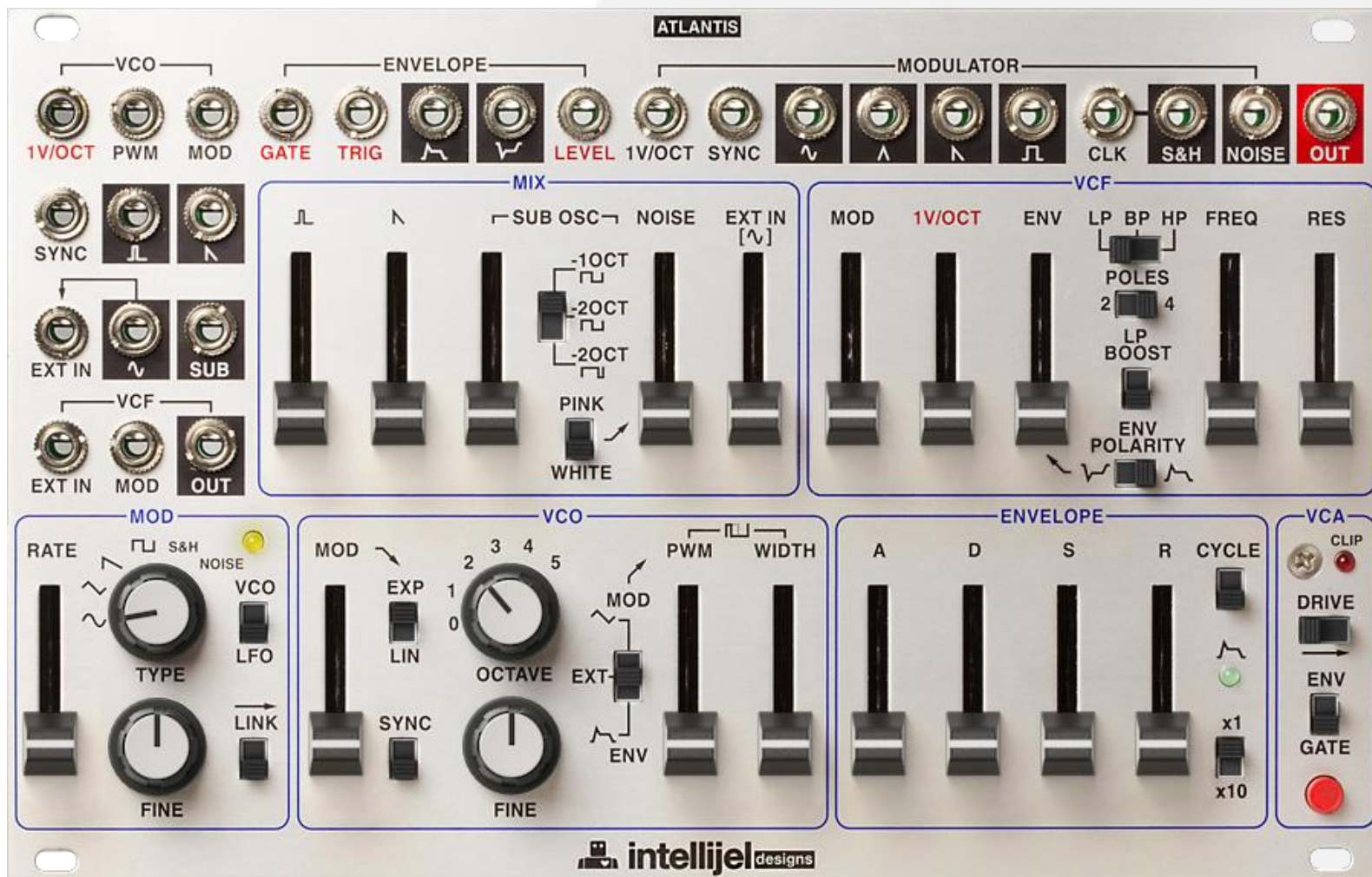


# Intellijel ATLANTIS Illustrated supplement



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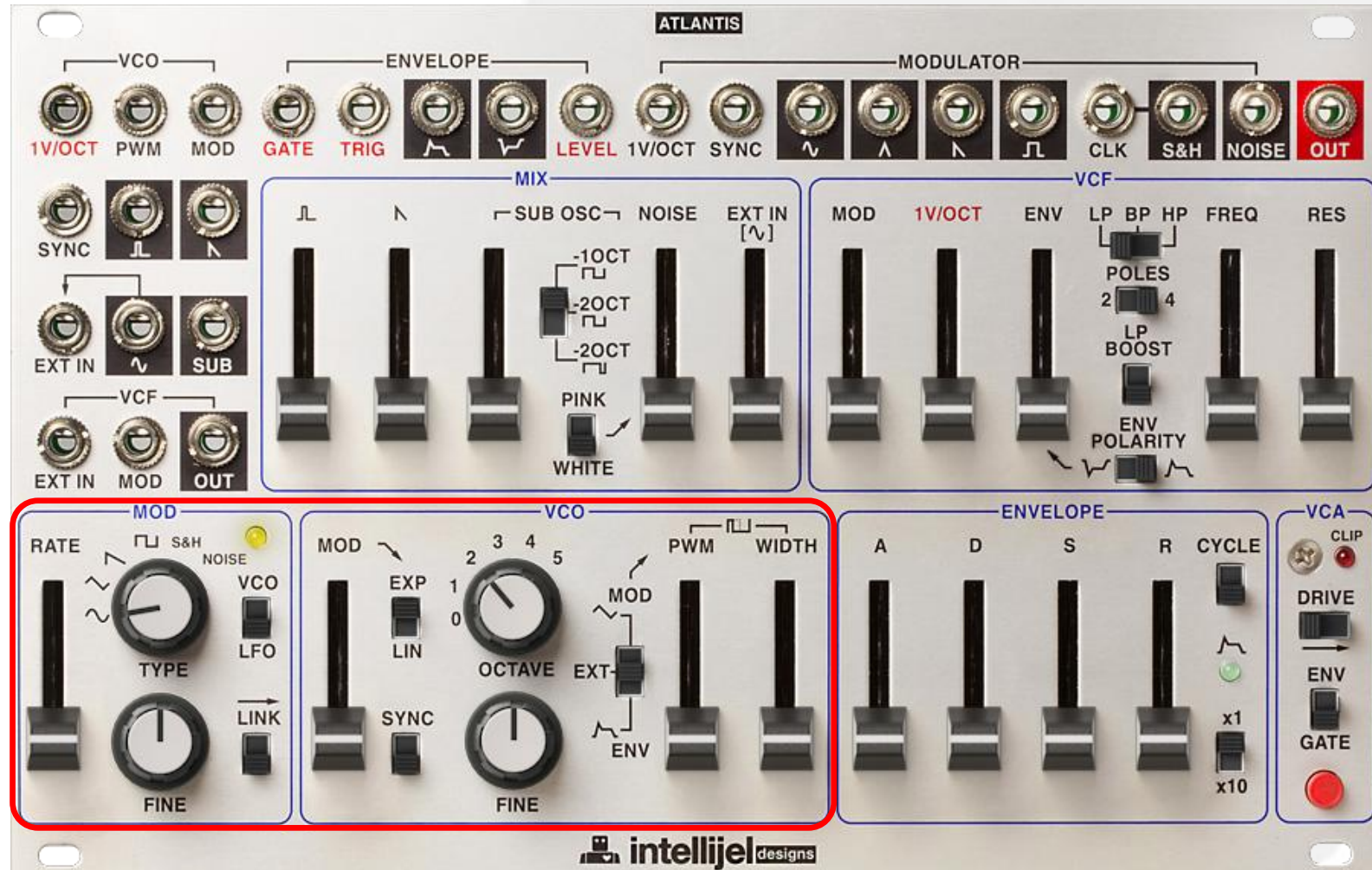
## SH-101 original patches

- 01... FLUTE
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- 05... HORN
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- 07... VIOLIN
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- 23... EFFECT SOUND II
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  - 25... PULSAR
  - 26... GONG
  - 27... FUNKY BASS
- 28... SYNTH VOICE
- 29... WHISTLE
- 30... BARKING
- 31... CHIRPING
- 32... WIND
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# Introduction - part 1

The Atlantis is heavily inspired by the architecture and sound of the classic Roland SH-101. It has always been one of our favorite synths and we really liked how the seemingly limited architecture allowed for all sorts of creative and musically useful sounds to be easily generated.

Just like the 101 it is quick to dial in beautifully rich bass and lead sounds. This module uses **triangle core VCOs** (based on the Dixie core) instead of Saw core which respond much more musically to FM. The **modulation oscillator** can be used as an **LFO** or **VCO** (audio rate) and both track very precisely over 8 or more octaves.

