulation) synthesis method. Waveform switch will shift the VCO 2 between sawtooth and square wave modes. When working in square/ pulse mode, PWM switch applies modulation on the pulse, ranging the waveform between pulse to square. Pulse width can be controlled with according knob. Mod Switch to turn modulator on will send LFO to frequency modulation, creating tremolo. The switch between Envelope to Sample and Hold will adjust the waveform according to Envelope settings or modulate it according to Sample and Hold settings. Sync switch will apply hard sync to VCO1, offsetting the phase of the waveform and synchronising them to each other.

SIGNAL GENERATORS VCO 2



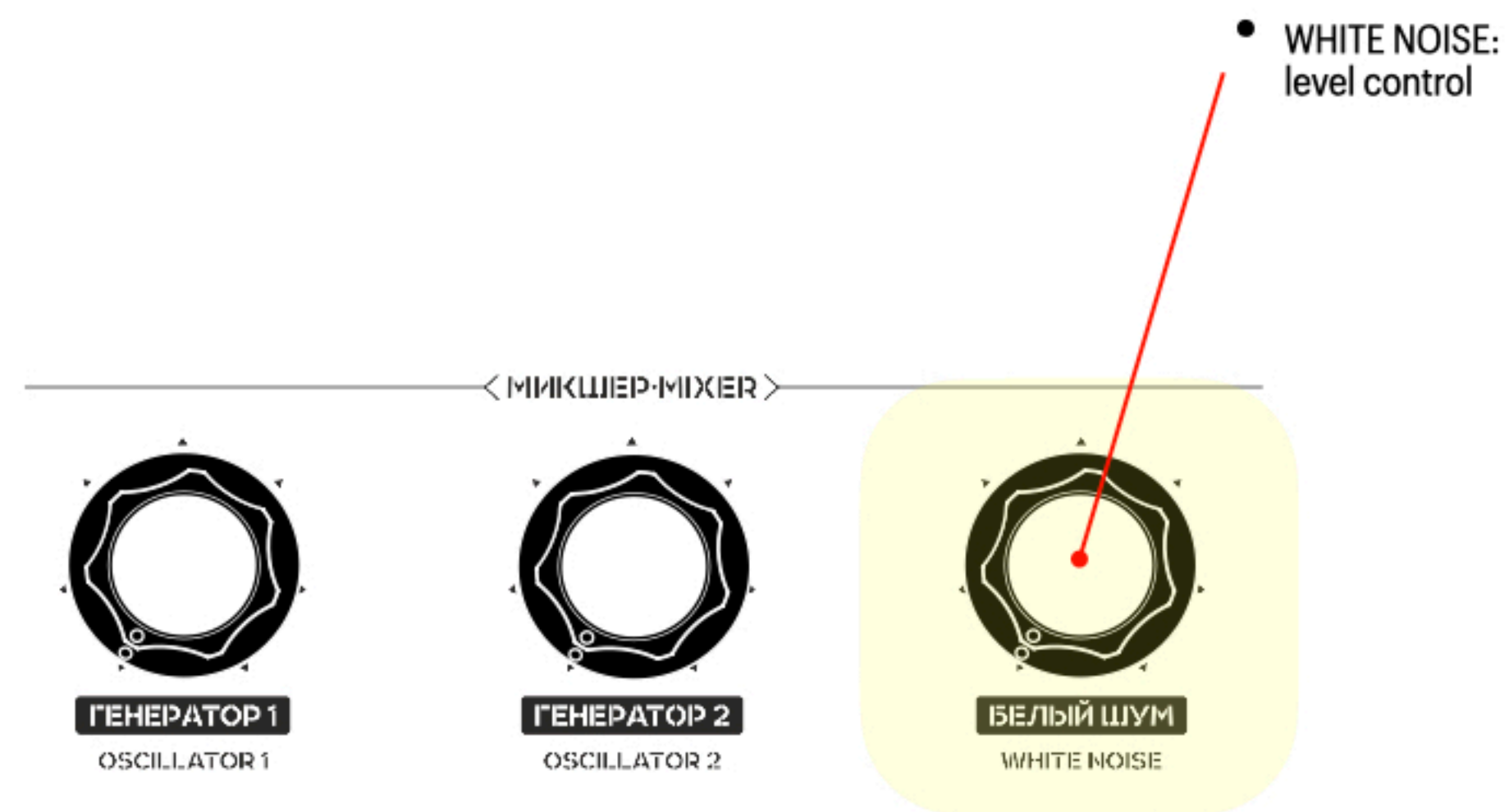
VCO 2 is working in 2 modes: sawtooth and square wave. Modulator switch (MOD) applies LFO on frequency of VCO 2. Second modulator switch turns on either S/H or envelope (AR). When in square waveform mode, PWM (pulse width modulation) switch applies modulation on the width of the pulse, thus creating range of waveforms from pulse to square.

- VCO 2 sends audio signal to the Mixer, either in sawtooth or square waveform.
- S/H modulates the waveform of VCO 2, patterning the signal.
- AR (envelope) modulates the waveform of VCO 2, shaping the signal from percussive till long key pressed feeling.
- LFO modulates the waveform of VCO 2, creating tremolo.
- VCO 2 also functions as modulator for VCO 1.

Eurorack outputs and inputs:

- 1: CV input to feed the VCO2 with gate (0-5V) to control the waveform
- 2: Pitch input to VCO2 (equals 1V/Oct input) to create melodic algorithms to the VCO 2
- 3: Output of VCO 2 sawtooth/square waveforms (0-9V) - allows to send VCO 2 to any destination in Eurorack type system.

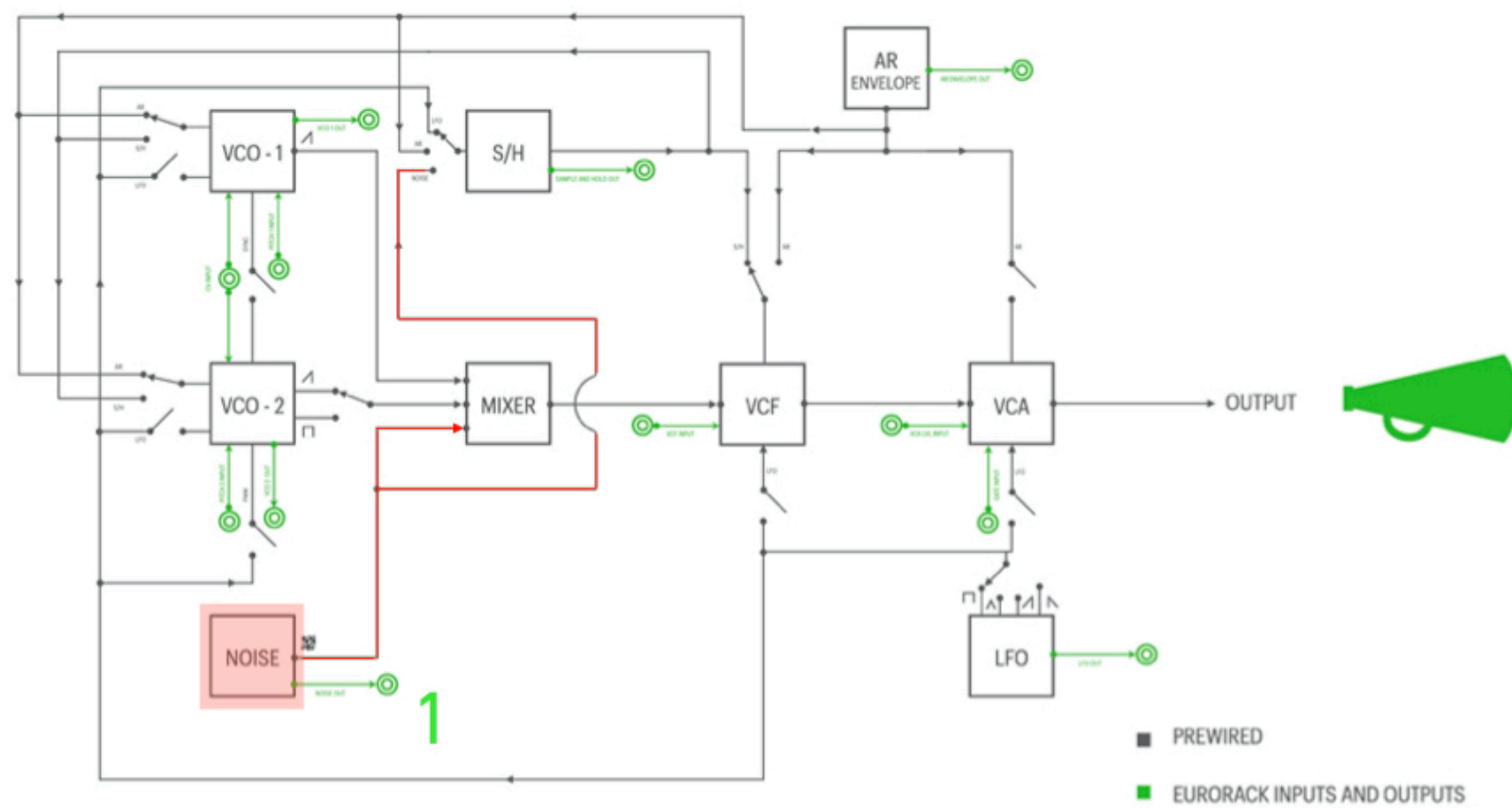
WHITE NOISE



WHITE NOISE

White Noise can be added in mixer section - adding it with the third knob, marked "White Noise". Adding a noise to the signal can result in extra harmonics being added, and by passing the signal through a filter, these extra harmonics can be enhanced or reduced, with it enriching the library of timbres. Noise is also important in creating drum, hh, cymbals - type of sounds, or hisses, background atmospherics, swooshes and breathing, wind, ocean and rain type of sounds.

WHITE NOISE



WHITE NOISE output sent into mixer.

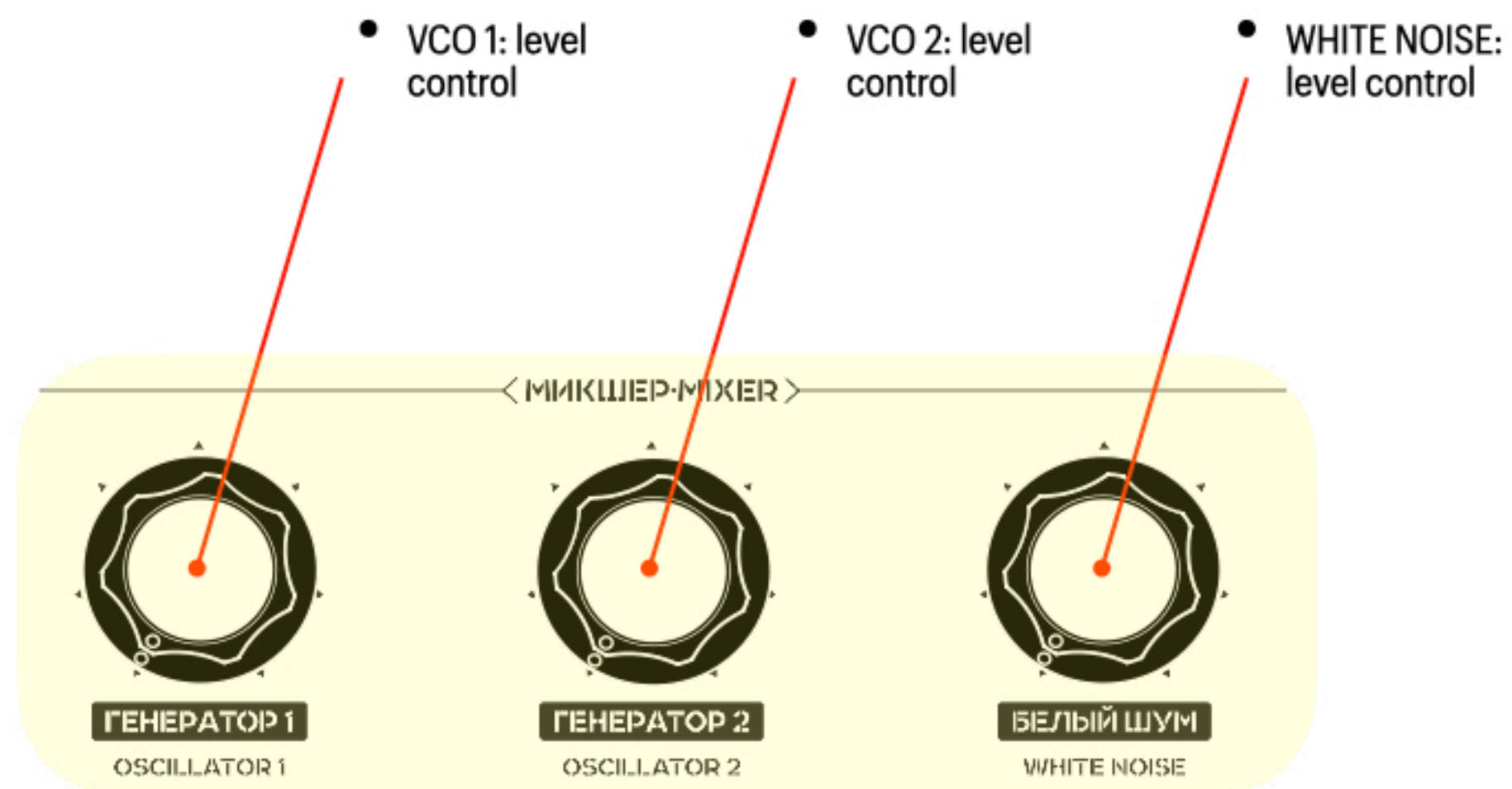
- White Noise is sent to a mixer.
- White Noise is sent to Sample and Hold as an incoming variable.



Eurorack outputs and inputs:

1: White Noise audio output can be sent to Eurorack system.

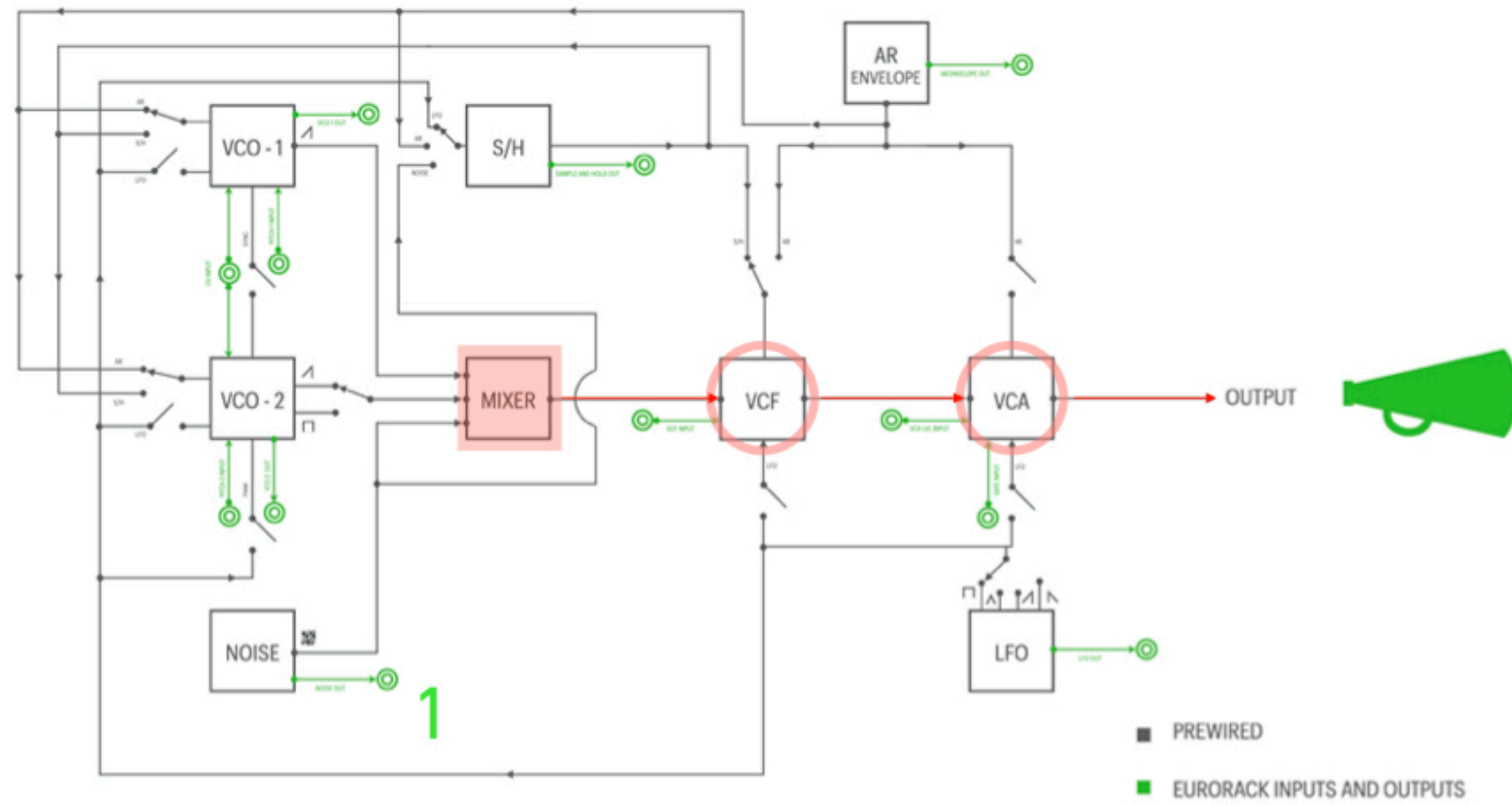
MIXER



MIXER

Mixer allows you to mix signals in equal or random proportion. You can control here, how many voices will go further to the filter and amplifier.

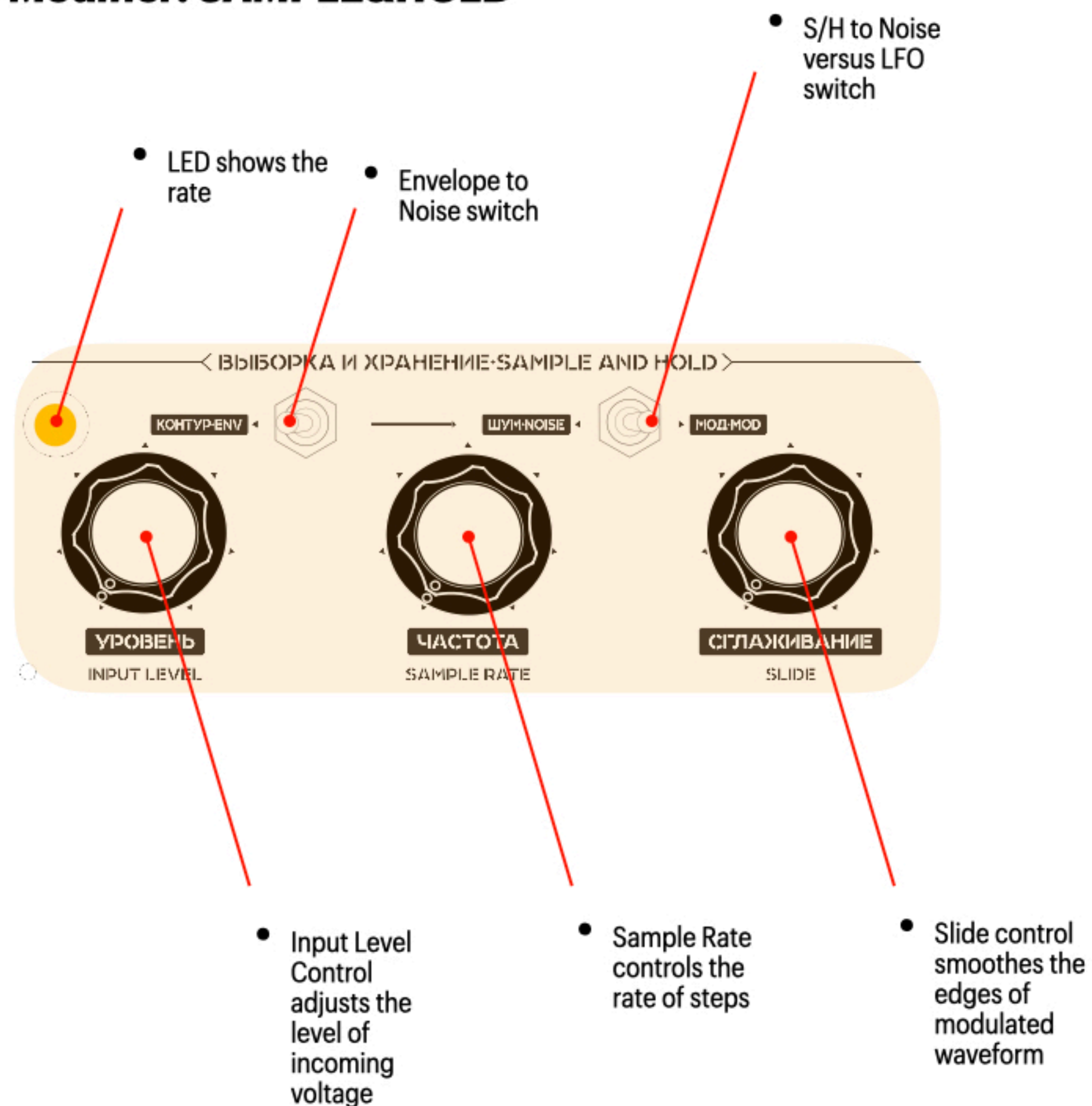
MIXER



MIXER

- Mixer summarising signals that are sent into it, VCO 1, VCO 2 and White Noise. From there, Signal travels into filter (VCF) and amplifier (VCA).

Sound Modifier: **SAMPLE&HOLD**



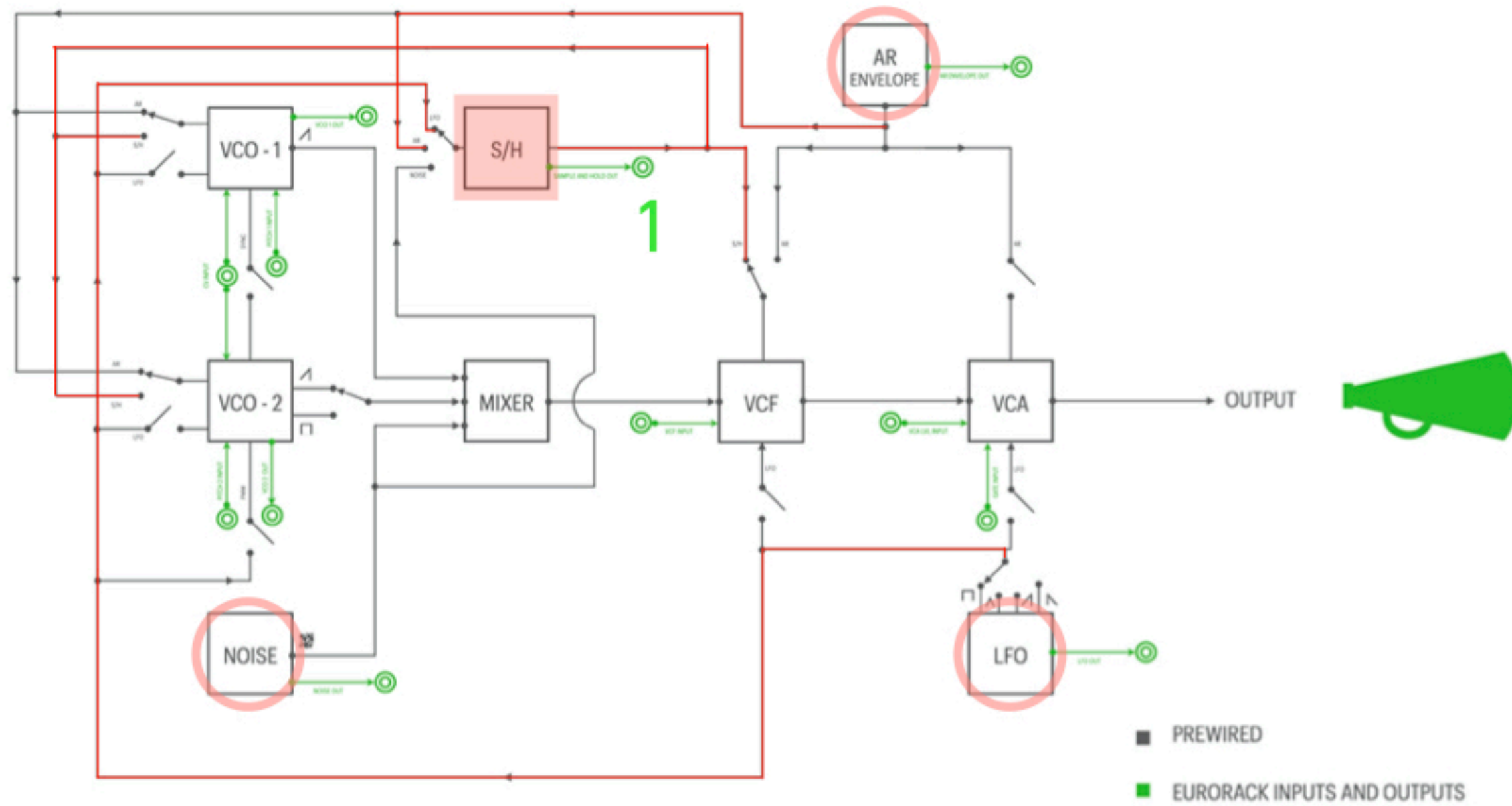
SAMPLE & HOLD

Sample & Hold is an analog device that samples (captures) the incoming signal and holds ("samples"/locks in a buffer) its value at a constant level for applied minimum period of time. Sample & Hold is a device that remembers the level of voltage on the input and cuts this value across the phase of the waveform, modulating initial waveform to a new one. Sample and hold sort of creates rhythmic patterns/steps from initial monotone sound.

Variable on the input gives an opportunity to create a big library of new type of waveforms, that will result in new timbres and sound textures. Input Level controls the level of incoming voltage, Sample Rate adjusts the repetition rate, Slide would smooth the edges between each captured fragment of voltage.

Switches Envelope to Noise/Modulator changes the source of incoming signal. If we feed Envelope to the S&H, AR and it's settings would be the reference to modify the waveform.

SAMPLE AND HOLD



SAMPLE AND HOLD

- S&H is a modulator, that sends signal to VCF, VCO1 and VCO2.
- LFO can feed the S/H input. Initial waveform of LFO will be the carrier.
- AR / Envelope can feed S&H. Chosen modulator will be the carrier.



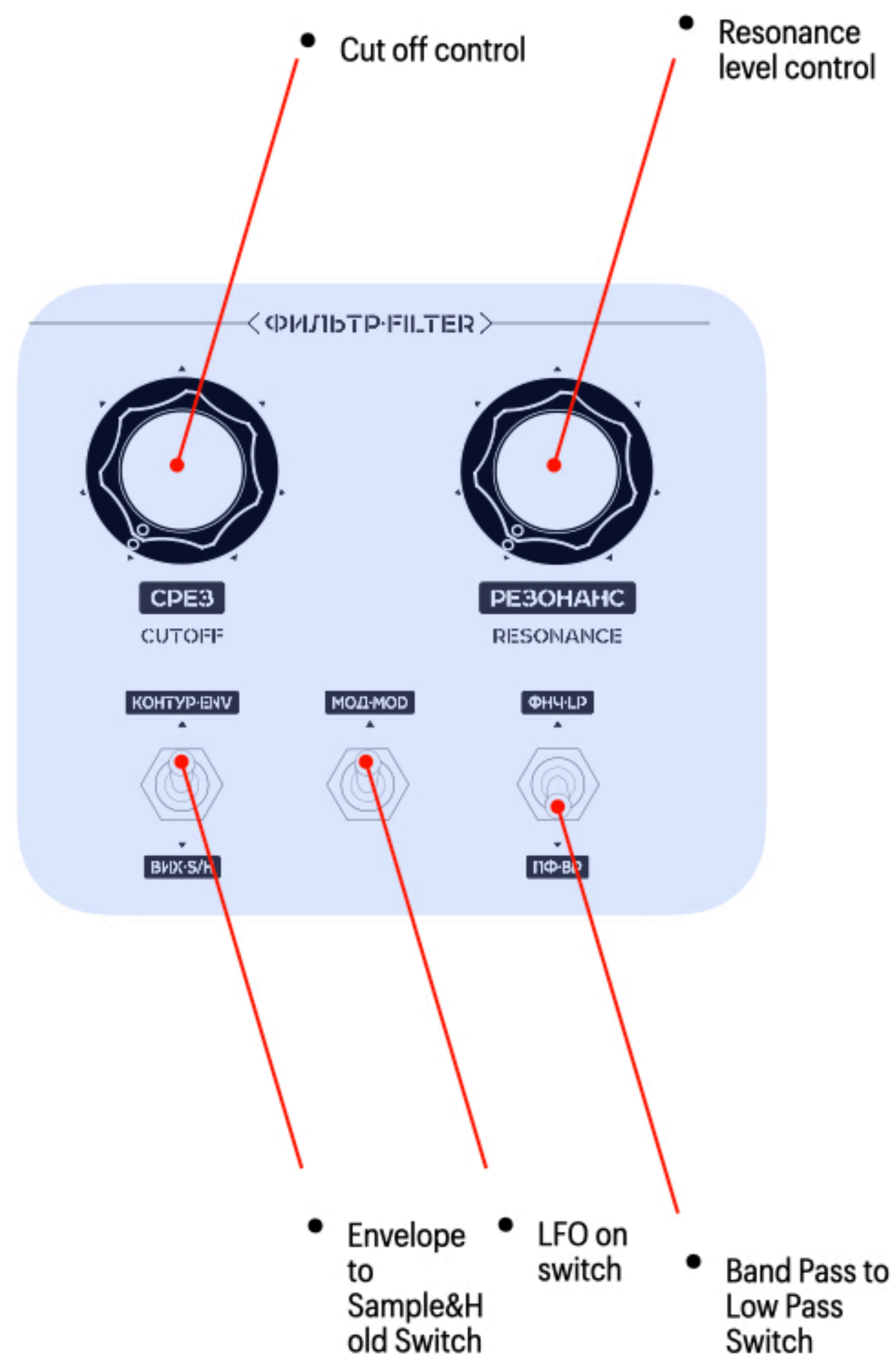
Eurorack outputs and inputs:

1: S&H output to Eurorack.



Example of S&H workings: Chosen incoming triangle waveform sent into Same and Hold will create a "ladder" type of signal, depending on the rate value of the S&H. Incoming signal can vary from Envelope sent from AR till Noise.