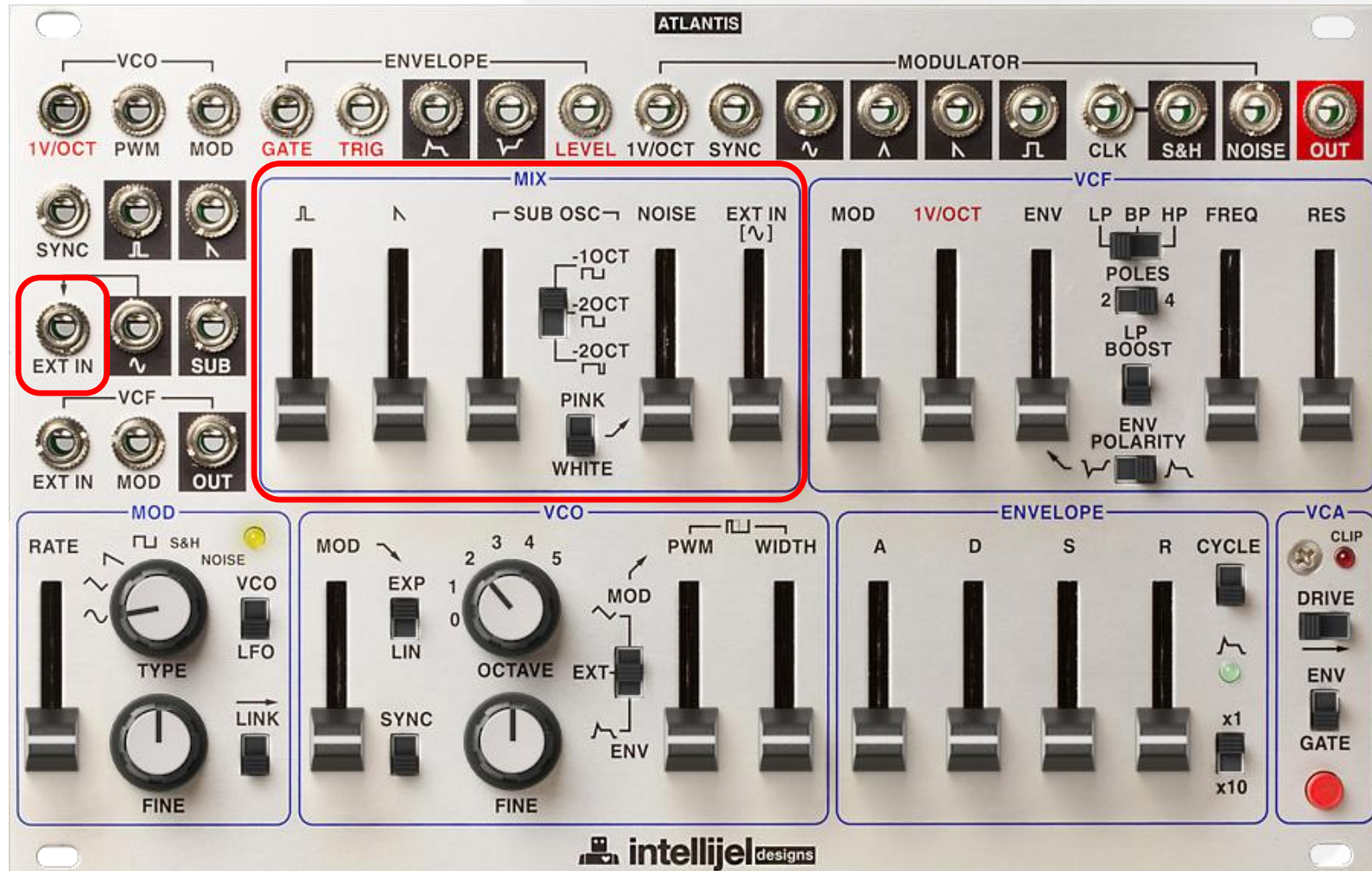




# Introduction - part 2

In the **mixer section** you can adjust the balance of the primary oscillators waveforms including a sinewave which is normalled to the **EXT IN** jack. You could also patch in one of the modulation oscillators waveforms into this channel and be able to operate the Atlantis as a proper two oscillator synth.

There is a switch labelled **"LINK"** which enables the modulation vco pitch to be based as an offset of the primary VCO. This is useful when using it as a stacked dual vco or when you have the mod VCO acting as the linear FM source for the primary vco and wish to maintain the ratio.

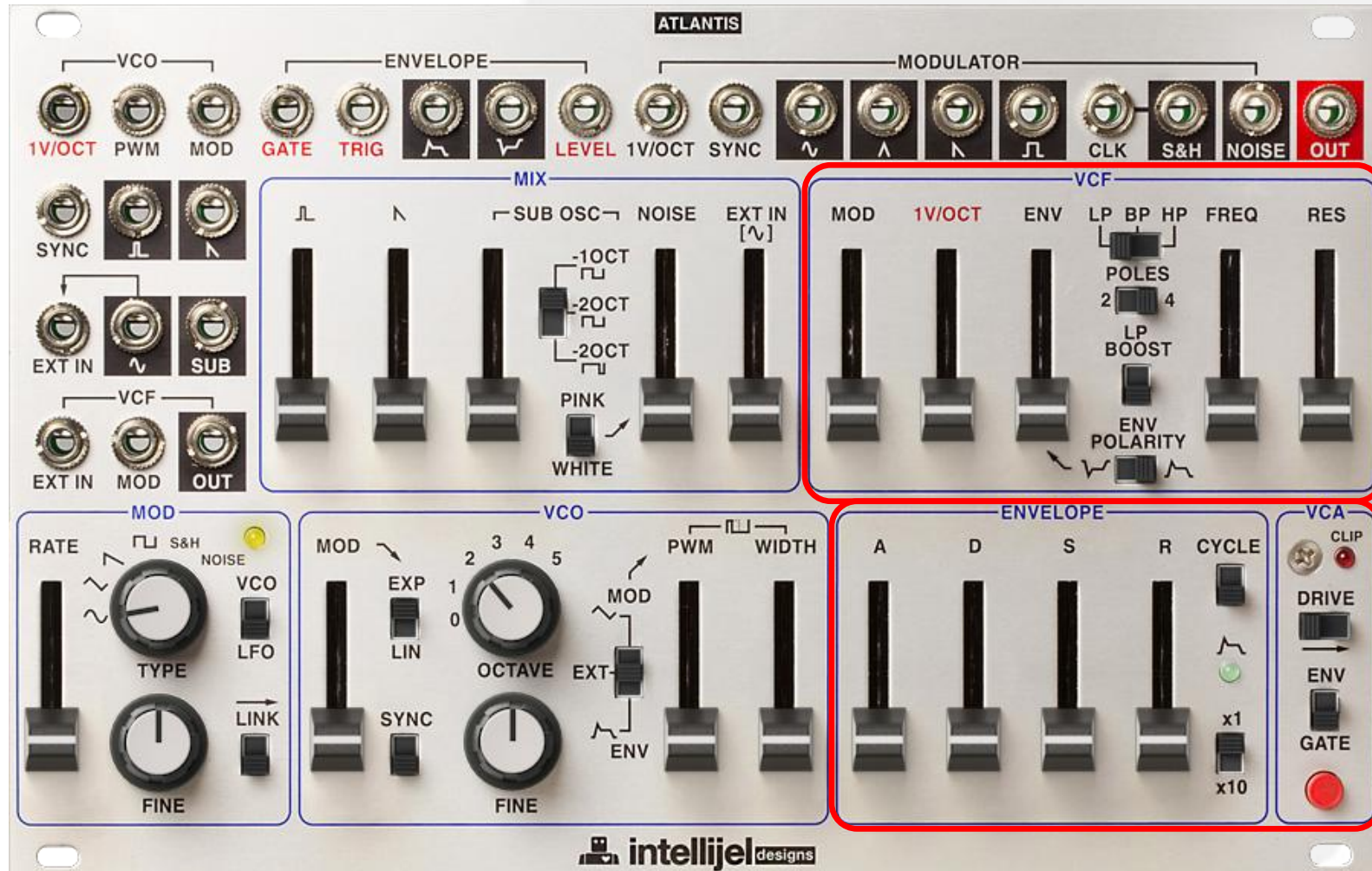




# Introduction - part 3

The **filter section** is a Roland style cascaded 4 pole multimode filter with **LP**, **BP** and **HP** modes. The **LP Boost** switch engages a special mode useful for the LP that produces a much fatter and prominent sound that is not drowned out by resonance (unlike the original SH-101). The filter self-oscillates to produce a very clean sine wave which also tracks 1V/Oct. Between the Mod VCO, Primary VCO, Sub Oscillator and resonating filter it is possible to layer up to four different pitches at one time.

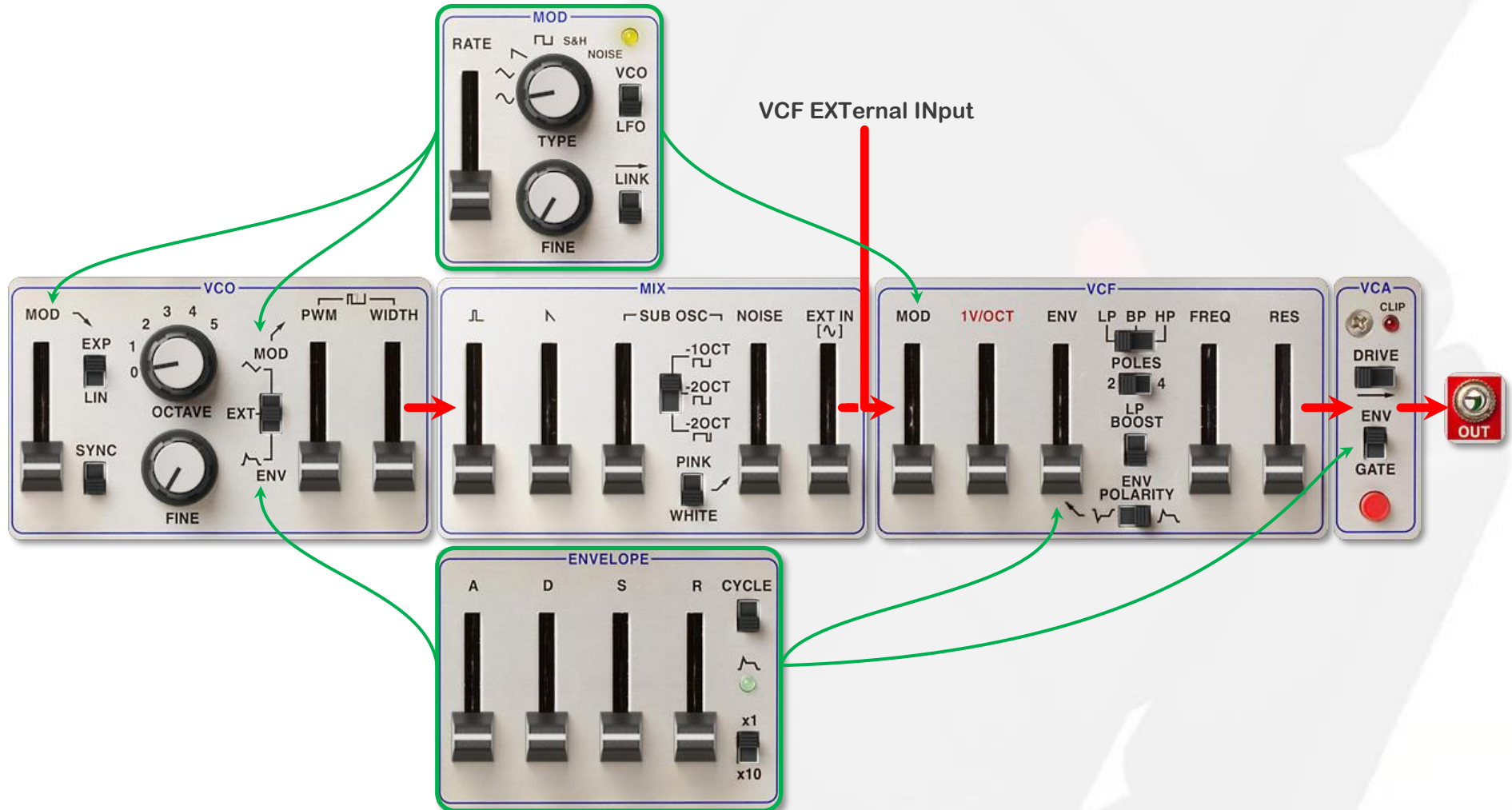
The **envelope section** is an **ADSR** with a dual range switch. It also can be set to a looping mode which can be gated on/off externally. The **output VCA** feeds into a two level output clipping circuit that you can use to get a much ballsier/dirtier sound.