Sound Modifier: **FILTER**

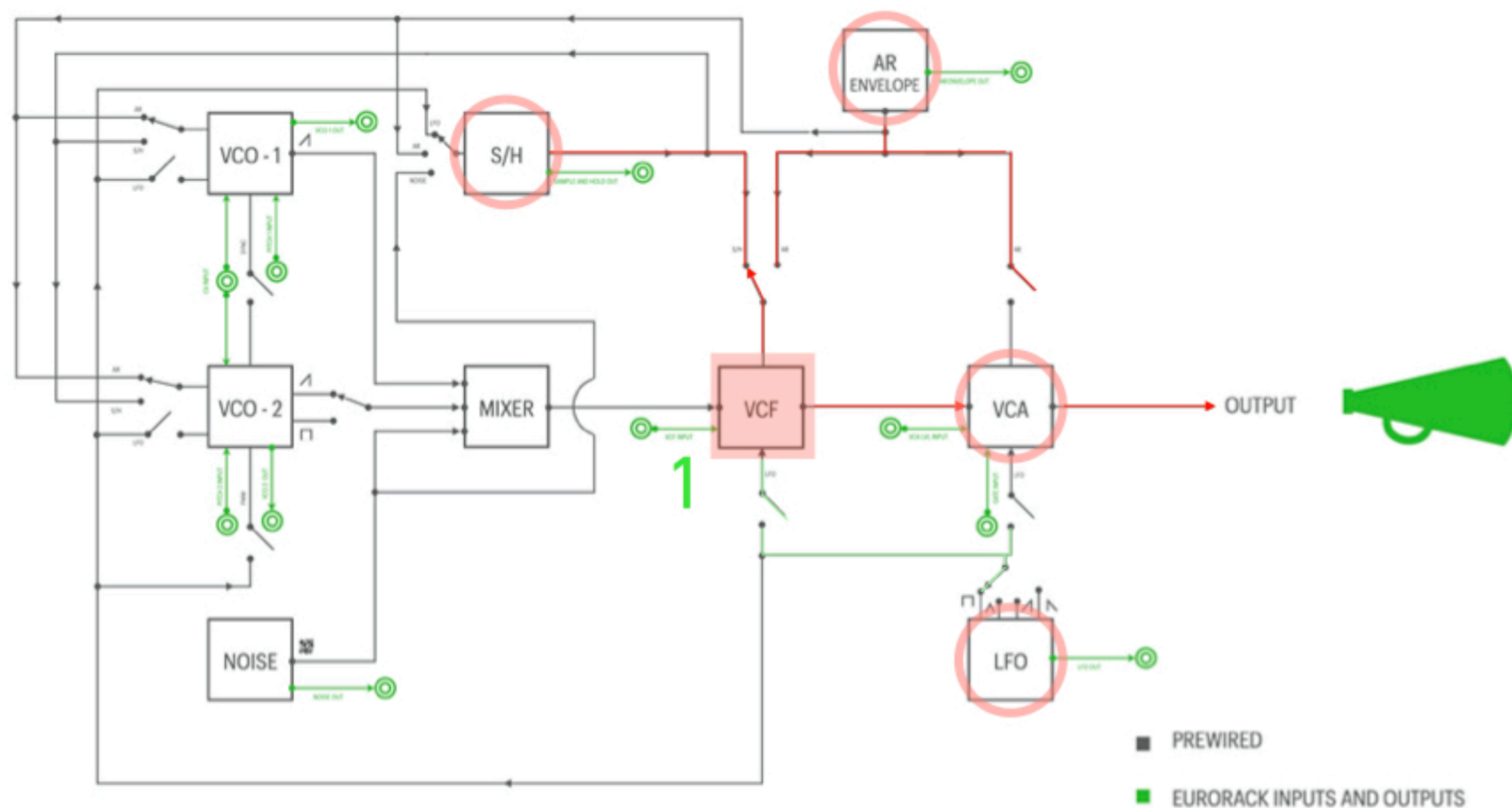


FILTER

The filter receives the audio signal, that is sent from the mixer, and reduces some of the harmonics, according to the position of the Cut Off knob. If to add the Resonance, the Filter will start to self-resonate and will generate a sine-type waveform. If the cut-off is opened and the resonance is on maximum, that might result in silence. Resonance, if opened, will add extra high frequencies to the sound. Cut Off envelope can be modulated by the Envelope (AR) or Sample & Hold and can have LFO on to modulate the rate of the envelope of the cutoff, creating vibrato. The filter has Low Pass and Band Pass switches to set the frequency range the filter is operating on.

This is Polyvox type filter, 12 dB per Octave; keyboard tracking.

FILTER (VCF)



VCF filters the signal from the mixer.

- S/H is modulating the cut off envelope.
- Envelope settings modify the cut off form
- LFO modulates the cut off envelope, creating tremolo.

+ modulator (mod wheel) on midi will affect cut off envelope, if the cut off wheel turned to all the way left. Then mod wheel on midi controls the filter envelope

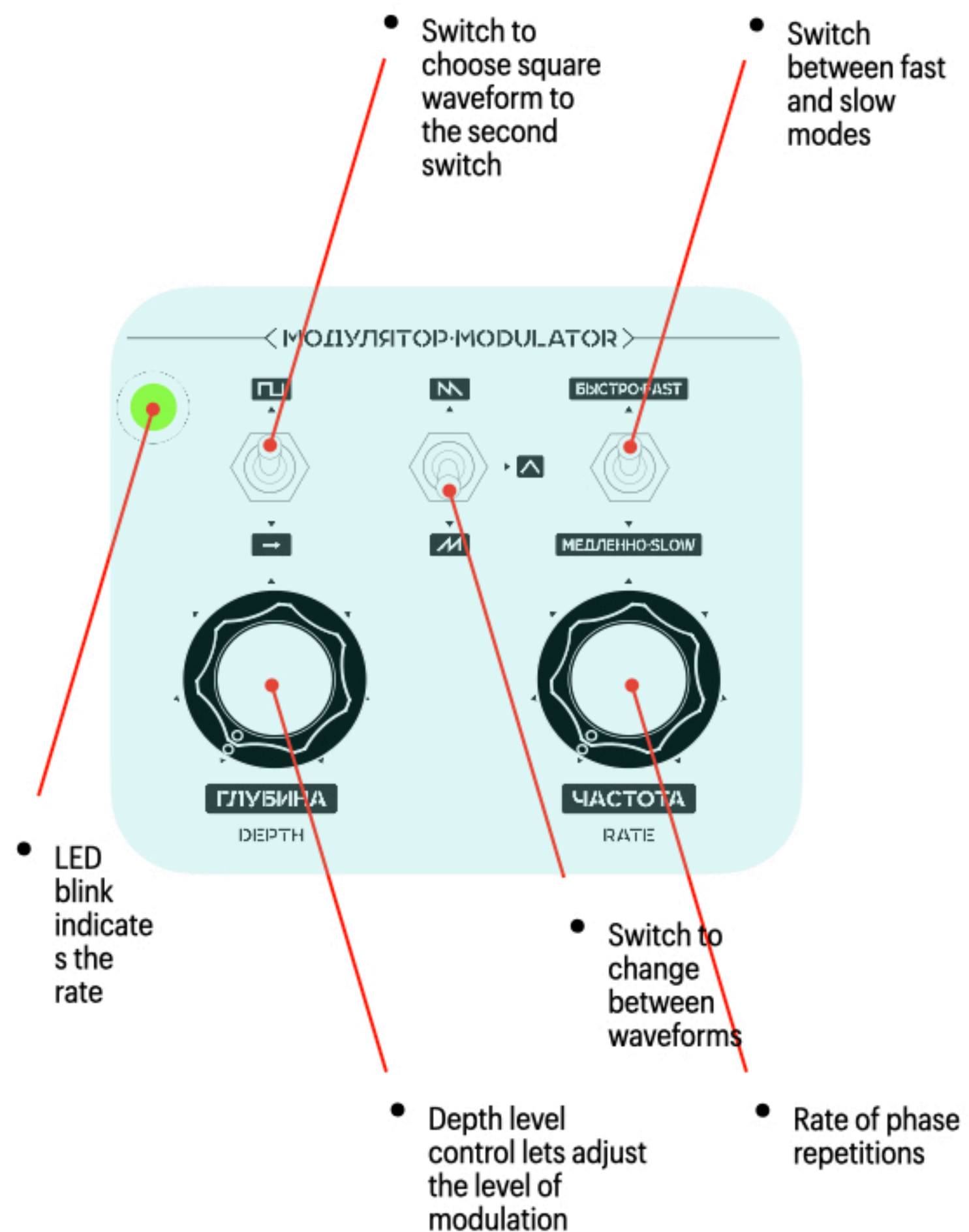
Eurorack outputs and inputs:

1: VCF input to modulate the cut off envelope from any euro rack CV generator or LFO.



Note that Mod Wheel on the midi controller will affect cut off envelope, if the cut off knob is turned to all the way left.

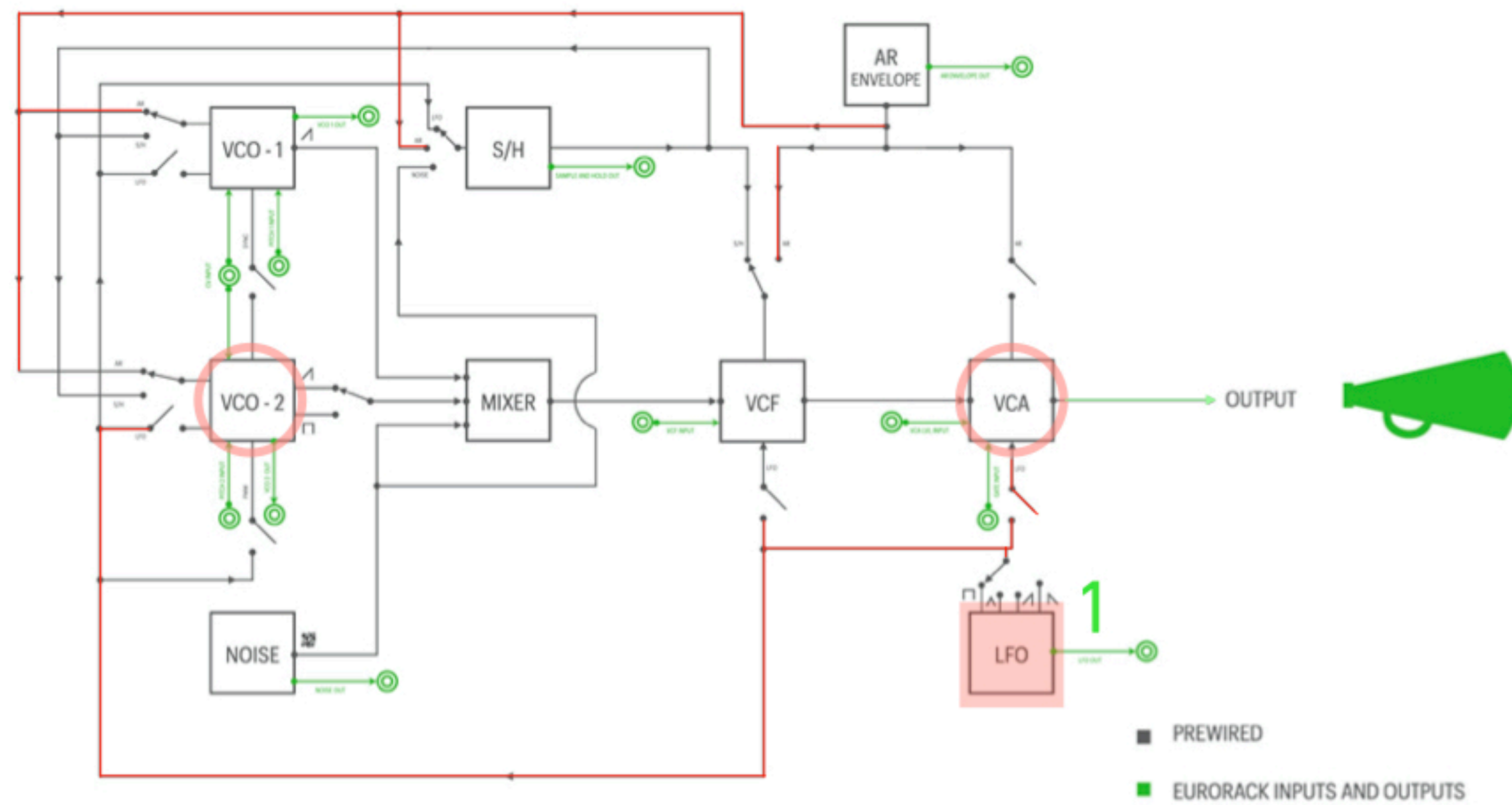
Sound Modifier: **MODULATOR**



MODULATOR

Modulator is an advanced LFO, working in fast and slow rate modes. Square waveform switch or phased sawtooth/triangle switches will define the initial waveform. Depth knob will adjust the level of modulation. Rate will define the phase of repetition, or with other words, frequency rate. The higher the knob - the higher the rate.

MODULATOR (LFO)



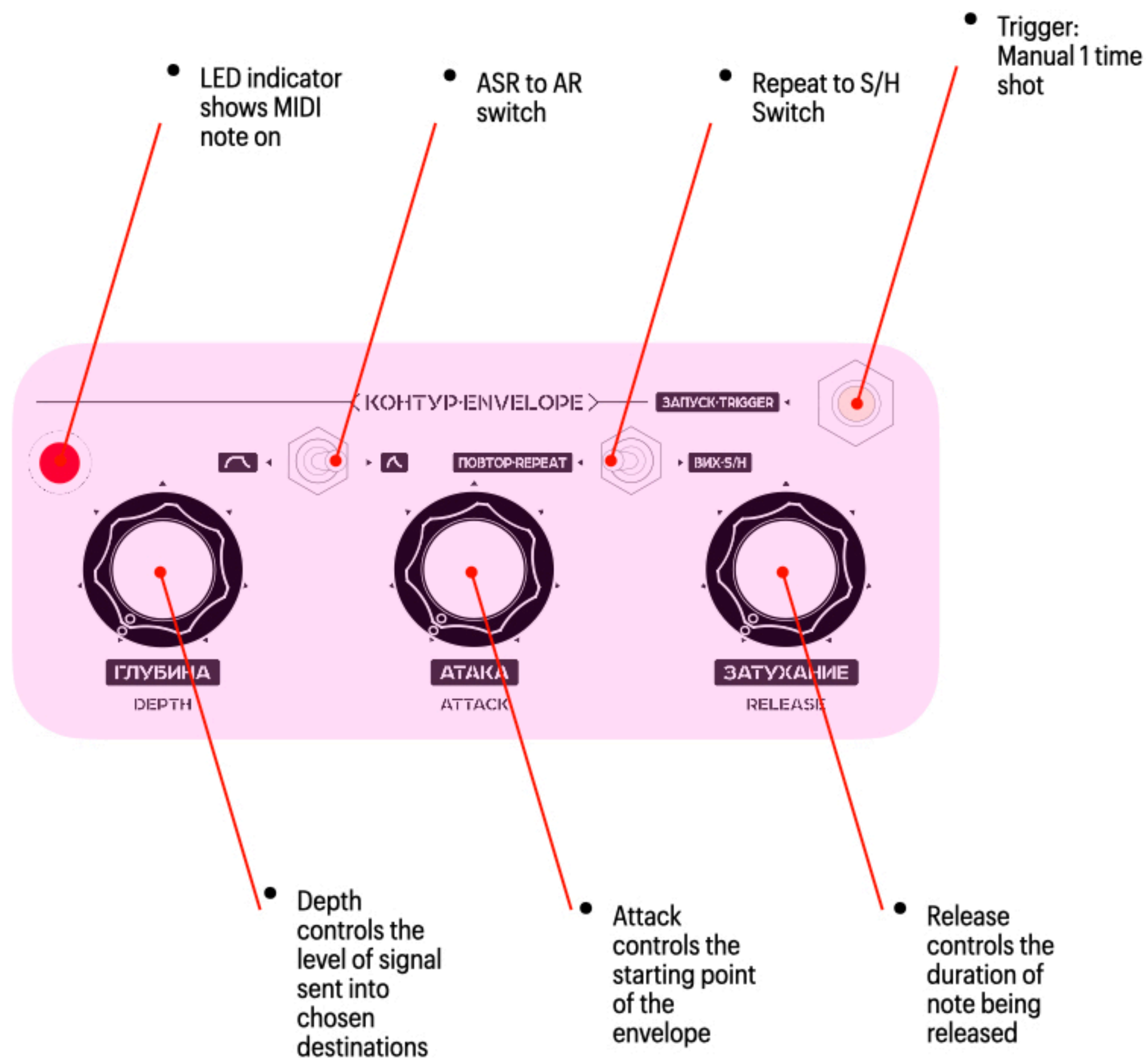
MODULATOR (LFO)

- LFO is sent to VCA
- LFO can be applied on cut off of the VCF
- LFO can modulate frequency of VCO 1 and/or VCO 2
- LFO can be the incoming signal for the S&H

Eurorack outputs and inputs:

1: Modulator (LFO) output can be sent to any destination to further modulate other signals, respectively to the current settings of it, in a range of 0-9V.

Sound Modifier: ENVELOPE

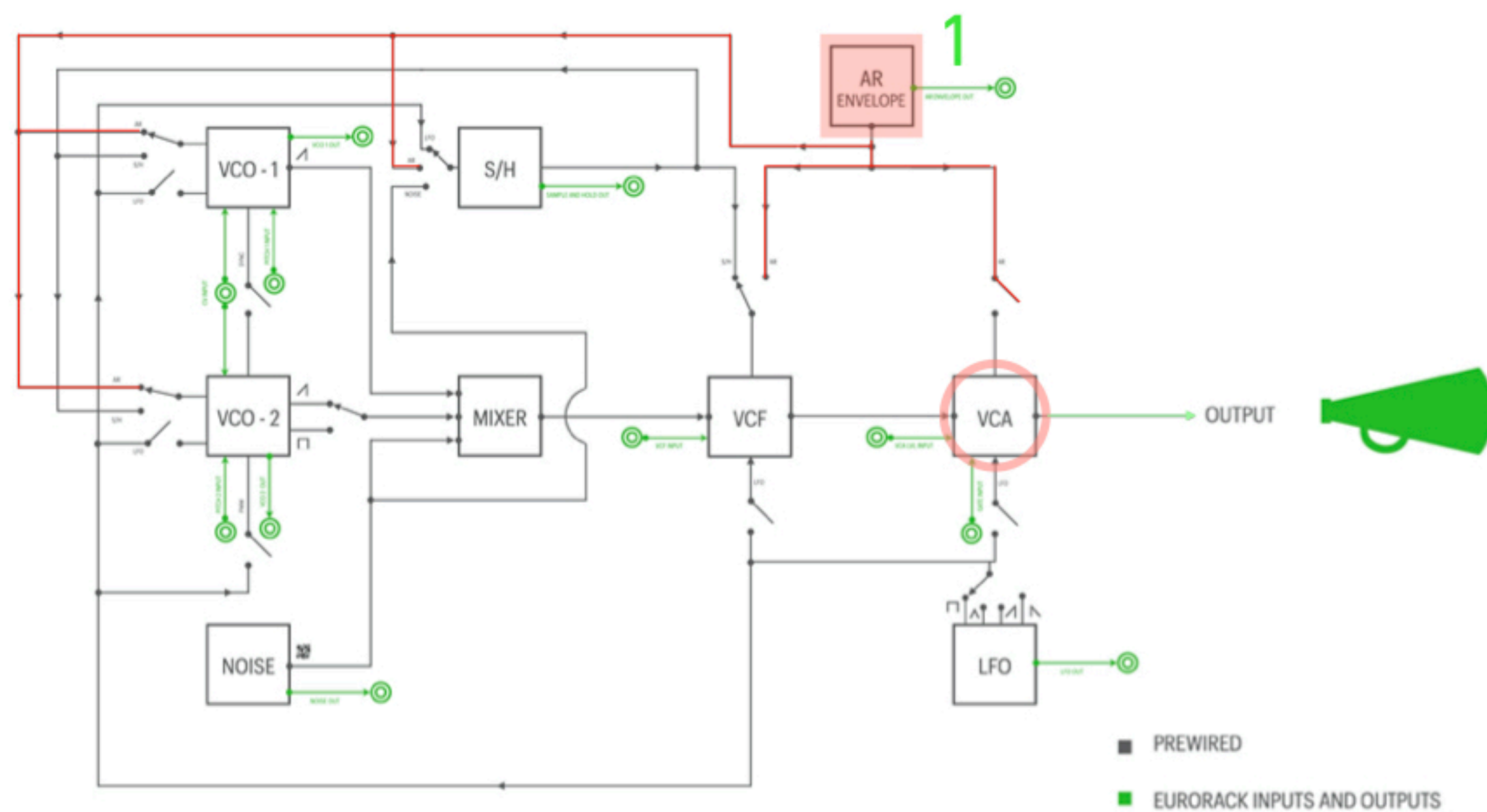


ENVELOPE

Envelope lets to shape the audio signal, applying it's settings will result in carving the sound from shot pulses till long key-pressed like sounds. Depth equals sustain, Attack controls the time when the sound starts, Release will control how long the sound is played.

The envelope has 2 modes switch - wider and shorter envelope, Repeat switch that will set the envelope to loop, and Sample & Hold switch that would let the S&H settings to start the envelope. One trigger shot button lets to send one trigger shot to activate the envelope manually.

ENVELOPE (ASR)



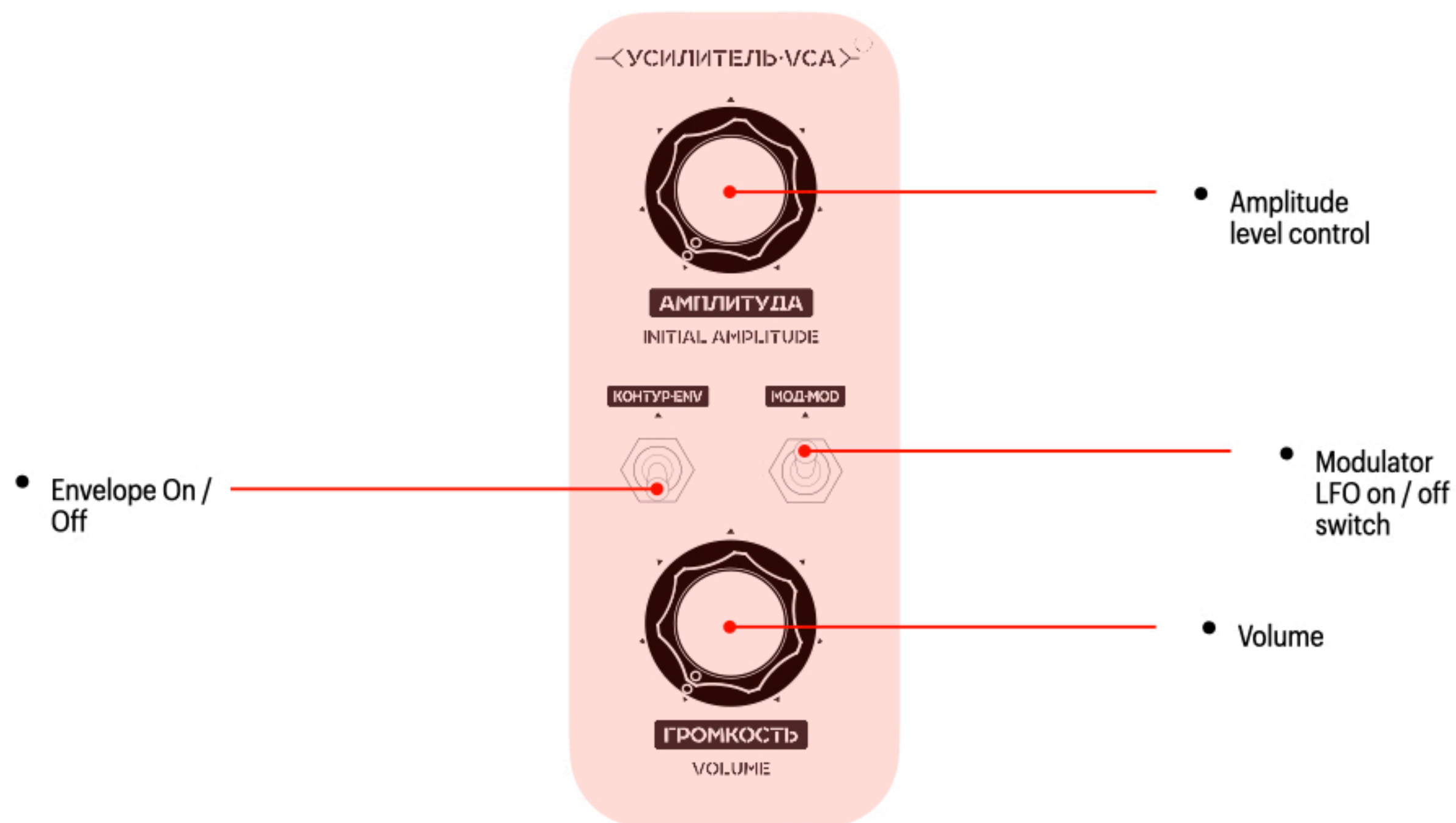
ASR ENVELOPE

- Envelope is sent to VCA
- Envelope can be applied on cut off of the VCF
- Envelope can modulate frequency of VCO 1 and/or VCO 2
- Envelope can be the incoming variable for the S&H

Eurorack outputs and inputs:

1: Envelope output can be sent to any destination to further modulate other signals, respectively to the current settings of it, in a range of 0-9V.

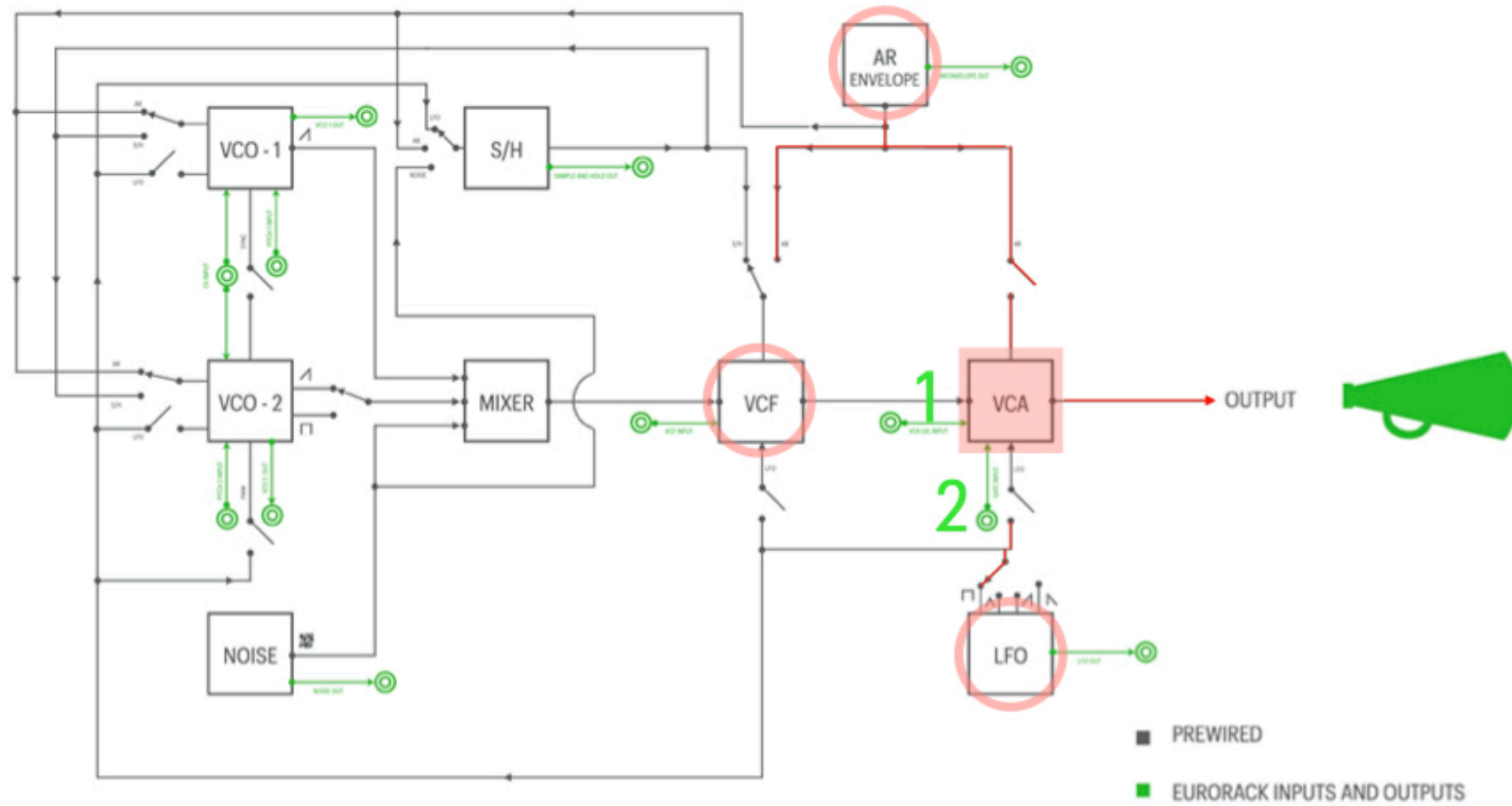
Sound Modifier: VCA



VCA

VCA is the final block of the system, where the sound travels to. VCA amplifies the sound and lets extra modulation on the level of the signal. VCA has a level control knob, an amplitude knob that controls the level of infused modulation, and 2 switches to apply CV on the audio signal: Envelope on/off switch and Modulator (LFO) on/off switch. The depth of the envelope settings is by default set permanently on maximum, thus the level of the depth cannot be controlled. By default, the initial amplitude to be set on 0; if we set this parameter on maximum, the level of the signal will sound interrupted, if we set the cut off to be opened to any position.