# Hard-linked synth voice

Here is a simplified representation of hard-linked voice of the Atlantis, that can be use as a full-featured classic synth voice.

Now if you consider in/outputs for each section, you can see that you can use each of them independently and make them interact in DC or AC range. By this way, you can walk trough hyperspace.



# Primary VCO section





# Overview

The Primary VCO section consists of a triangle-core VCO that produces pulse, saw, sine and sub waveforms. You can frequency modulate this section with MOD bus, in EXPonential or LINear manner. The pulse WIDTH can be manually adjusted and modulated by triangle wave of MODulation bus, ENVELOPE or an EXTERNAL signal. You can drive this VCO in 1V/OCT and adjust range with OCTAVE 6-positions switch and FINE knob.

All waveforms are routed to the MIX section.

**Range** : ~15Hz - 1000Hz

set frequency MODulation level

set Pulse Width Modulation

set pulse WIDTH



Primary VCO OUTPUTS

set OCTAVE range

set FINE frequency

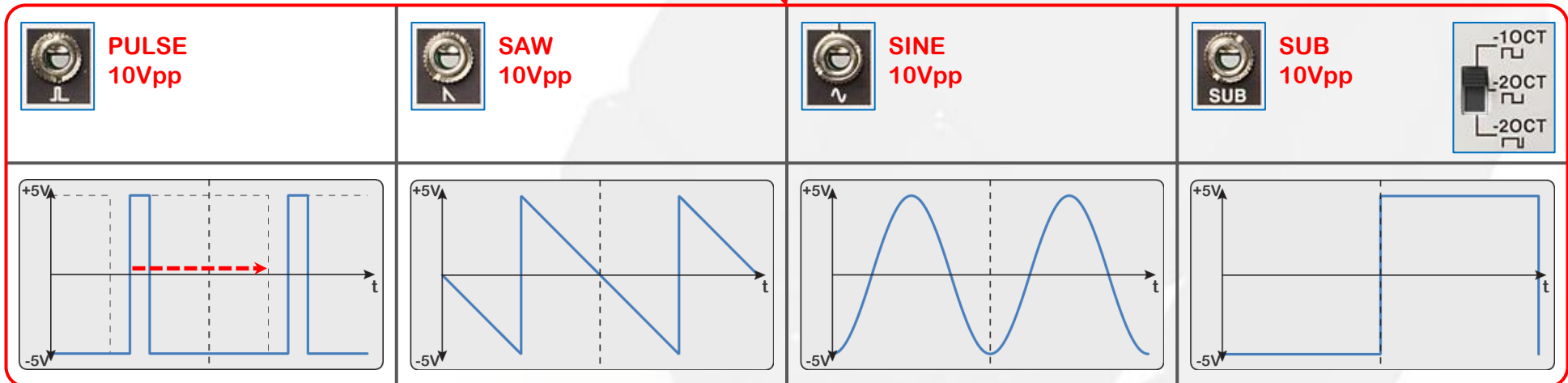
# Waveforms

4 waveforms are available at Primary VCO outs : pulse, saw, sub octave (1 or 2, depending of SUB switch position in MIXER section) and sine.

Those outs are unaffected by MIXER section levels settings.



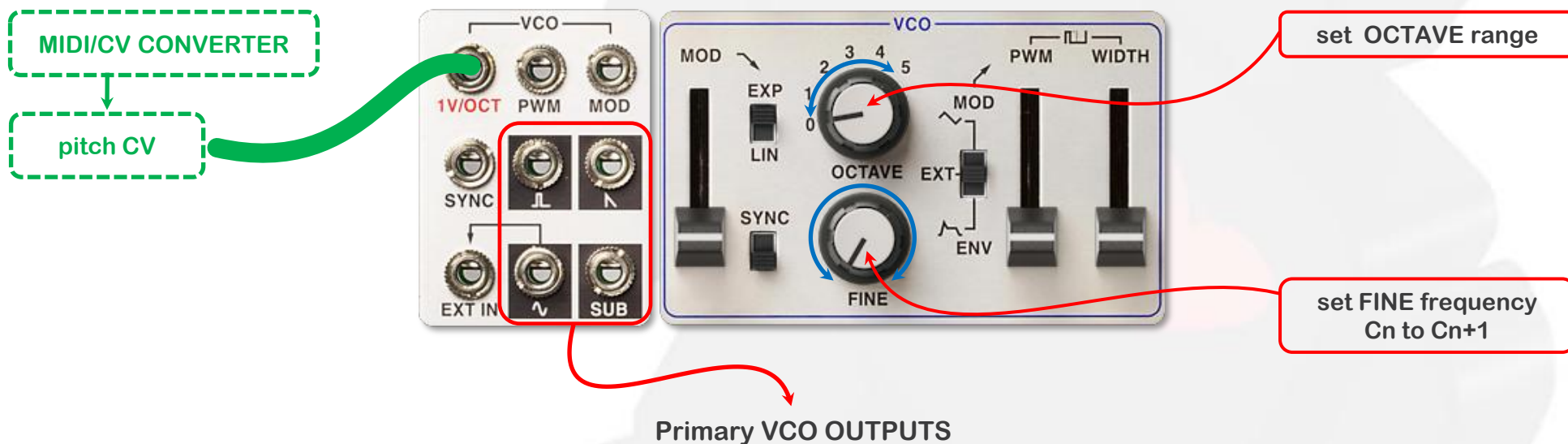
adjust pulse WIDTH







# Range & tracking

Initial Primary VCO range is ~16Hz (0.063 sec.) to 1000Hz (audio). You can expand this range by using MOD bus with positive or negative signal control (AC or DC source) to go to slow LFO or fast audio range.

Atlantis tracks very well over 8 octaves. Set the initial frequency with the **OCTAVE** knob and adjust with the **FINE** knob over one octave. Control it with the **1V/OCT** input. **FINE** knob covers 1 octave range from CCW to CW.



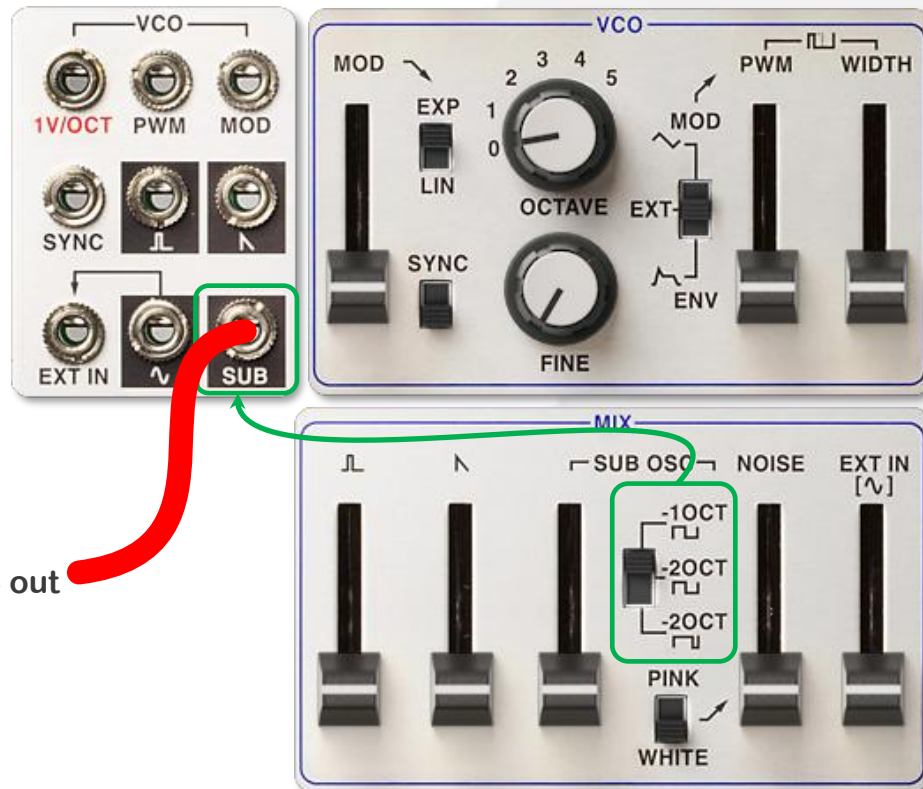
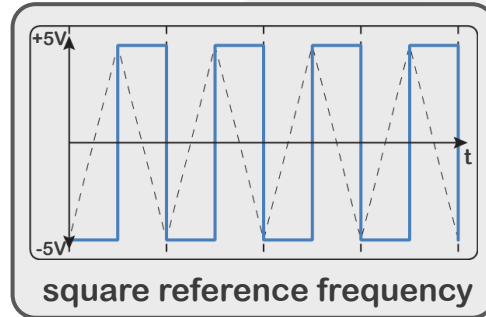
## Primary VCO OUTPUTS

					
Range : C0 - C1 ~16Hz - 33Hz	Range : C1 - C2 ~ 33Hz - 66Hz	Range : C2 - C3 ~ 66Hz - 125Hz	Range : C3 - C4 ~ 125Hz - 250Hz	Range : C4 - C5 ~ 250Hz - 500Hz	Range : C5 - C6 ~ 500Hz - 1000Hz

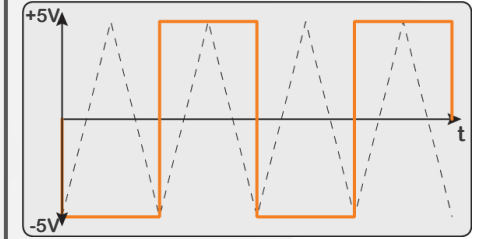


# SUB OSCillator

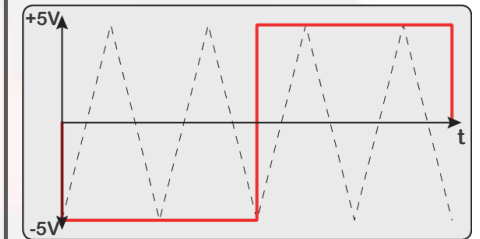
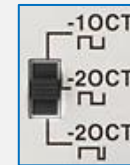
**SUB** out is affected by SUB OSCillator switch position in the MIXER section. SUB can be 1 or 2 octaves down relative to the Primary oscillator frequency, with an alternative pulse waveform for the -2OCT position.



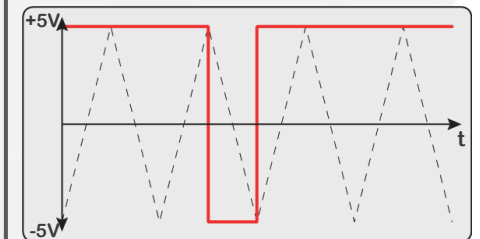
-1 OCTave



-2 OCTaves



-2 OCTaves



# Pulse WIDTH

Pulse WIDTH produces a square wave at middle slider position. Note that the pulse doesn't disappear at the min and max positions although this can be achieved via the PWM control (see page 07).