VCA



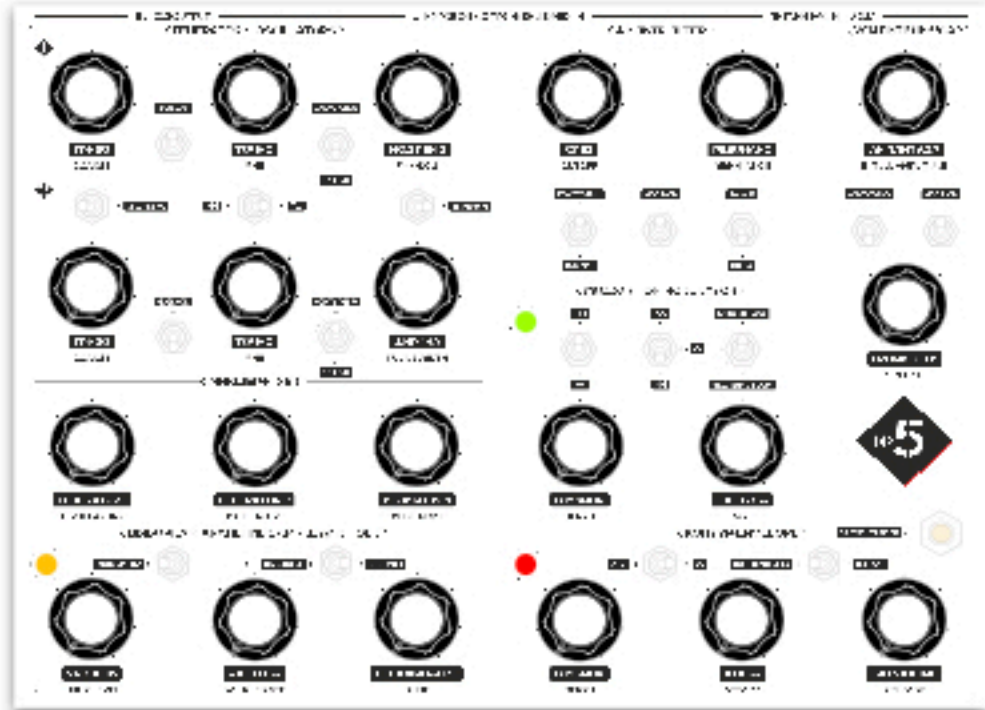
VCA amplifies the signal and sends it to the output.

- AR Envelope is applied to the amplitude
- LFO modulates the output, creating tremolo.

Eurorack outputs and inputs:

- 1: VCA input on the rear panel can accept voltages to modify the amplitude level.
- 2: Gate will trigger the VCA in a range of 0-5V.

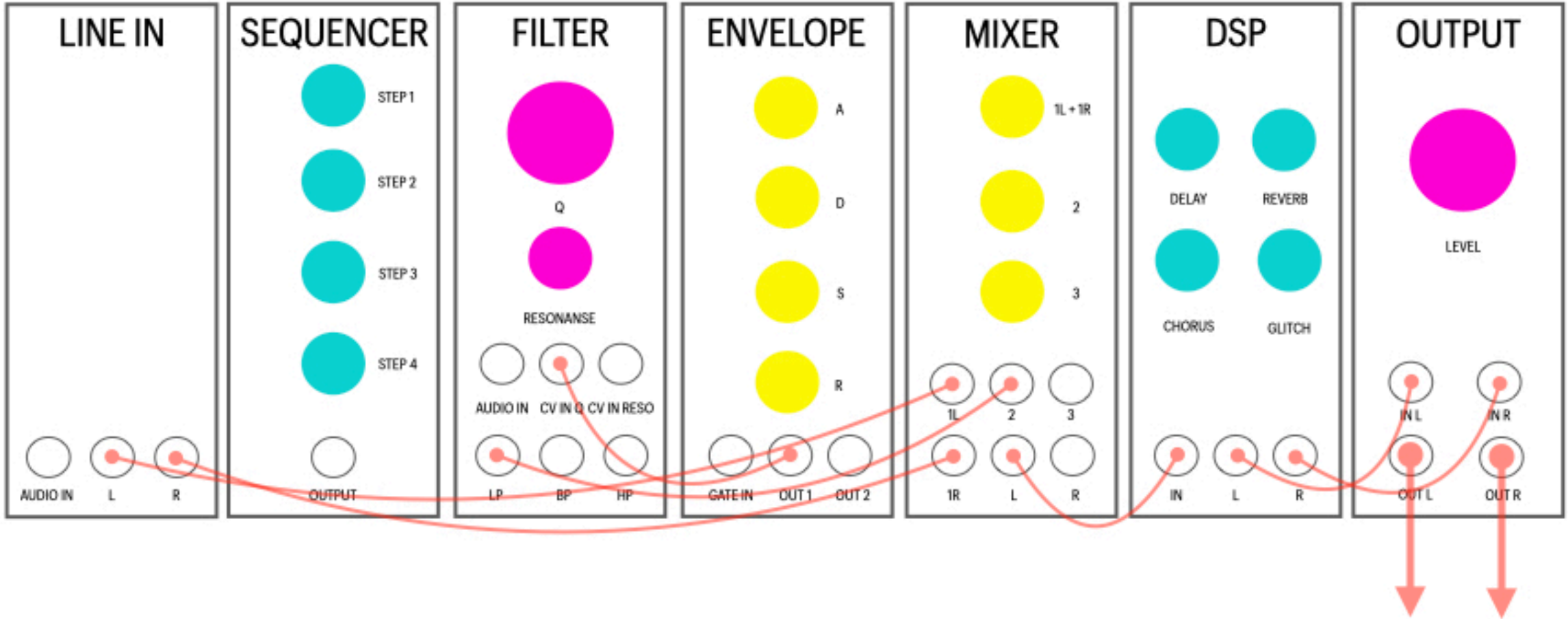
CREATING SOUNDS



+



+





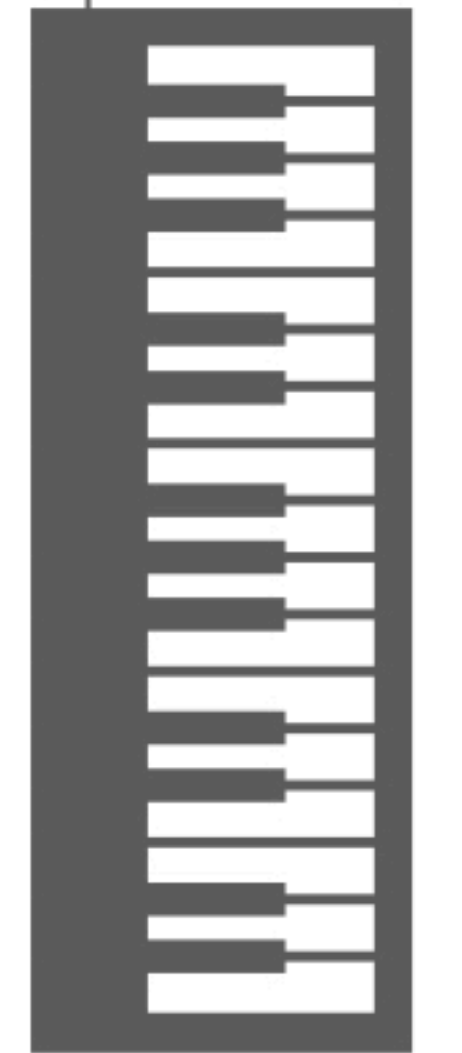
Set potentiometers to parameter they show. Define Coarse by your liking. Use MIDI controller, to send melody.



MIDI controller



Set potentiometers to parameter they show. Define Coarse by your liking. Use MIDI controller, to send melody.



MIDI controller

ВЫХОД-OUTPUT ЦИФРОВОЕ СОПРЯЖЕНИЕ-MIDI IN ПИТАНИЕ-AC IN 12V 0,1A

ГЕНЕРАТОРЫ-OSCILLATORS ФИЛЬТР-FILTER УСИЛИТЕЛЬ-VCA

1 ГРУБО COARSE ТОЧНО FINE МОД ГЕН 2 FM OSC 2

2 ШИРИНА PULSE WIDTH

ГЕНЕРАТОР 1 OSCILLATOR 1 ГЕНЕРАТОР 2 OSCILLATOR 2 БЕЛЫЙ ШУМ WHITE NOISE

ВЫБОРКА И ХРАНЕНИЕ-SAMPLE AND HOLD МОДУЛЯТОР-MODULATOR КОНТУР-ENVELOPE

УРОВЕНЬ INPUT LEVEL ЧАСТОТА SAMPLE RATE СГЛАЖИВАНИЕ SLIDE

СРЕЗ CUTOFF РЕЗОНАНС RESONANCE АМПЛИТУДА INITIAL AMPLITUDE

ГЛУБИНА DEPTH ЧАСТОТА RATE ГРОМКОСТЬ VOLUME

ГЛУБИНА DEPTH АТАКА ATTACK ЗАТУХАНИЕ RELEASE

№ 5

9V DC / 1A OUT 2 OUT 1 MIDI IN USB 4 (Universal) 3 (Conti)

P001 SL 88 STUDIO

STORE UNDER:	P001
NAME:	SL 88 STUDIO
ZONE EDIT:	1 2 3 4
MERGE SOURCE:	OFF
MERGE DEST.:	USB OUT
MERGE FILTER:	SYS OFF - ALL

studiologic



Set potentiometers to parameter they show. Define Coarse by your liking. Use MIDI controller, to send melody.



MIDI controller

ВЫХОД-OUTPUT ЦИФРОВОЕ СОПРЯЖЕНИЕ-MIDI IN ПИТАНИЕ-AC IN 12V 0,1A

ГЕНЕРАТОРЫ-OSCILLATORS ФИЛЬТР-FILTER УСИЛИТЕЛЬ-VCA

1 ГРУБО COARSE ТОЧНО FINE МОД ГЕН 2 FM OSC 2

2 СХР-С/УН П ШИР РИМ

ГРУБО COARSE ТОЧНО FINE ШИРИНА PULSE WIDTH

МИКСЕР-MIXER

ГЕНЕРАТОР 1 OSCILLATOR 1 ГЕНЕРАТОР 2 OSCILLATOR 2 БЕЛЫЙ ШУМ WHITE NOISE

ВЫБОРКА И ХРАНЕНИЕ-SAMPLE AND HOLD

УРОВЕНЬ INPUT LEVEL ЧАСТОТА SAMPLE RATE СГЛАЖИВАНИЕ SLIDE

СРЕЗ CUTOFF РЕЗОНАНС RESONANCE

АМПЛИТУДА INITIAL AMPLITUDE

ГРОМКОСТЬ VOLUME

№ 5

МОДУЛЯТОР-MODULATOR

ГЛУБИНА DEPTH ЧАСТОТА RATE

КОНТУР-ENVELOPE

ЗАПУСК-TRIGGER

ГЛУБИНА DEPTH АТАКА ATTACK ЗАТУХАНИЕ RELEASE

9V DC / 1A OUT 2 OUT 1 MIDI IN USB 4 (Universal) 3 (Cont)

P001	SL 88 STUDIO
STORE UNDER:	P001
NAME:	SL 88 STUDIO
ZONE EDIT:	1 2 3 4
MERGE SOURCE:	OFF
MERGE DEST.:	USB OUT
MERGE FILTER:	SYS OFF - ALL

studiologic



Set potentiometers to parameter they show. Define Coarse by your liking. Use MIDI controller, to send melody. Add delay).



MIDI controller

ВЫХОД-OUTPUT ЦИФРОВОЕ СОПРЯЖЕНИЕ-MIDI IN ПИТАНИЕ-AC IN 12V 0,1A

<ГЕНЕРАТОРЫ-OSCILLATORS> <ФИЛЬТР-FILTER> <УСИЛИТЕЛЬ-VCA>

1 ГРУБО COARSE ТОЧНО FINE МОД ГЕН 2 FM OSC 2

2 СКОР-SYNC ПУ ШИР РИМ

ГРУБО COARSE ТОЧНО FINE ШИРИНА PULSE WIDTH

<МИКСЕР-MIXER>

ГЕНЕРАТОР 1 OSCILLATOR 1 ГЕНЕРАТОР 2 OSCILLATOR 2 БЕЛЫЙ ШУМ WHITE NOISE

<ВЫБОРКА И ХРАНЕНИЕ-SAMPLE AND HOLD> <МОДУЛЯТОР-MODULATOR>

УРОВЕНЬ INPUT LEVEL ЧАСТОТА SAMPLE RATE СГЛАЖИВАНИЕ SLIDE

СРЕЗ CUTOFF РЕЗОНАНС RESONANCE АМПЛИТУДА INITIAL AMPLITUDE

ГЛУБИНА DEPTH ЧАСТОТА RATE

УРОВЕНЬ INPUT LEVEL ЧАСТОТА SAMPLE RATE СГЛАЖИВАНИЕ SLIDE

ГЛУБИНА DEPTH АТАКА ATTACK ЗАТУХАНИЕ RELEASE

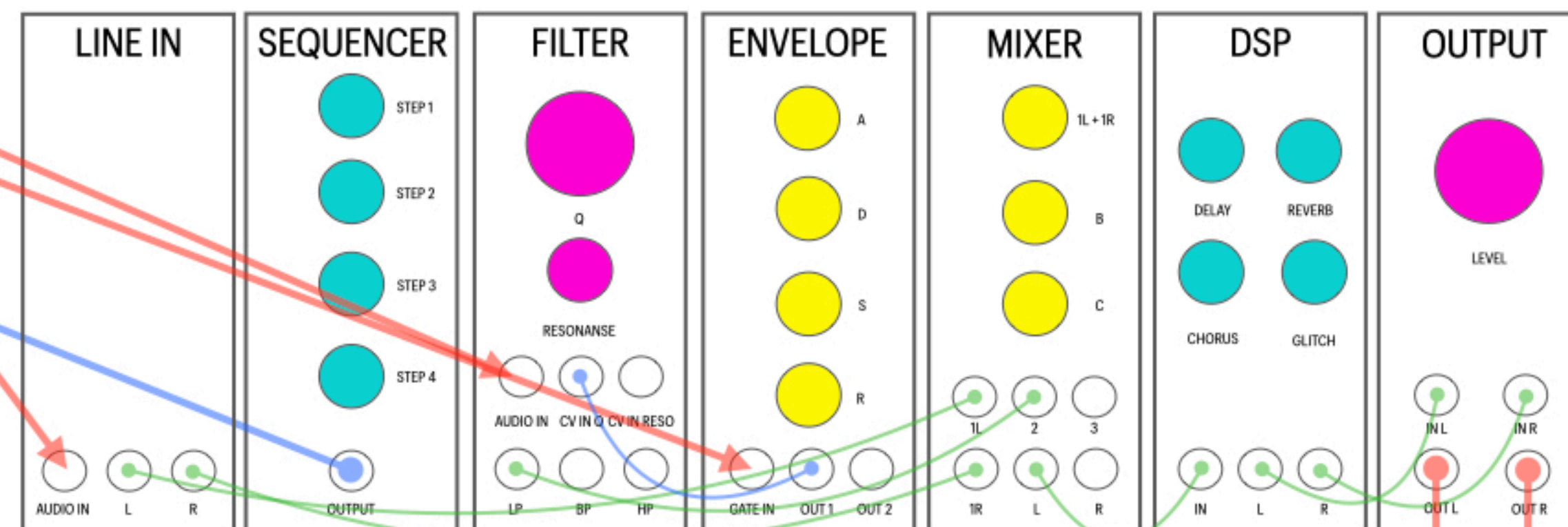
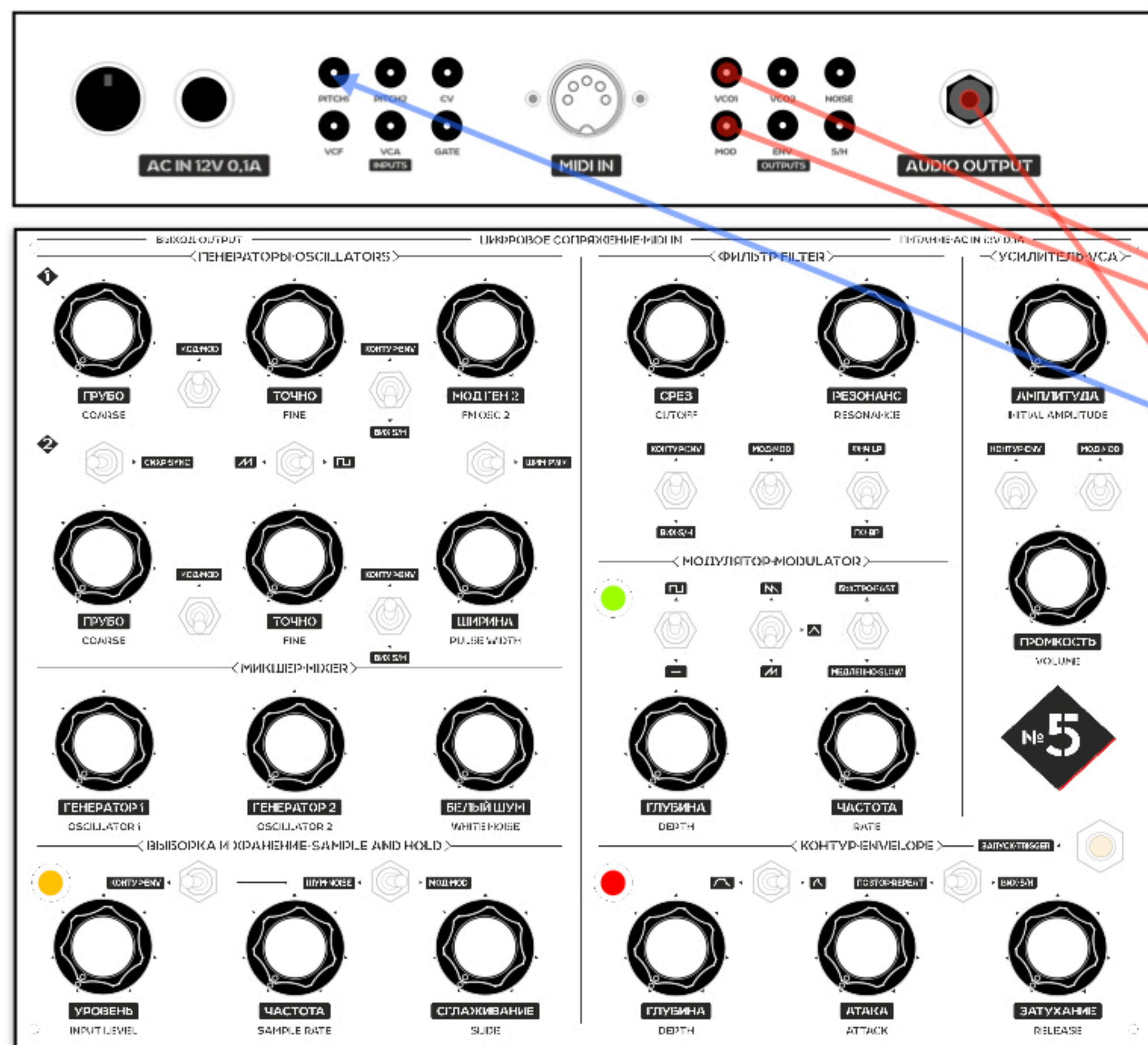
№5