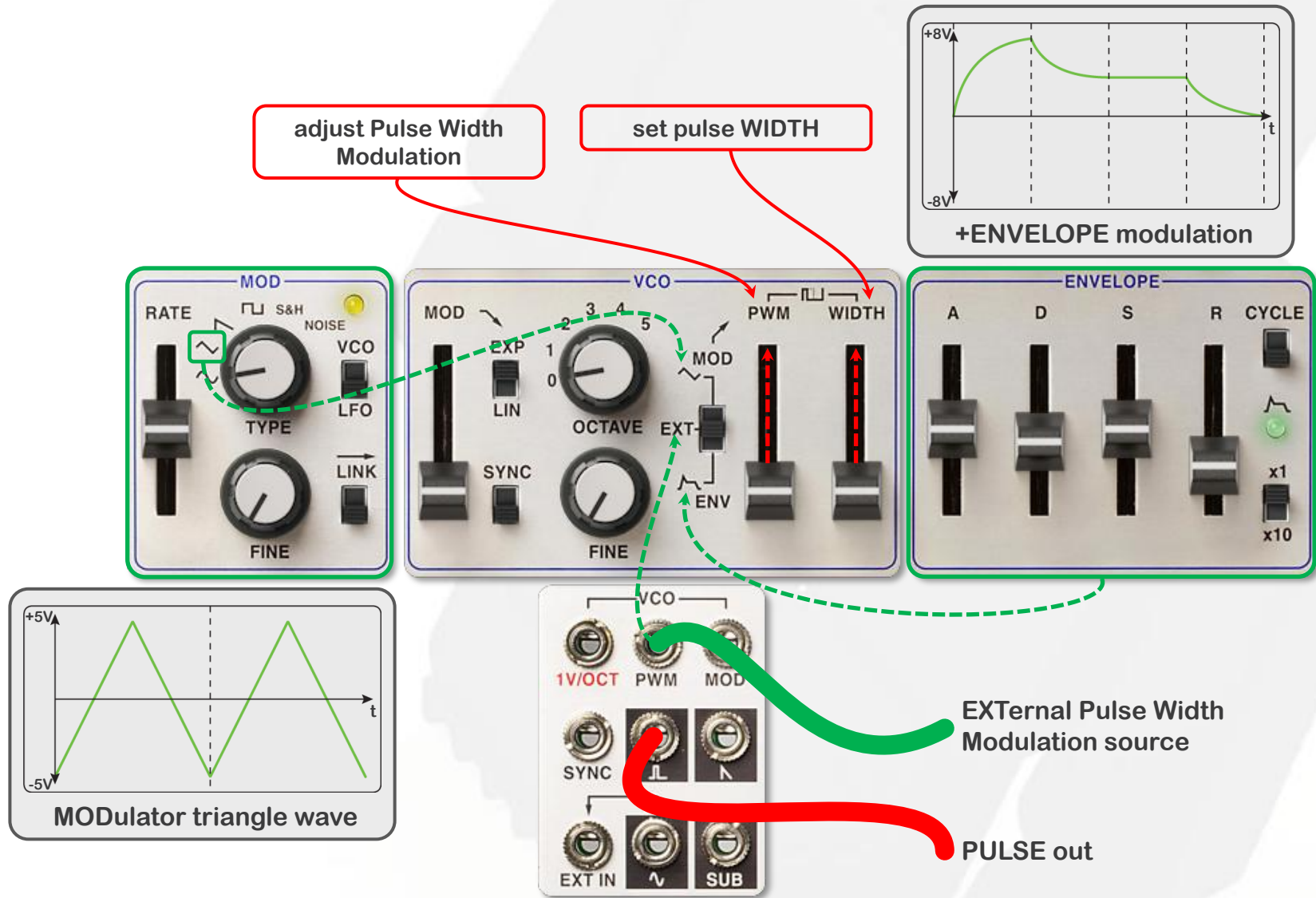
adjust pulse WIDTH

PULSE out

Setting	Waveform Description
MAX	Wide square wave pulse with a high duty cycle, ranging from -5V to +5V.
MED	Medium square wave pulse with a 50% duty cycle, ranging from -5V to +5V.
MIN	Narrow square wave pulse with a low duty cycle, ranging from -5V to +5V.

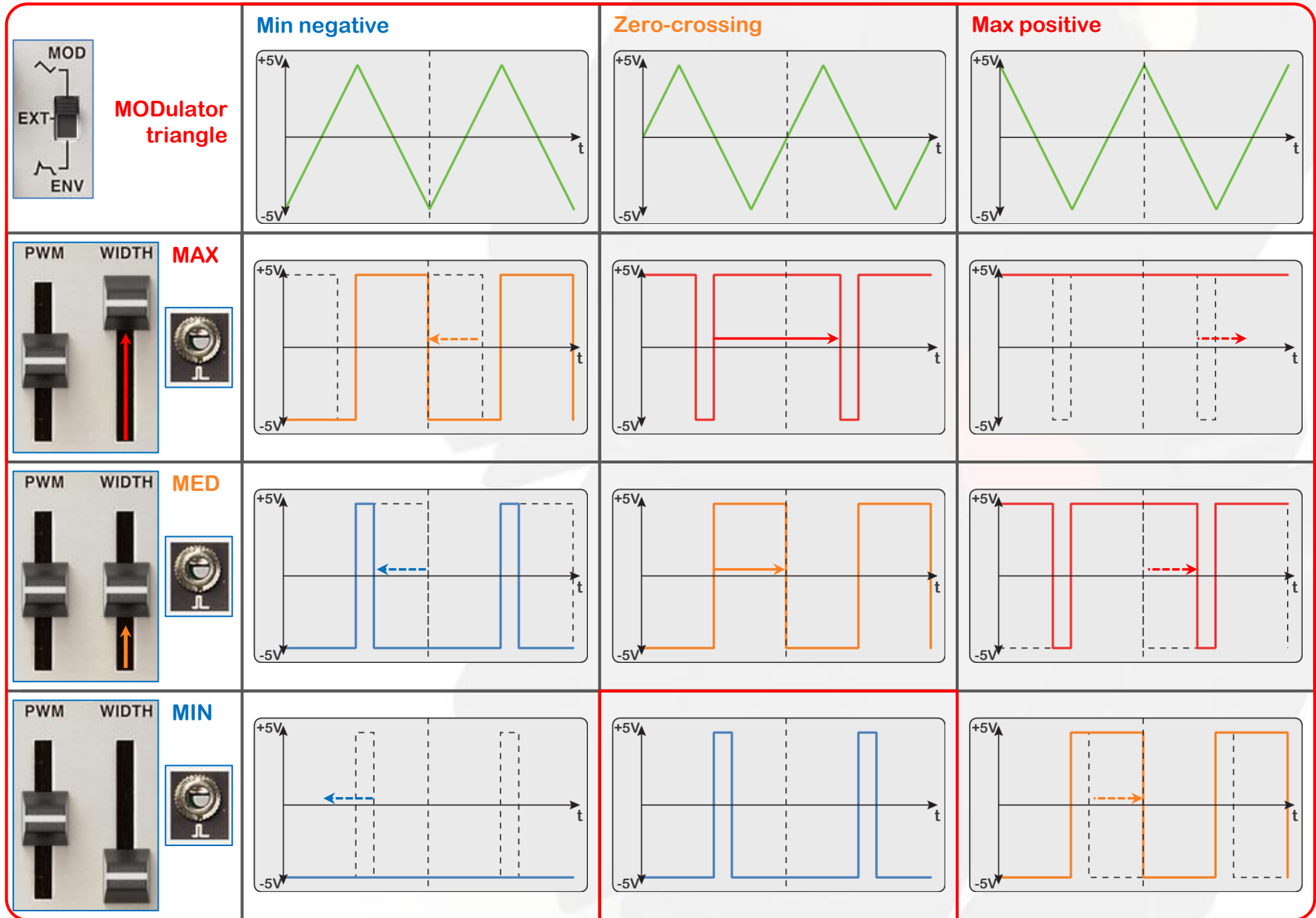
# Pulse Width Modulation

Pulse width can be adjusted by both the manual slider setting and the PWM signal. The PWM switch selects the source for the pulse width modulation signal : triangle wave from MODulator VCO, positive ADSR from ENVELOPE or EXTERNAL PWM signal.





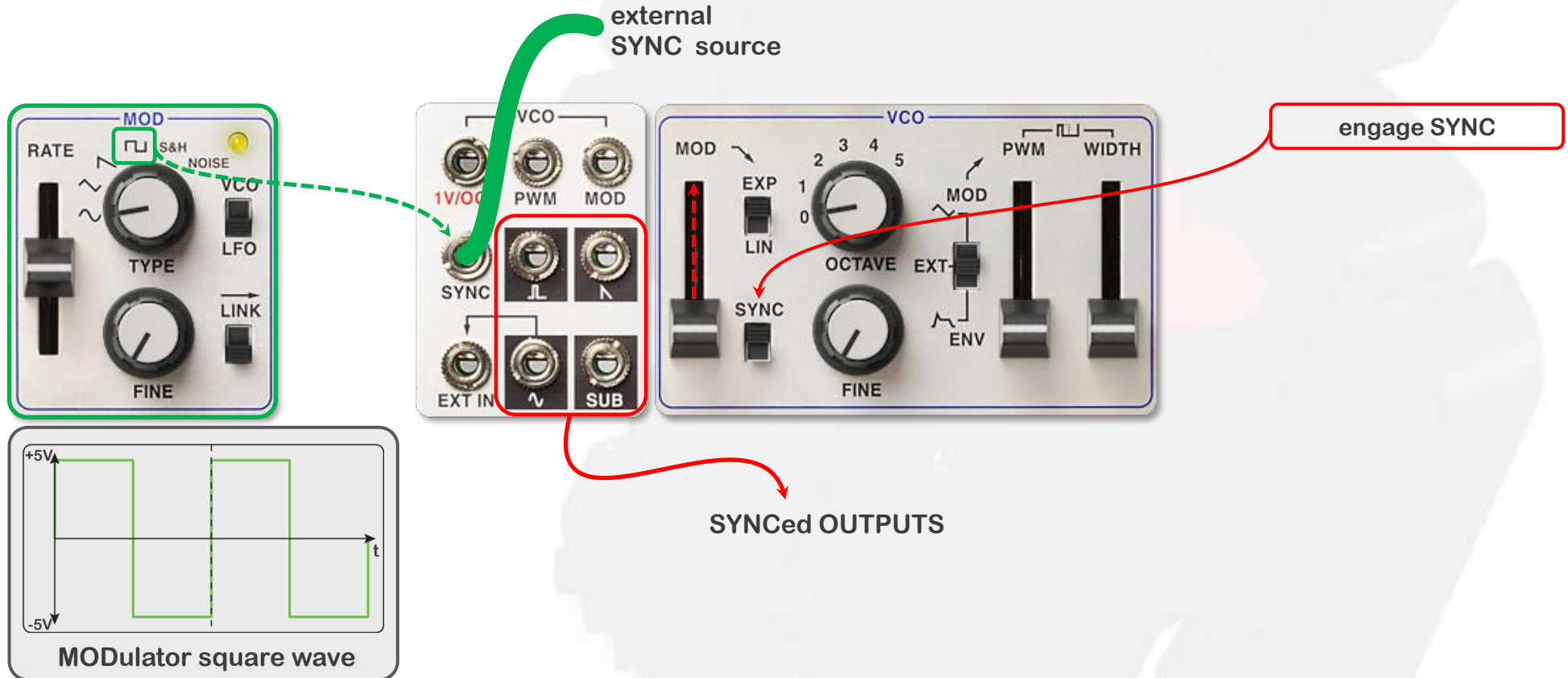
# PWM chart - MODulator cancelling scan



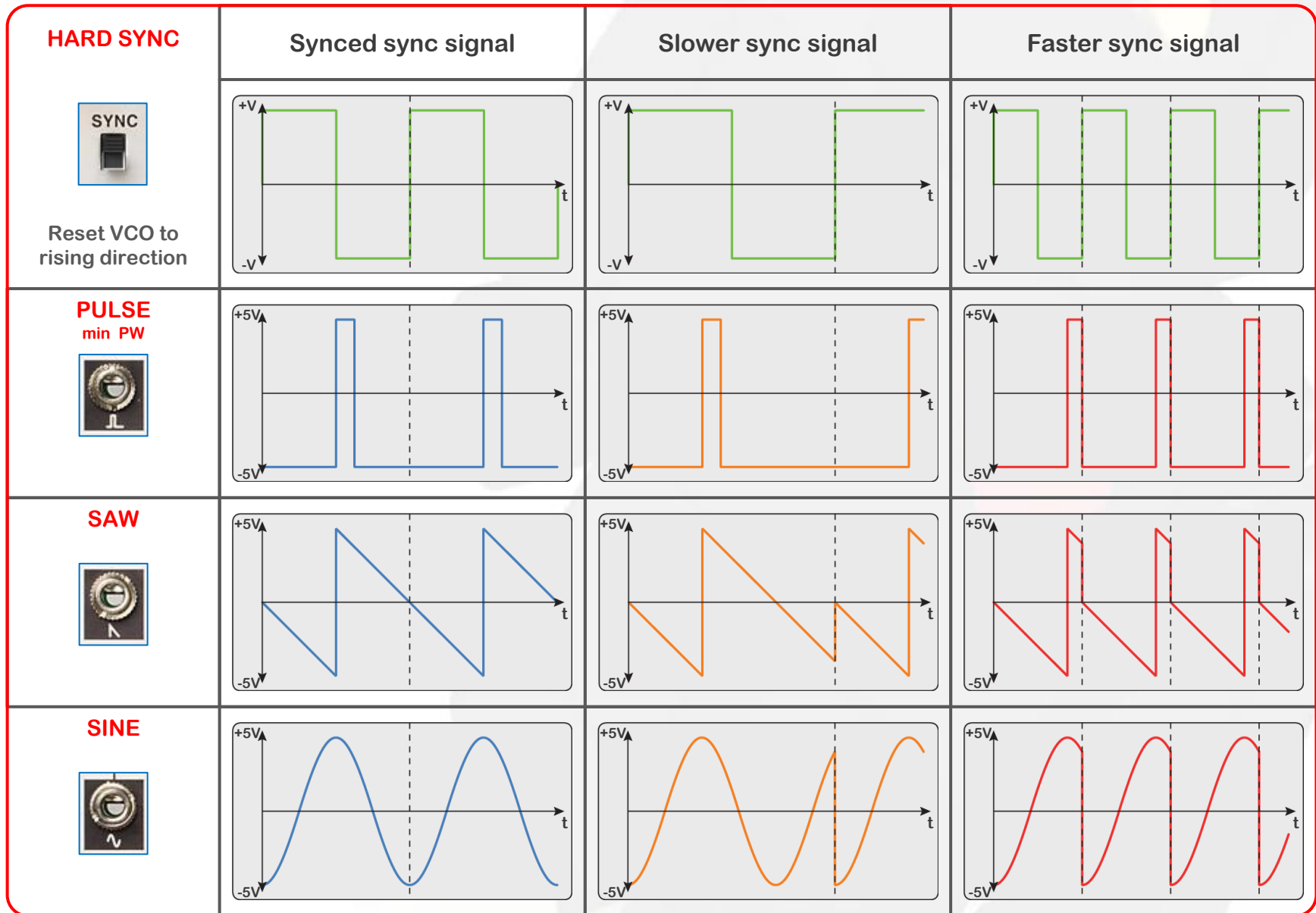
# Hard SYNC

The **SYNC** switch allows the Primary VCO to be hard-synchronized to an external source or the square wave from MODulator. SYNC of Primary VCO is normaled to the square wave of MODulator, you can break this normal with an external source patched at the SYNC input.

SYNC signal resets triangle core to the start of rising edge. Note that SUB OSCillator can reset in negative or positive domain.