9V DC / 1A OUT 2 OUT 1 MIDI IN USB 4 (Universal) 3 (Cont)

P001	SL 88 STUDIO
STORE UNDER:	P001
NAME:	SL 88 STUDIO
ZONE EDIT:	1 2 3 4
MERGE SOURCE:	OFF
MERGE DEST.:	USB OUT
MERGE FILTER:	SYS OFF - ALL

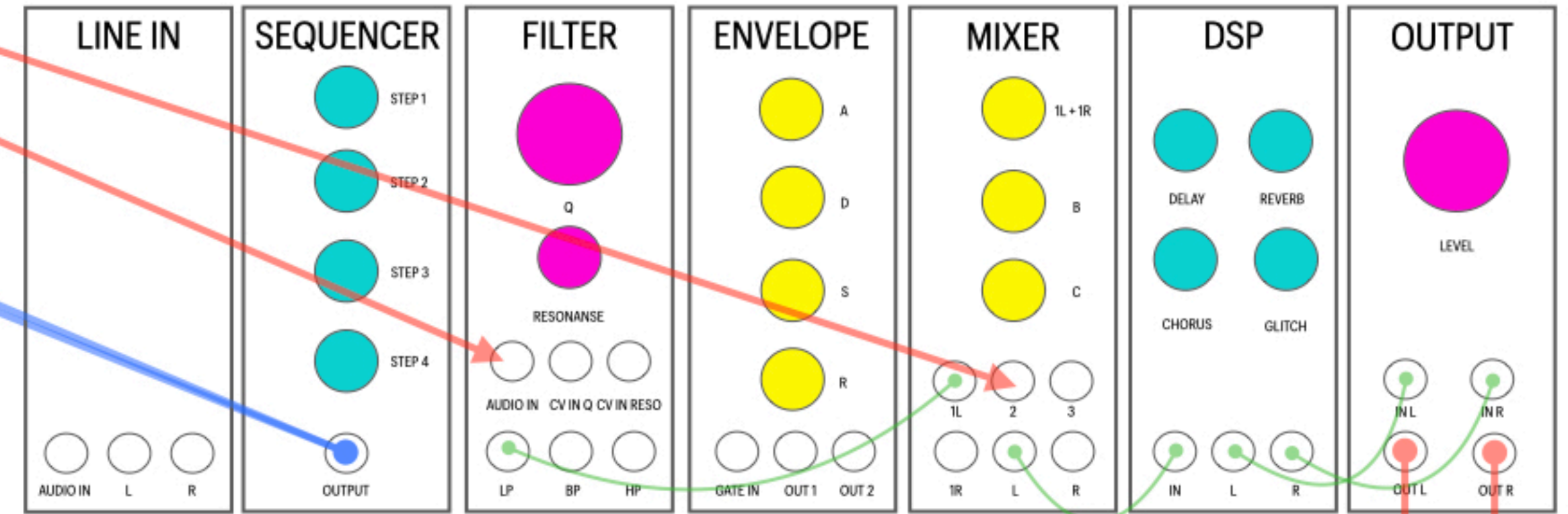
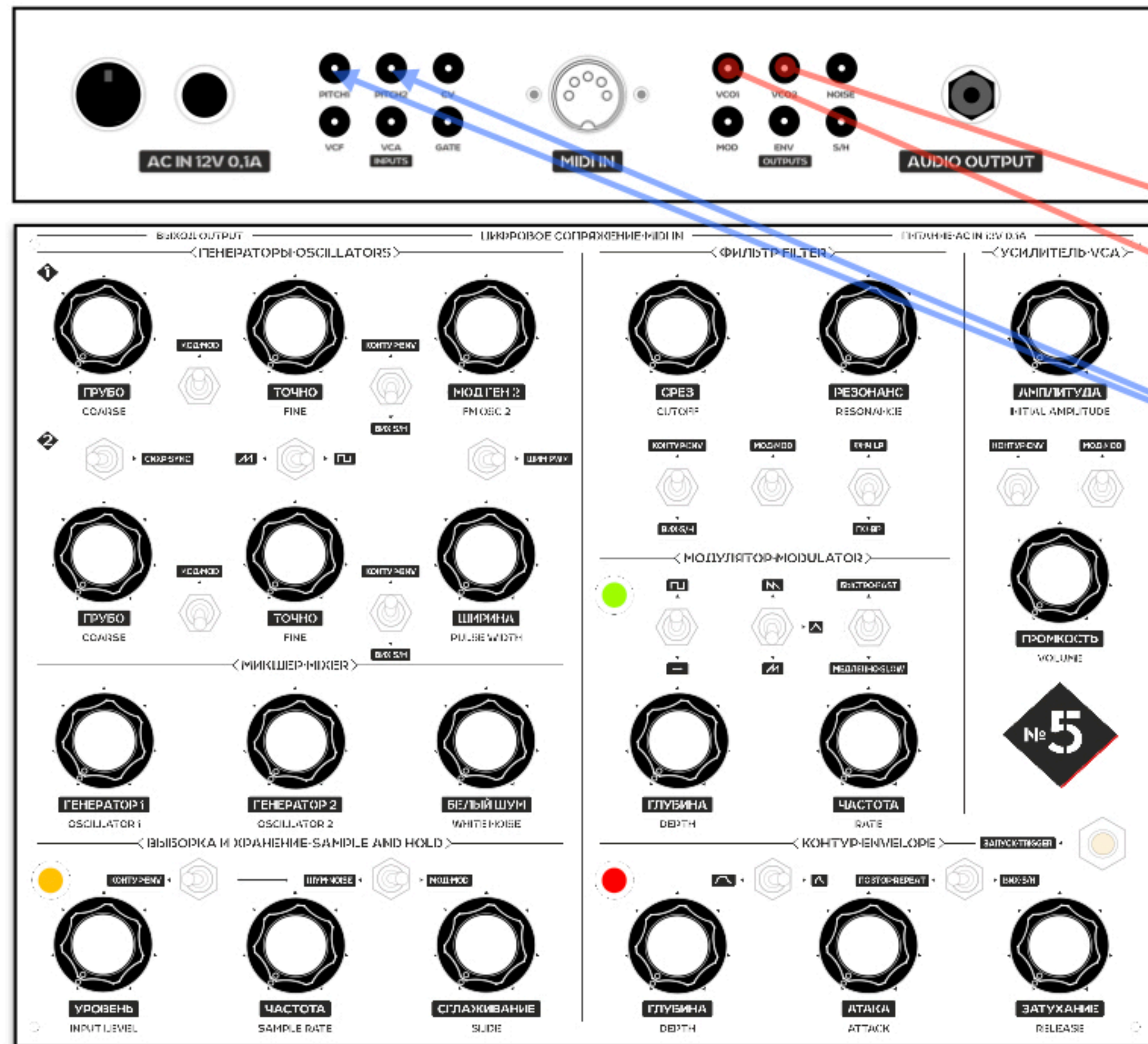
studiologic

PATCHING WITH EUORACK



PATCH EXAMPLE 1: SEQUENCING VCO 1 OF SO#5 AND MODULATING THE SIGNAL FURTHER WITHIN THE EURORACK

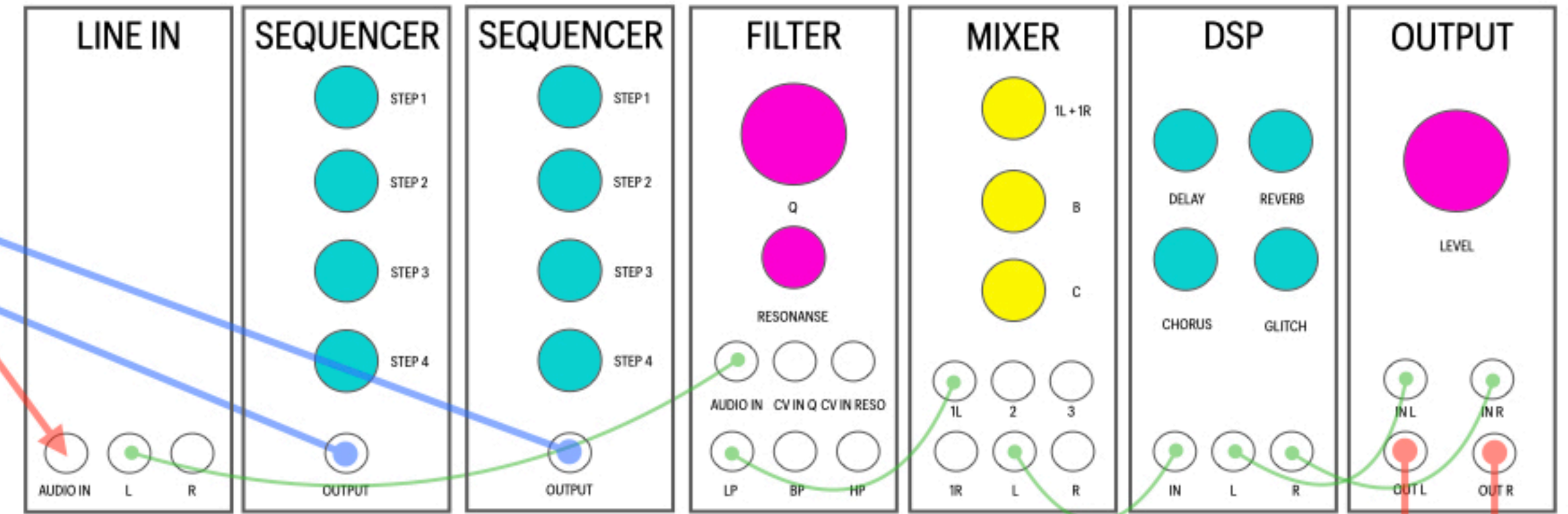
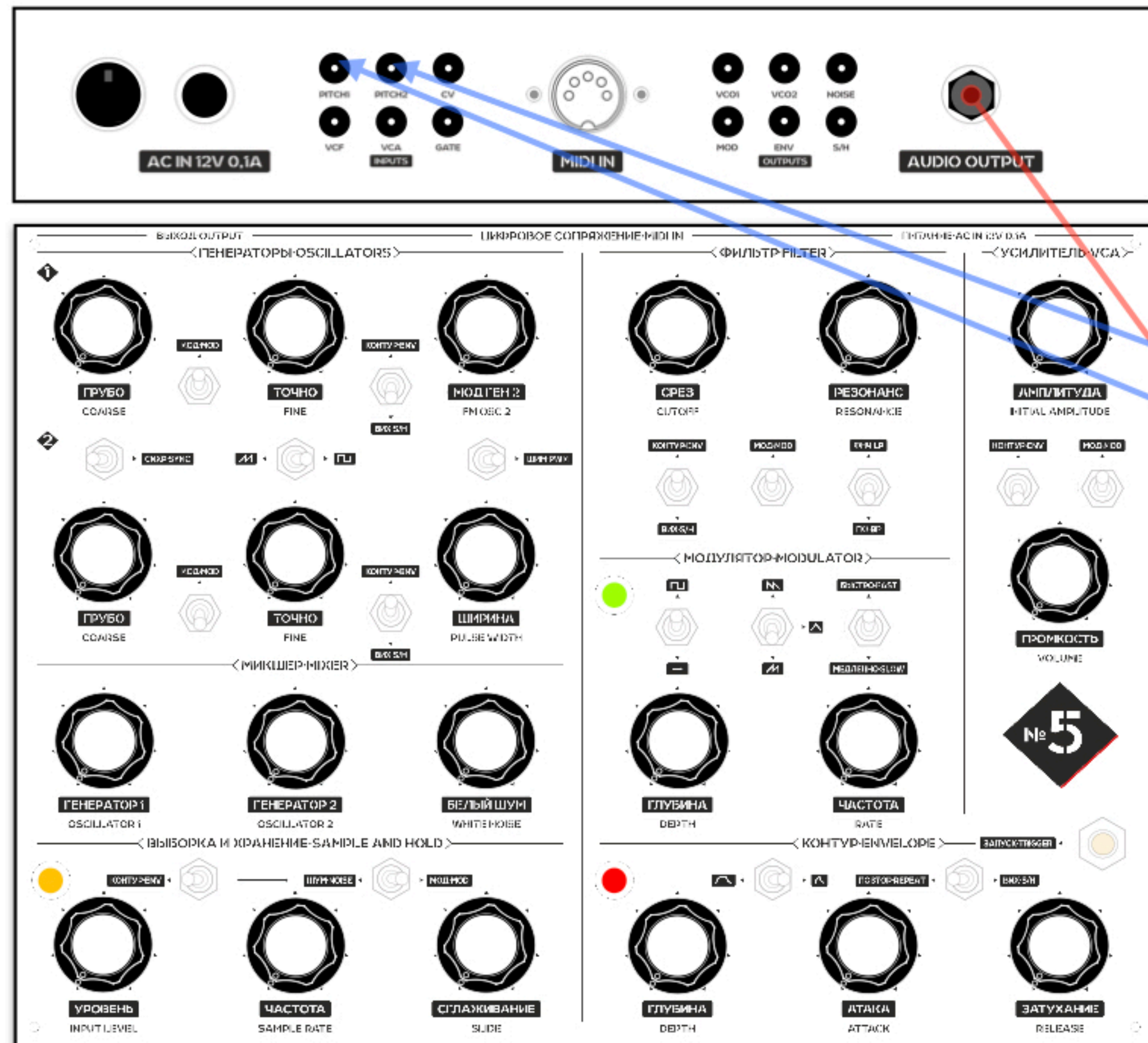
1. SEND MAIN AUDIO TO LINE IN MODULE, LEFT AND RIGHT OUTPUTS TO STEREO MIXER.
2. FEED VCO 1 PITCH WITH SEQUENCER YOU HAVE.
3. TAKE THE MODULATOR OUT AND FEED THE ENVELOPE MODULE WITH IT. SEND THE ENVELOPE TO CUT OFF OF THE FILTER.
4. SEND VCO1 FROM SO#5 TO ANY FILTER YOU OWN. LOW PASS FROM THE FILTER SEND TO YOUR MIXER.
5. LEFT (MONO OUTPUT) SEND TO ANY DSP (EFFECT) MODULE YOU HAVE.
6. STEREO OUTPUT FROM THE DSP SEND TO MAIN OUTPUT MODULE.
7. LISTEN THE RESULT AND PLAY WITH THE PARAMETERS IN REAL TIME.



PATCH EXAMPLE 2: CREATING DOUBLE SEQUENCED MELODIC SOUNDSCAPE

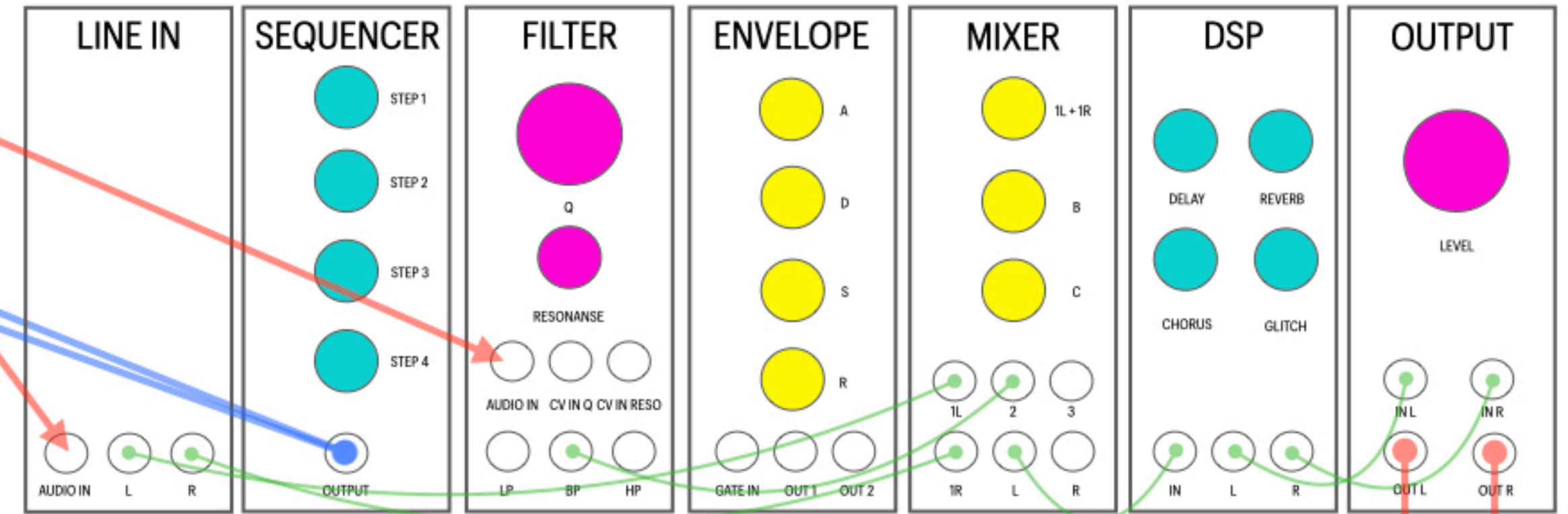
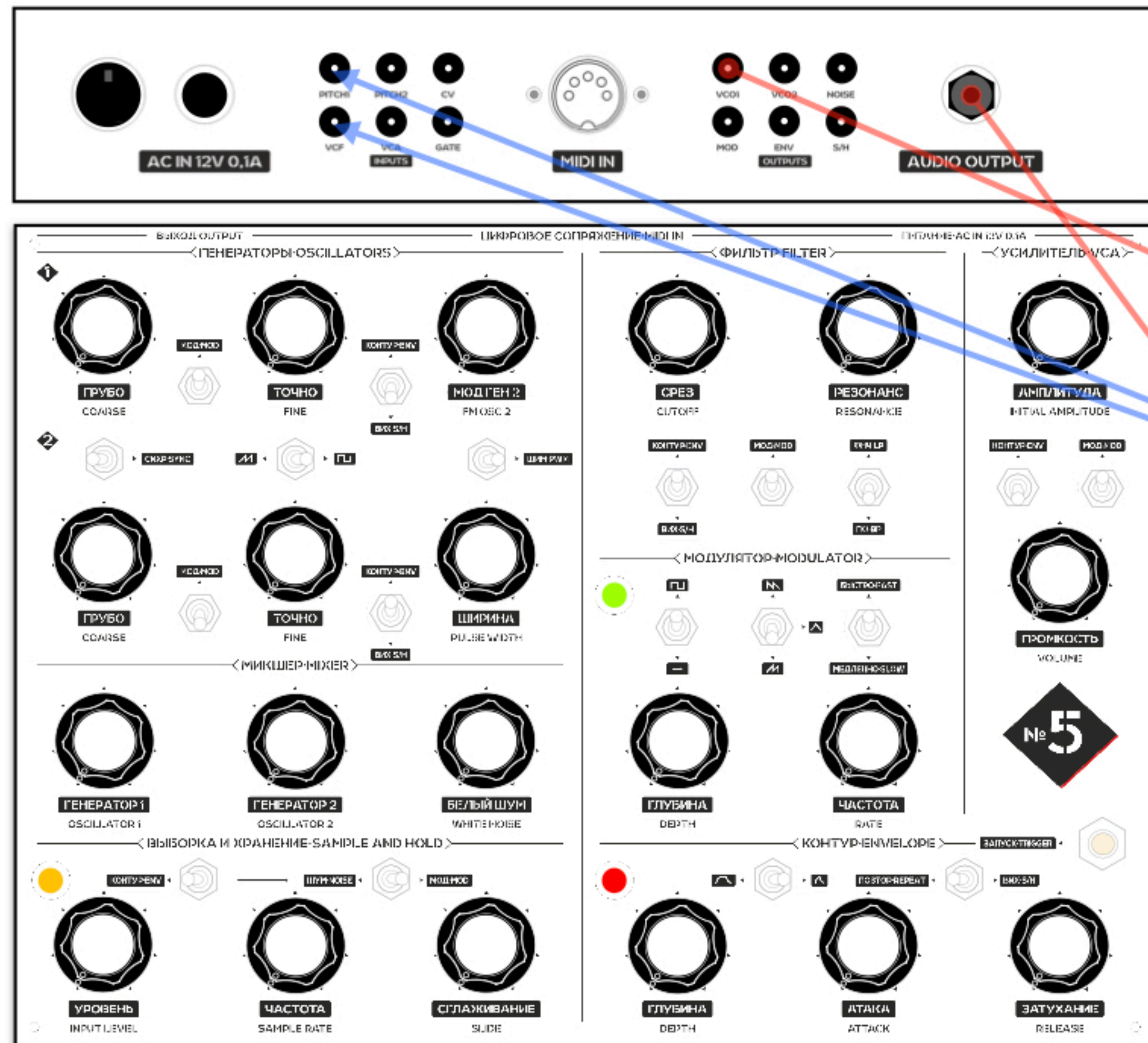
1. SEND VCO 1 TO FILTER.
2. LOW PASS FROM THE FILTER SEND TO THE MIXER.
3. DUPLICATE CV OUTPUT FROM THE SEQUENCER AND SEND TO PITCH INPUTS 1 AND 2.
4. ADJUST THE PITCH, TUNE BOTH VCOS - ONE IN HIGHER FREQUENCIES, ANOTHER ONE IN LOWER.
5. OUTPUT OF THE MIXER SEND TO DSP, USE DELAY + REVERB.
6. SEND THE DSP TO THE MAIN OUTPUT.
7. CHANGE PARAMETERS ON THE SO#5, CONSTRUCT A COMPOSITION.





PATCH EXAMPLE 3: SENDING DIFFERENT SEQUENCES TO BOTHS VCOS

1. SEND MAIN AUDIO TO LINE IN MODULE, LEFT AND RIGHT OUTPUTS TO STEREO MIXER.
2. LEFT OUTPUT FROM THE LINE IN SEND TO FILTER, LOW PASS FROM THE FILTER TO THE MIXER.
3. FEED VCO 1 PITCH WITH SEQUENCER YOU HAVE.
4. FEED VCO 2 PITCH INPUT WITH SECOND SEQUENCER. MAKE SURE BOTH ARE CLOCKED TO EACH OTHER.
5. MIXER SEND TO DSP, CHOOSE EFFECTS.
6. STEREO OUTPUT FROM THE DSP SEND TO MAIN OUTPUT MODULE.
7. LISTEN THE RESULT AND PLAY WITH THE PARAMETERS IN REAL TIME.

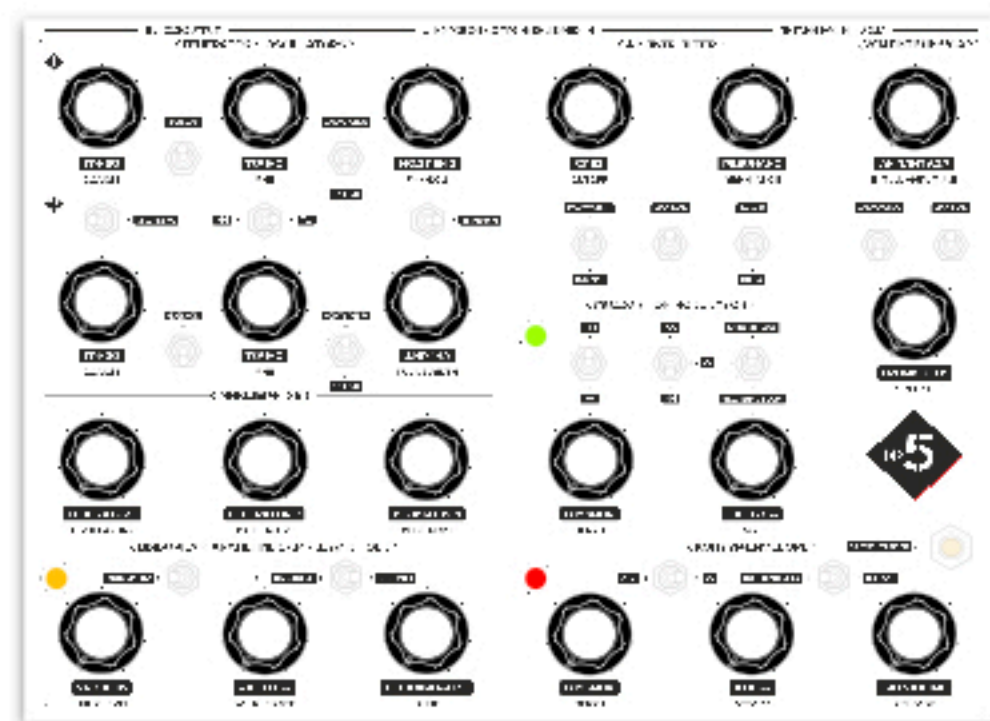


PATCH EXAMPLE 4: POLYPHONY MIMIC

1. SEND MAIN AUDIO TO LINE IN MODULE, LEFT AND RIGHT OUTPUTS TO STEREO MIXER.
2. VCO 1 SEND TO THE FILTER, BANDPASS FROM THE FILTER SEND TO THE MIXER.
3. DUPLICATE CV OUTPUT AND FEED BOTH VCO 1 PITCH INPUT WITH IT.
4. SECOND COPY OF THE SEQUENCER SEND TO VCF INPUT TO CONTROL THE CUTOFF ENVELOPE.
5. MIXER SEND TO DSP, CHOOSE EFFECTS.
6. STEREO OUTPUT FROM THE DSP SEND TO MAIN OUTPUT MODULE.
7. LISTEN THE RESULT AND PLAY WITH THE PARAMETERS IN REAL TIME.