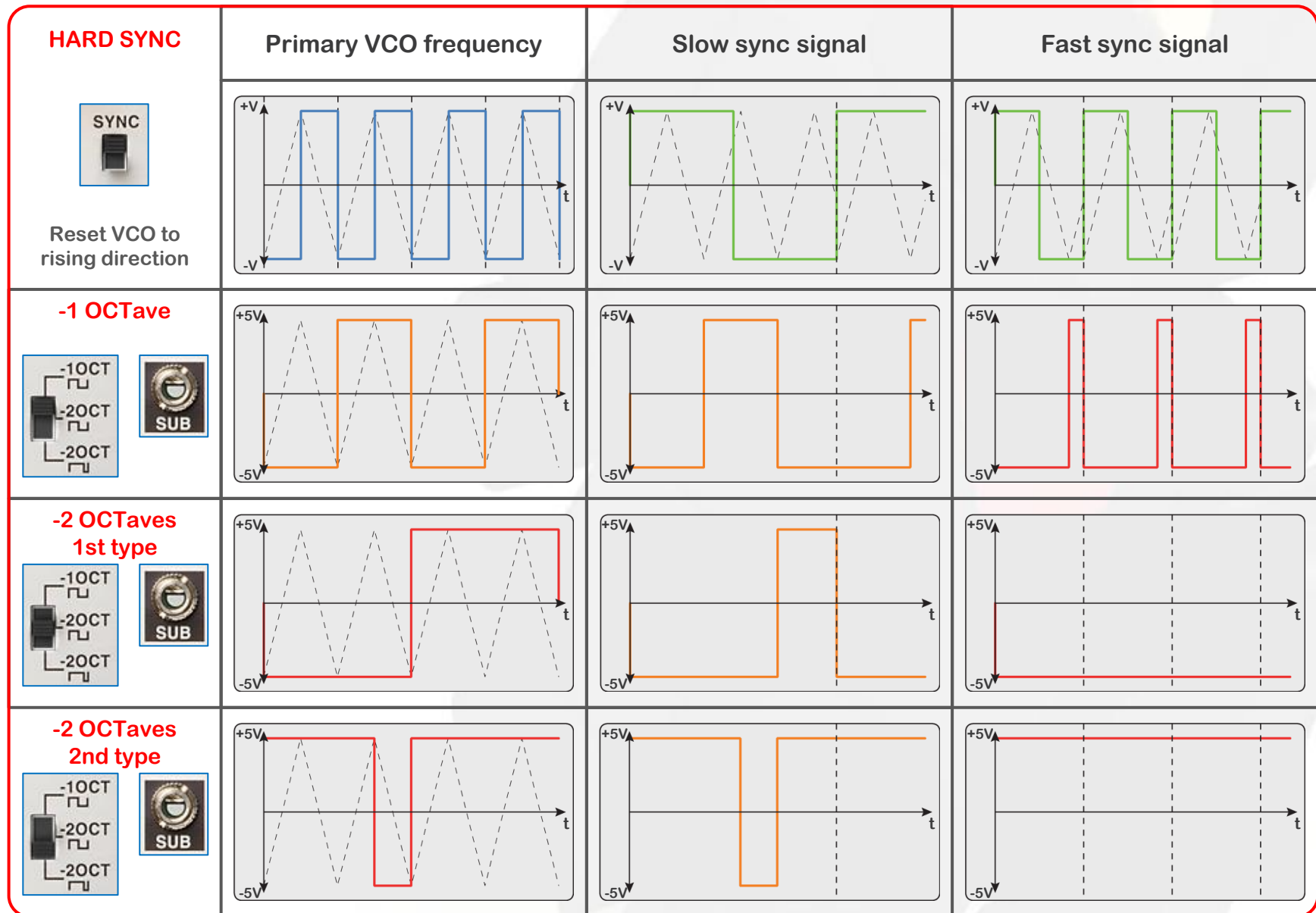


# Hard SYNC chart - WAVES





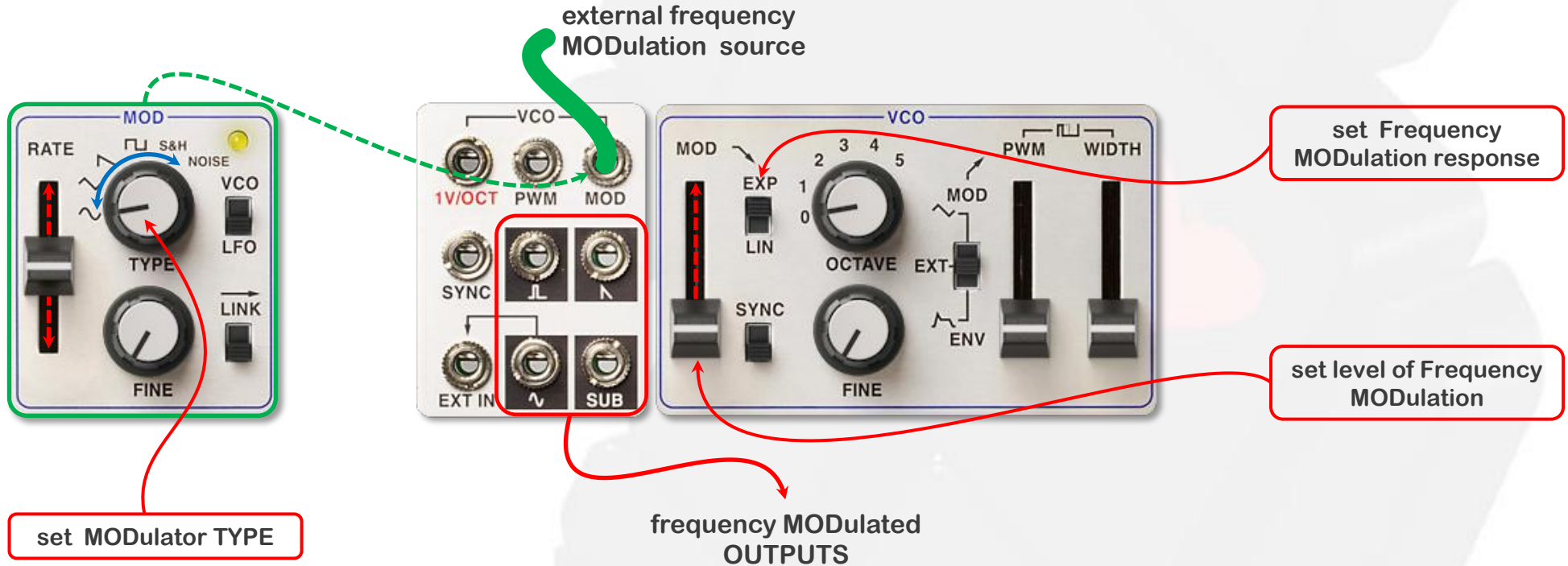
# Hard SYNC chart - SUB



# Frequency MODulation

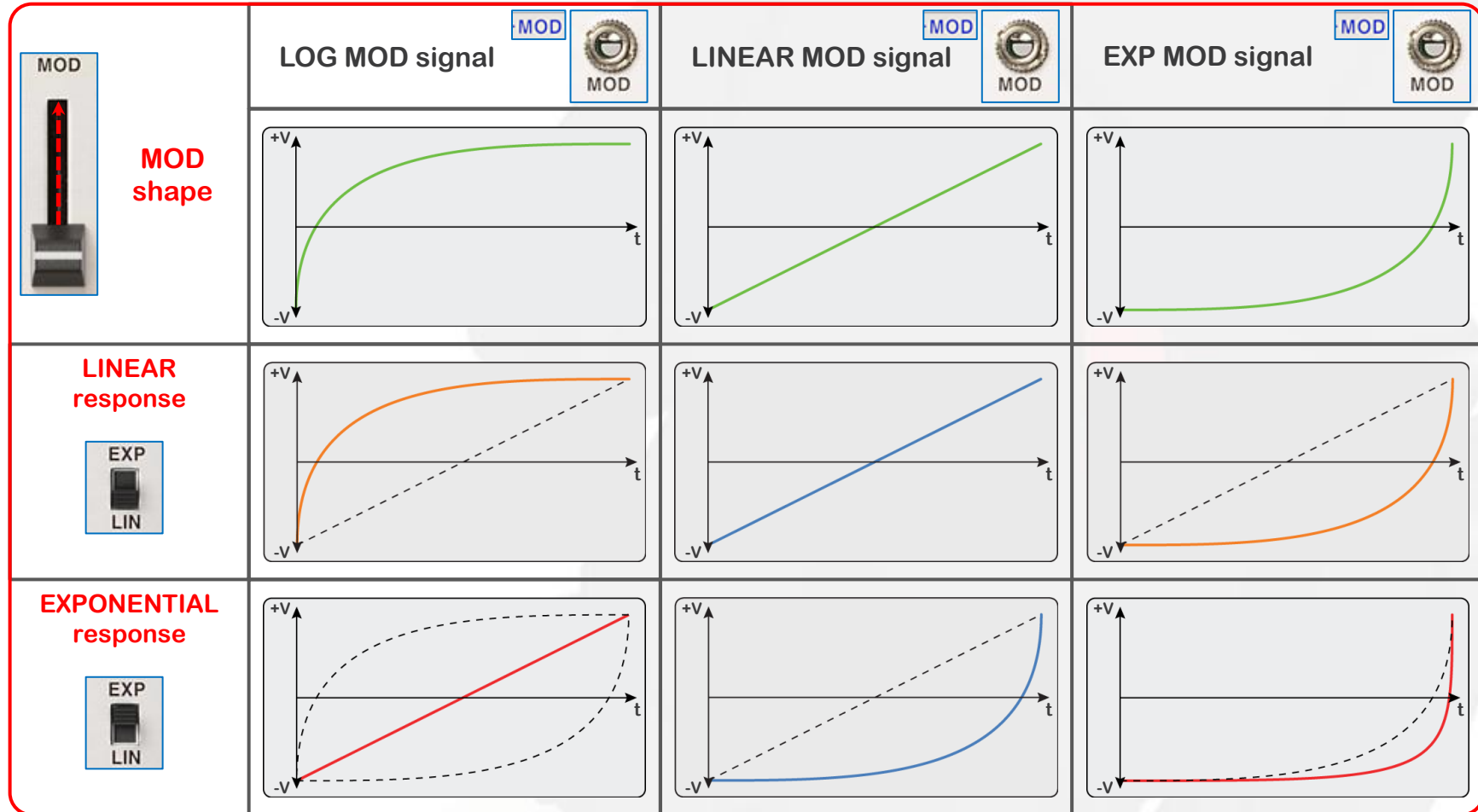
**MOD** bus as control over Primary VCO frequency, according to its slider position. You can make **LIN FM** or **EXP FM**, determined by the **EXP/LIN** switch position. At maximal slider position, MOD acts as a classic 1/OCT FM if set in EXP mode.

The **MOD** input of the Primary VCO is normaled to MODulator VCO section, a powerful modulation source (LFO or VCO range). You can break this normal by patching an external modulation source in the MOD input of the Primary VCO section.

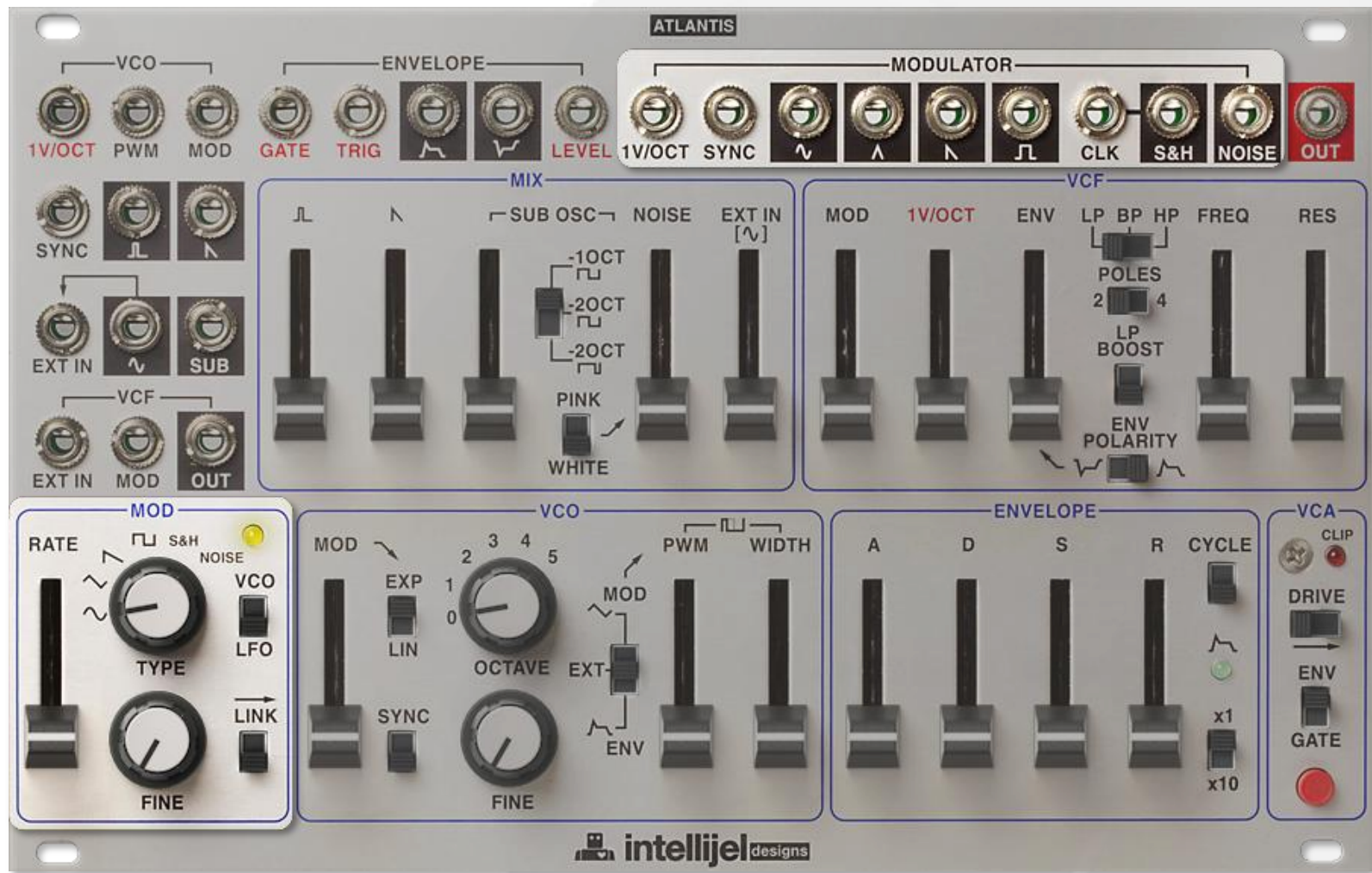


# EXP/LIN MOD response chart

You can set **EXP** or **LIN** response for MODulation frequency of the Primary VCO. LIN mode is best suited for FM sounds, while EXP response will act as a standard 1V/OCT control if MOD slider is set to the maximum position.