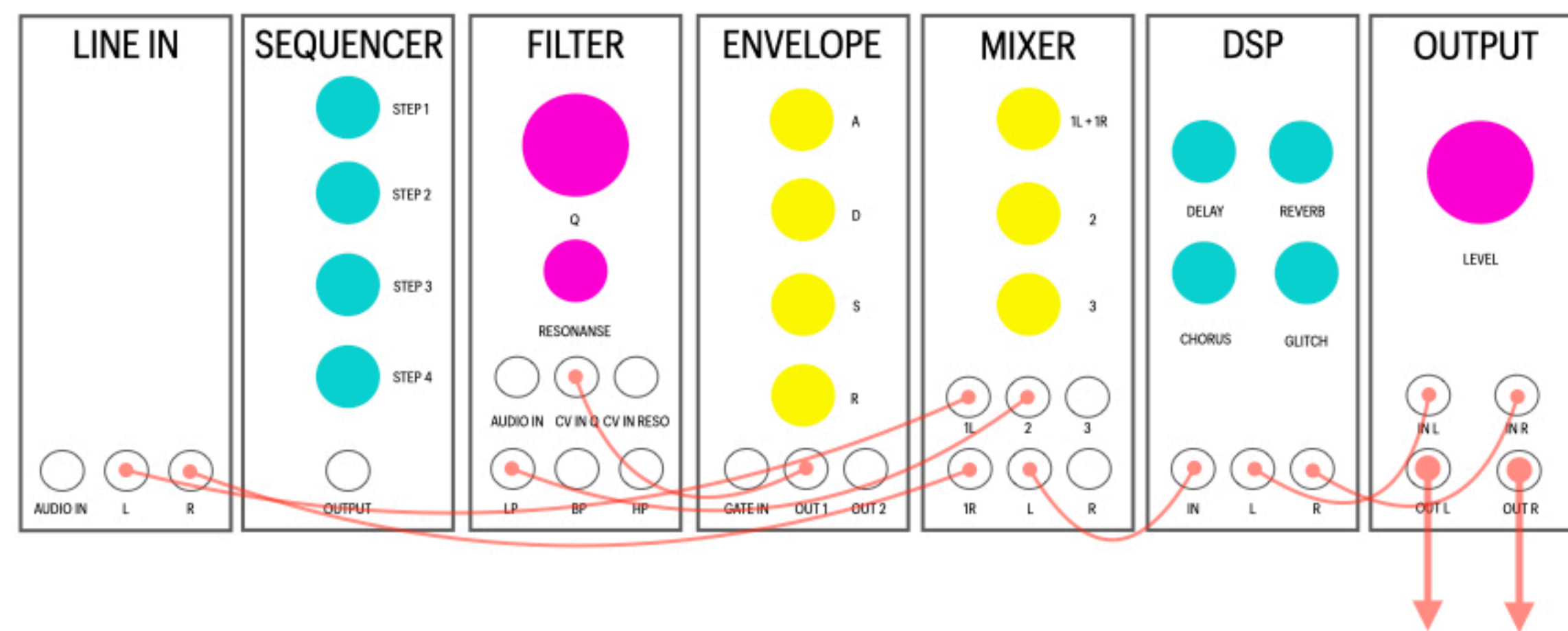
MY SOUNDS

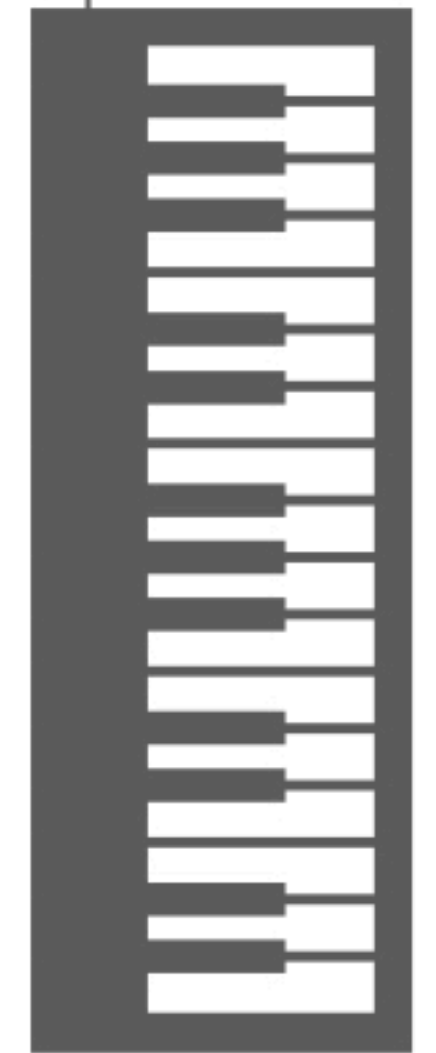
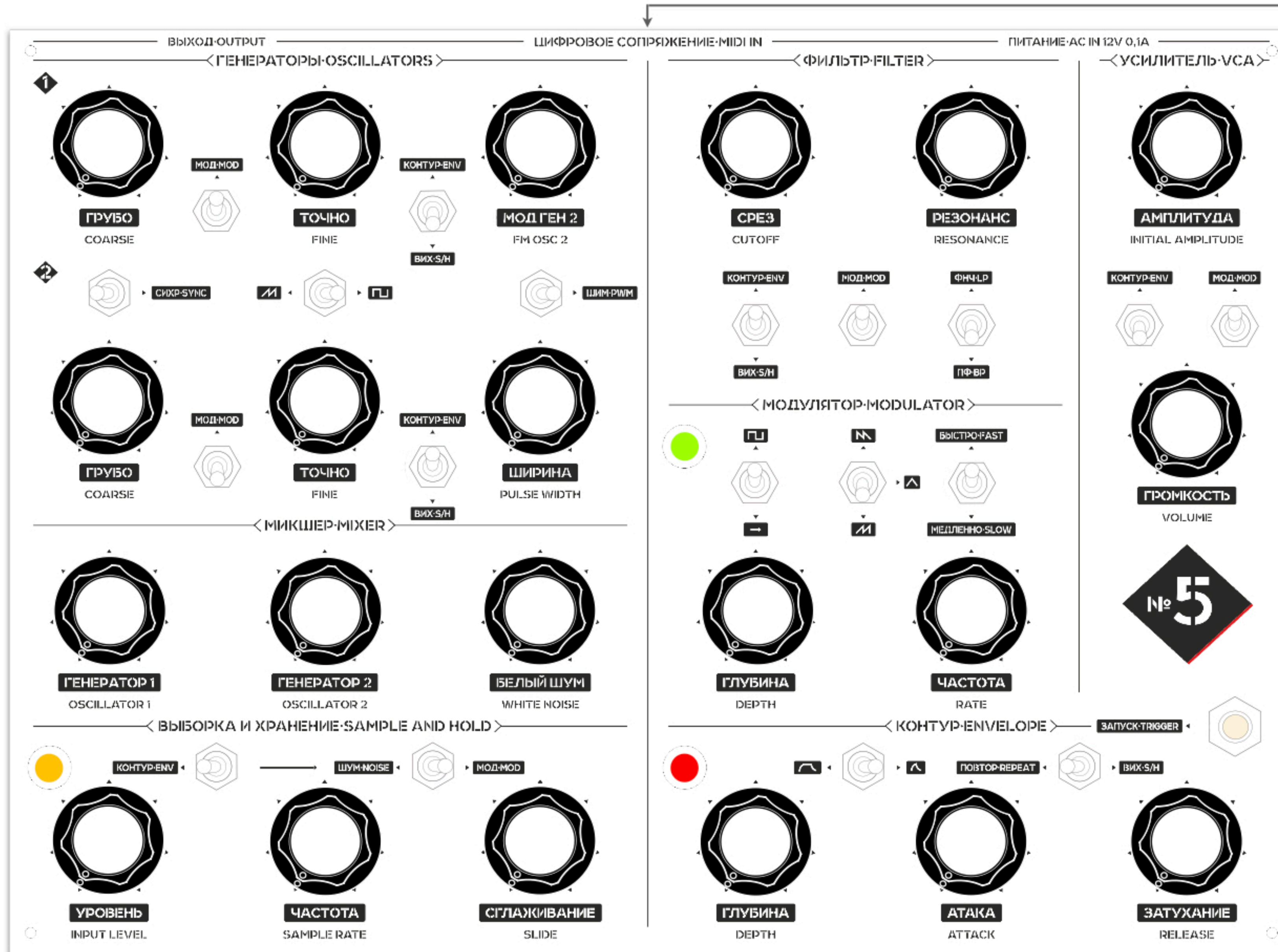


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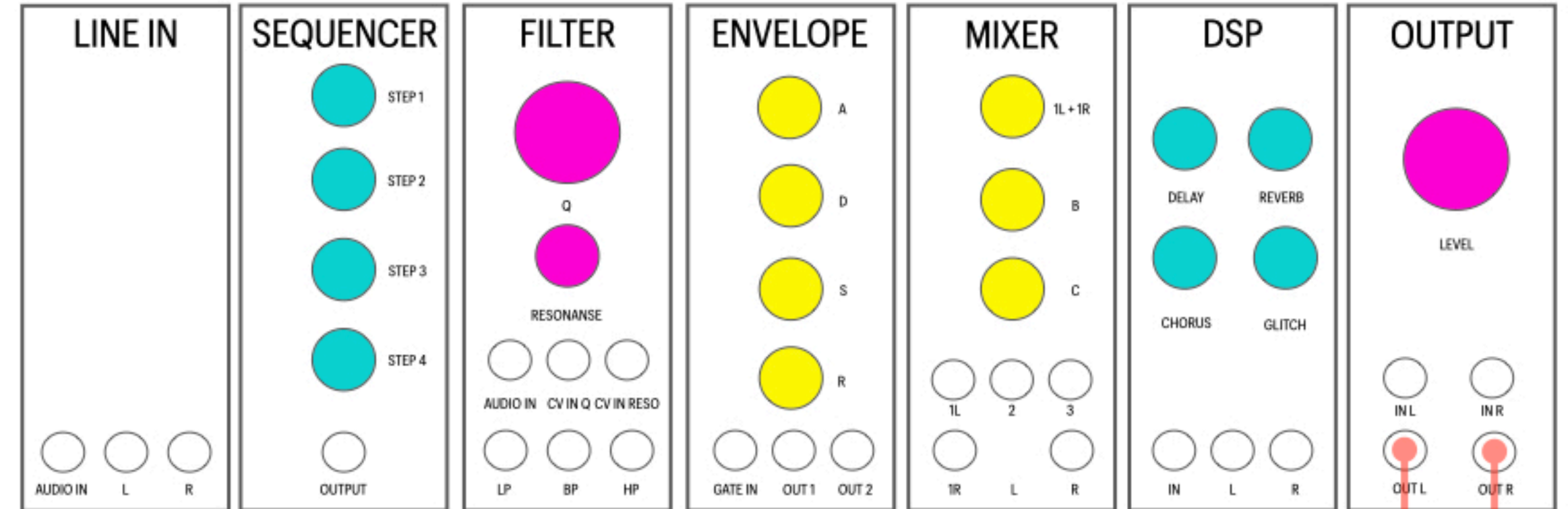
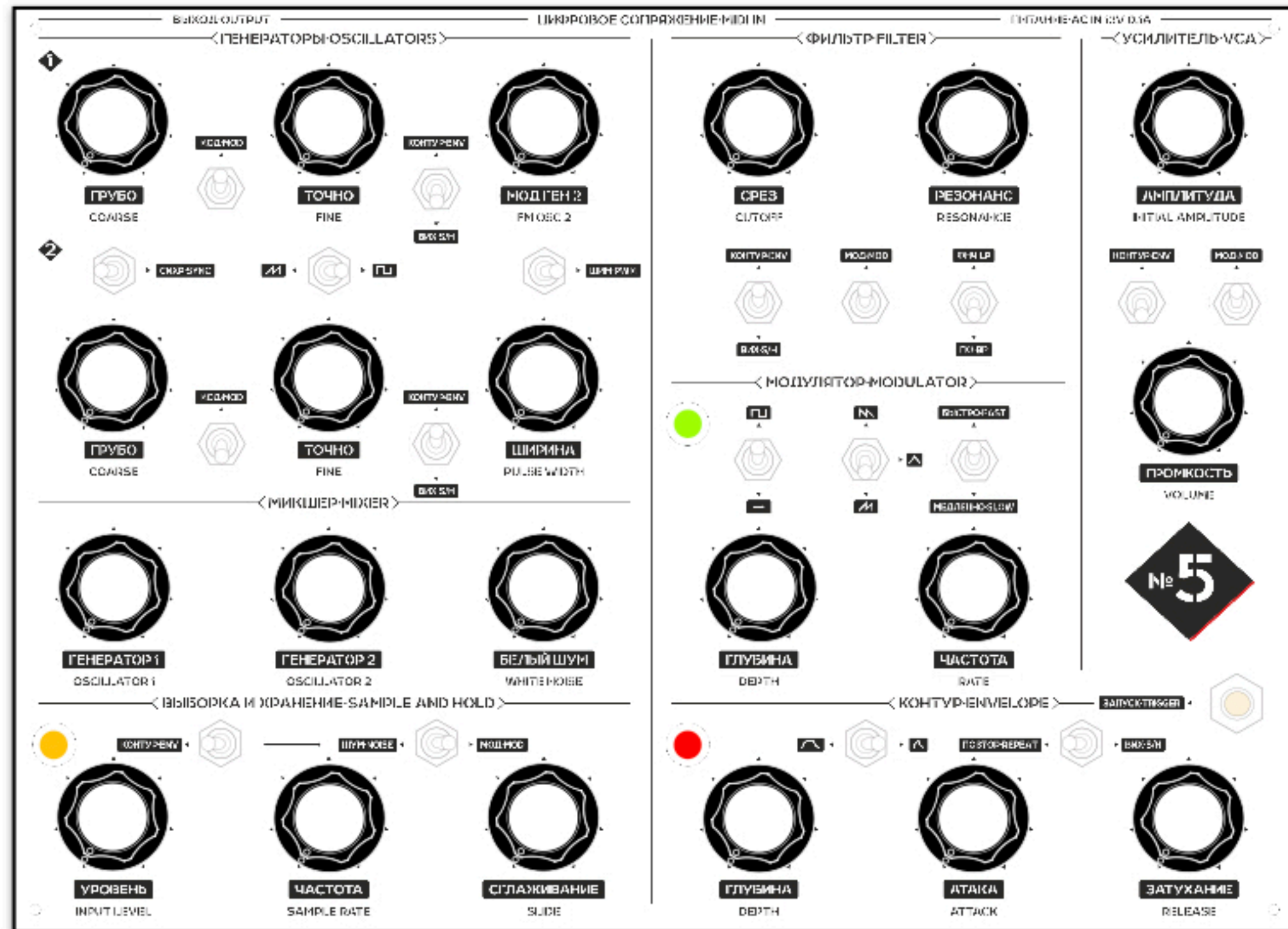
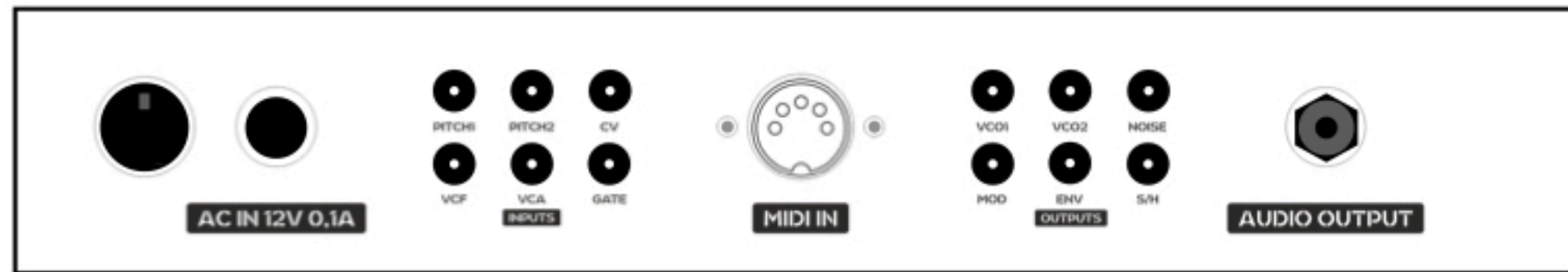
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MIDI controller

MY PATCHES



PATCH RECEPY



SAFETY

SOUND OBJECTS #5 : TECHNICAL DESCRIPTION AND SAFETY

SAFETY MEASURES:

**USE ONLY ORIGINAL POWER SUPPLY (AC 12V 100mA)
DO NOT SPILL WATER ON THE SYSTEM
KEEP AWAY FROM OPENED DIRECT SUNLIGHT AND FIRE
IN CASE OF ANY MECHANICAL DAMAGE, DO NOT OPEN THE UNIT. CONTACT FOR REPAIR.**

**PANEL: ALUMINIUM
BODY: ABS PLASTIC
DIMENSIONS: 225 X 170 X 60 MM
WEIGHT: 1.5 - 1.8 KG WITH POWER SUPPLY
PACKAGING: ZEROTREE HANDMADE BAG FROM ABACCA PLANT AND GRASS BY KERKLAU.NL**

CORRECT DISPOSAL: THIS PRODUCT SHOULD BE HANDED OVER TO AN AUTHORISED COLLECTING SITE FOR RECYCLING WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (EEE). IMPROPER HANDLING 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. CONTACT YOUR LOCAL CITY OFFICE, WASTE AUTHORITY, OR YOUR HOUSEHOLD DISPOSAL SERVICE.

CONTACT

FOR ANY QUESTIONS, CONTACT INFO@MODULARMOON.COM