# MODulator section



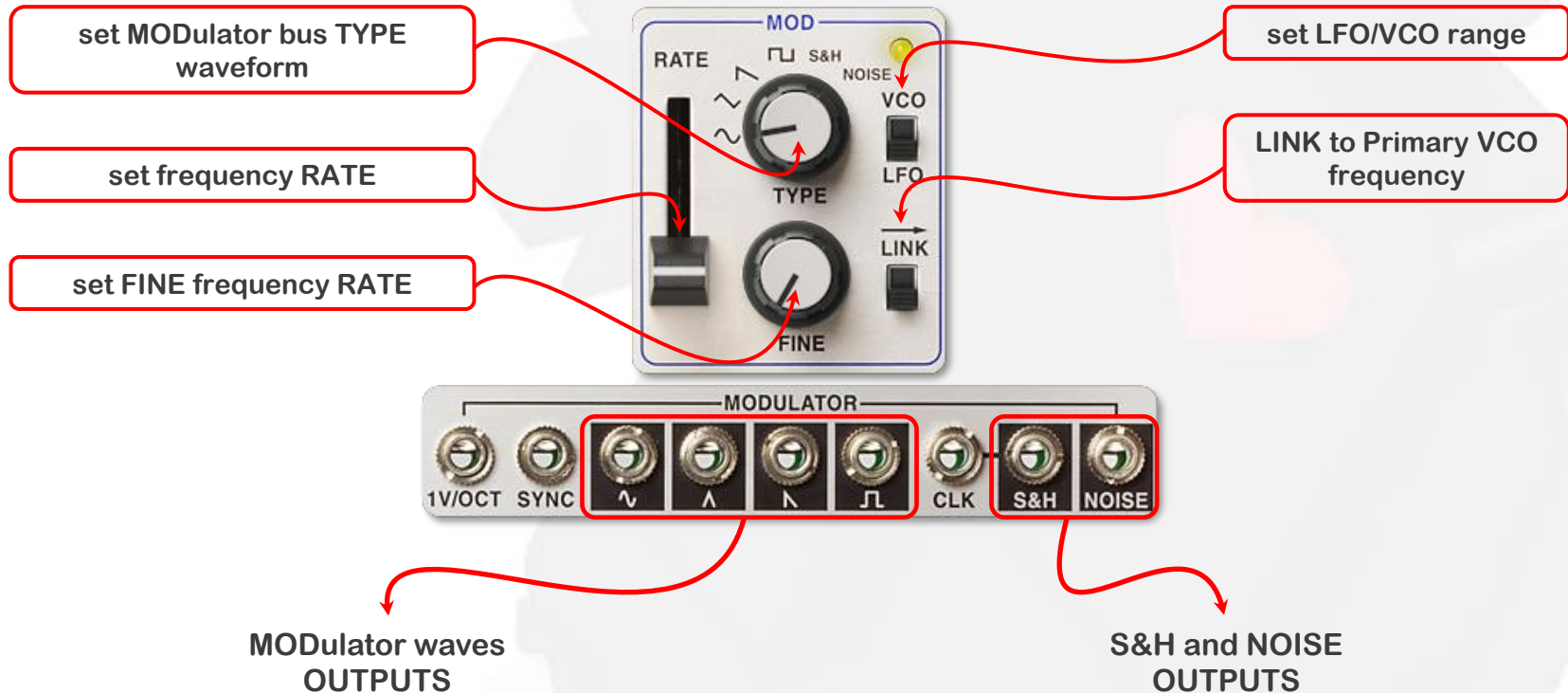


# Overview

The MODulator section is a triangle-core LFO/VCO that produces sine, triangle, saw, square waveforms combined with noise and Sample&Hold generators. You can frequency modulate this section at 1V/OCT over 8 octaves. The 6-positions knob selects the wave which is routed to the MOD bus. You can switch between **LFO** and **VCO** range and then use Atlantis as a dual triangle-core VCO generator. Sample&Hold input is linked to the noise generator and can be clocked by an external signal. The **LINK** switch allows to synchronise the frequency of the MODulator at a multiple of the Primary VCO core frequency.


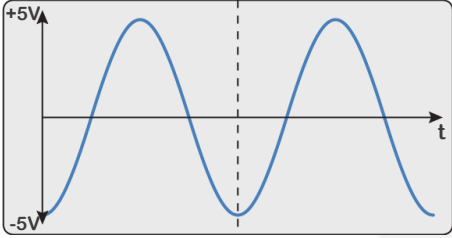

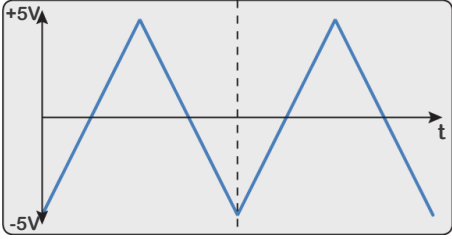

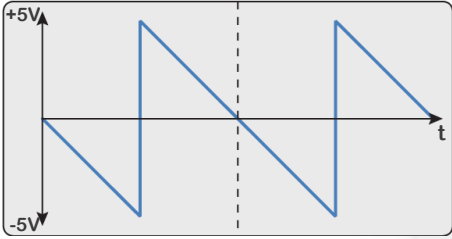
**LFO Range** : ~0.01 Hz (100 sec.) - 200Hz (0.005 sec.)

**VCO Range** : ~1Hz (1 sec.) - 20 000Hz (audio)


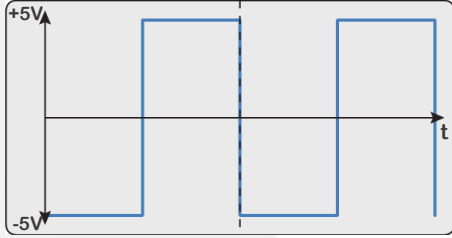

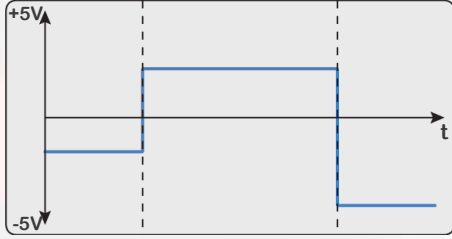

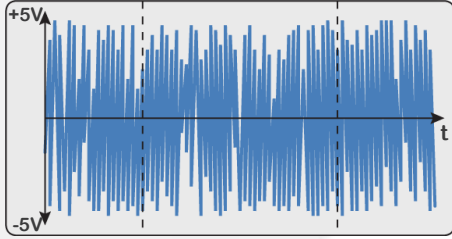


# Waveforms

Sine, triangle, saw, square, Sample & Hold and noise (white or pink) are available at the MODulator outputs.

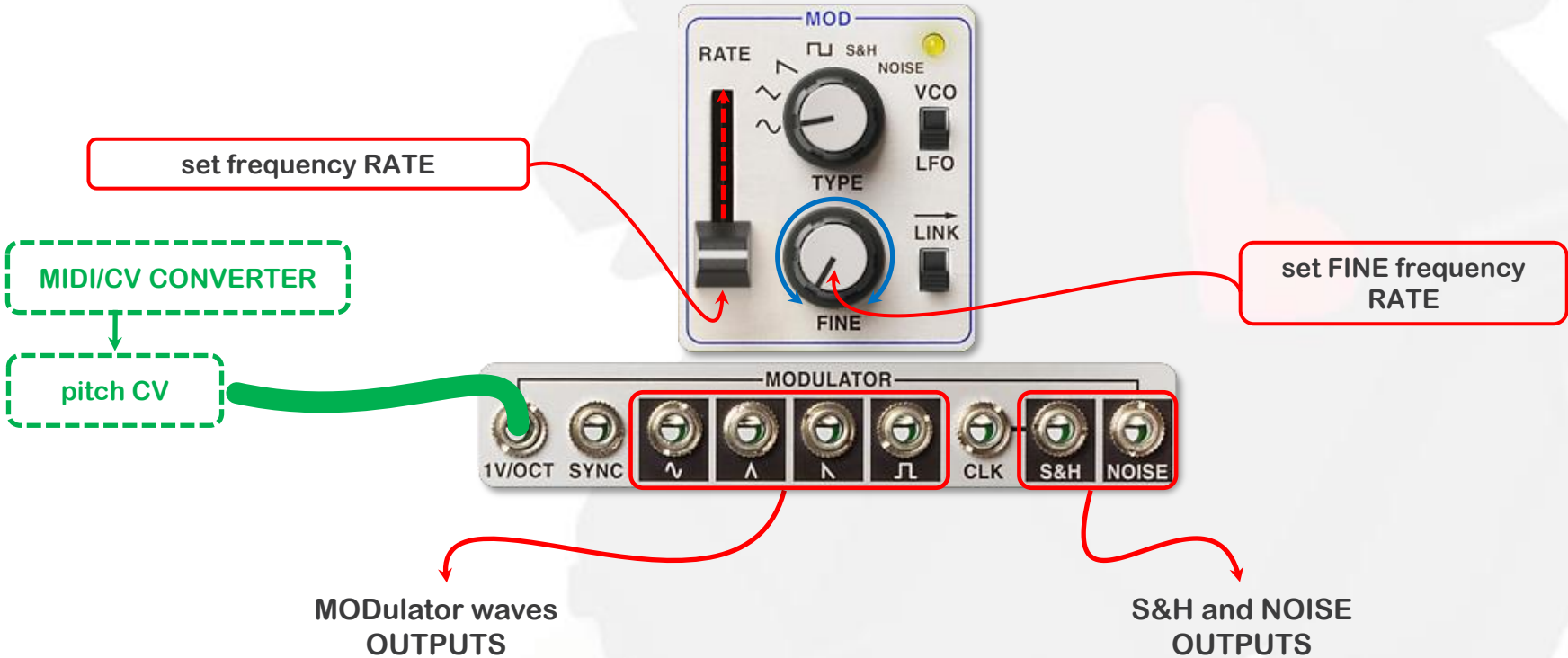
<b>SINE 10Vpp</b> 	
<b>TRIANGLE 10Vpp</b> 	
<b>SAW 10Vpp</b> 	



<b>SQUARE 10Vpp</b> 	
<b>Sample &amp; Hold</b> 	
<b>NOISE</b> 	

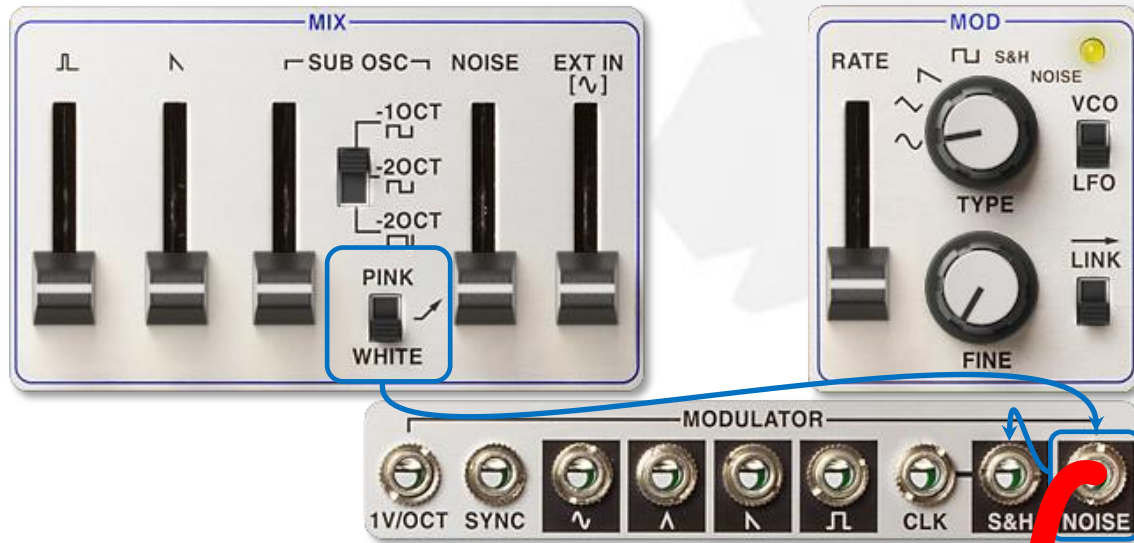
# Range & tracking

MODulator range is ~0.01Hz (100 sec.) to ~200Hz (audio) in LFO mode and ~1Hz (1 sec.) to ~20kHz (audio) in VCO mode (you can expect an approximative x100 factor between LFO and VCO mode). You can adjust raw frequency with the RATE slider and set FINE frequency with rotary knob. You can control the MODulator frequency with the 1V/OCT input over 8 octaves with very good tracking.



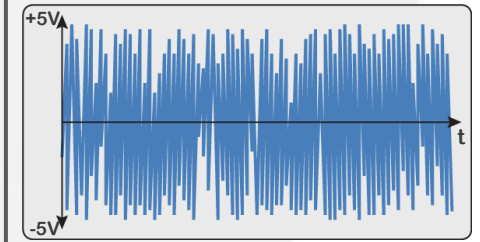
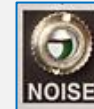
# NOISE

**NOISE** generator can produce **WHITE** or **PINK** noise, depending on the position of the related switch in the MIXER section. **NOISE** is routed to the Sample&Hold to produce random voltages, so by switching between **WHITE** or **PINK** noise you can change the response range of the S&H section.

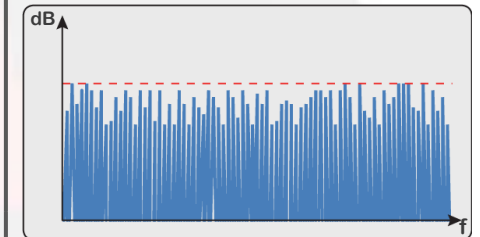


NOISE out

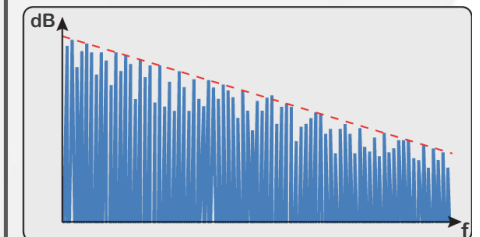
**NOISE**  
Audio illustration



**WHITE NOISE**  
equal energy per hertz



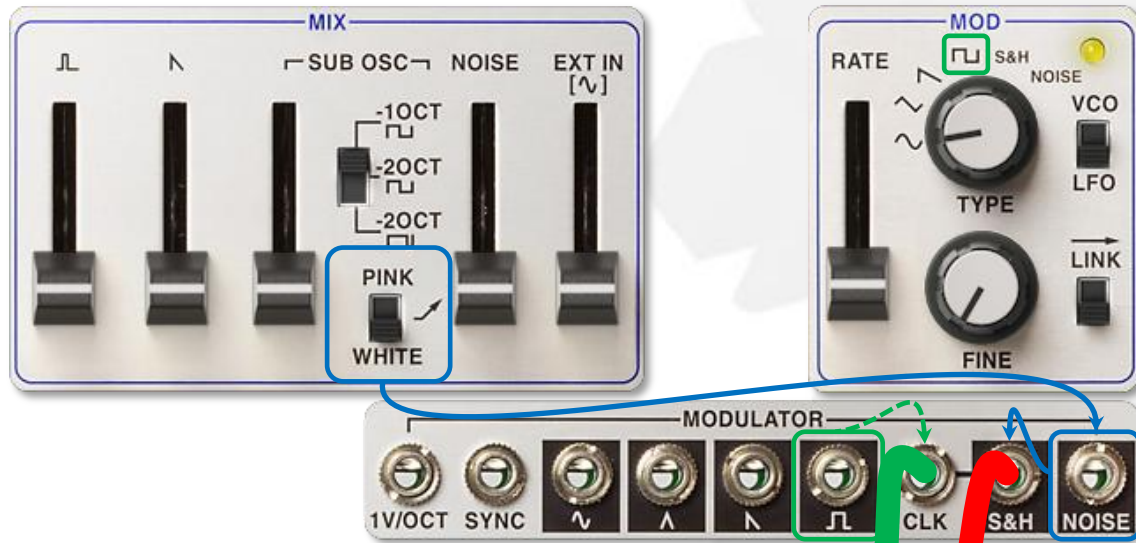
**PINK NOISE**  
equal energy per octave





# Sample & Hold

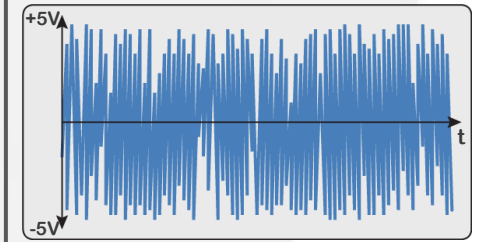
Sample & Hold input is linked to the noise generator. With the **PINK/WHITE** switch you can set the S&H output range. S&H clock input is normaled to the square MOD output, you can break this normal by patching external CLock source at the **CLK** input.



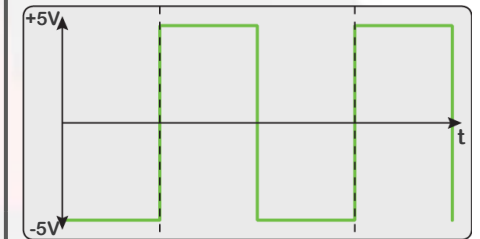
external  
CLOCK source

Sample & Hold  
out

## S&H INPUT Noise generator



## S&H CLOCK Normalled to square



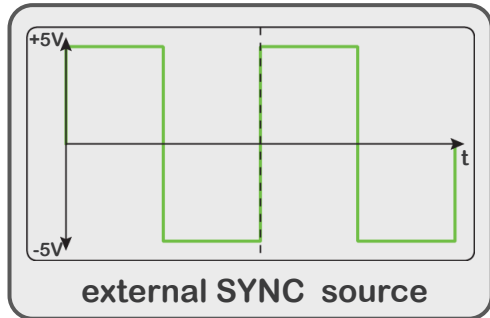
## S&H OUT



# Hard SYNC

The **SYNC** input allow the MODulator to be hard-synchronize to an external sync source. Because SYNC affects square wave reset, you can by this way synchronise the Sample&Hold if no signal is patched to CLK input.

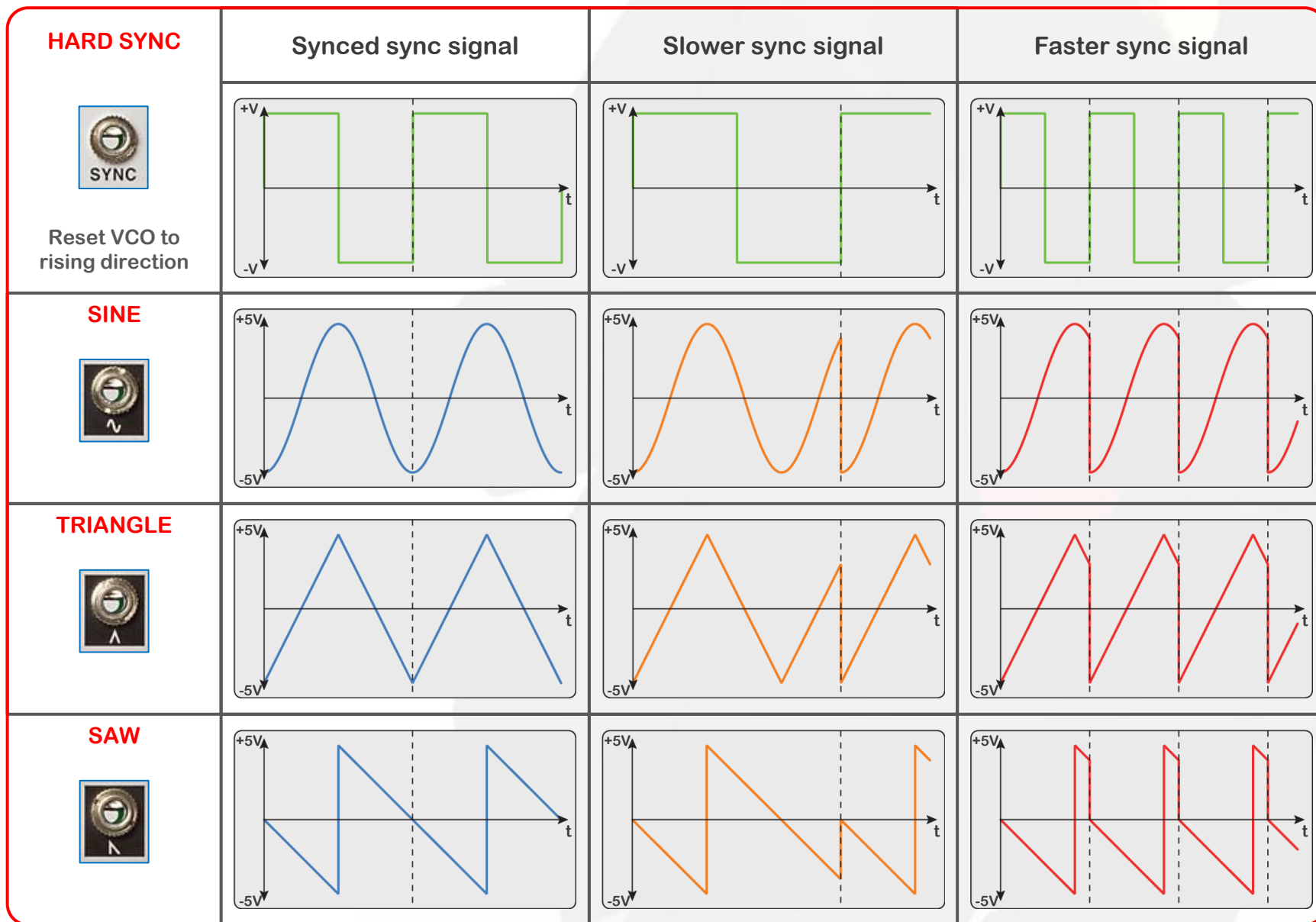
SYNC signal resets triangle core to the start of rising edge. Note that NOISE is unaffected.






SYNCed OUTPUTS

SYNCed S&H OUTPUT

# Hard SYNC chart - part 1



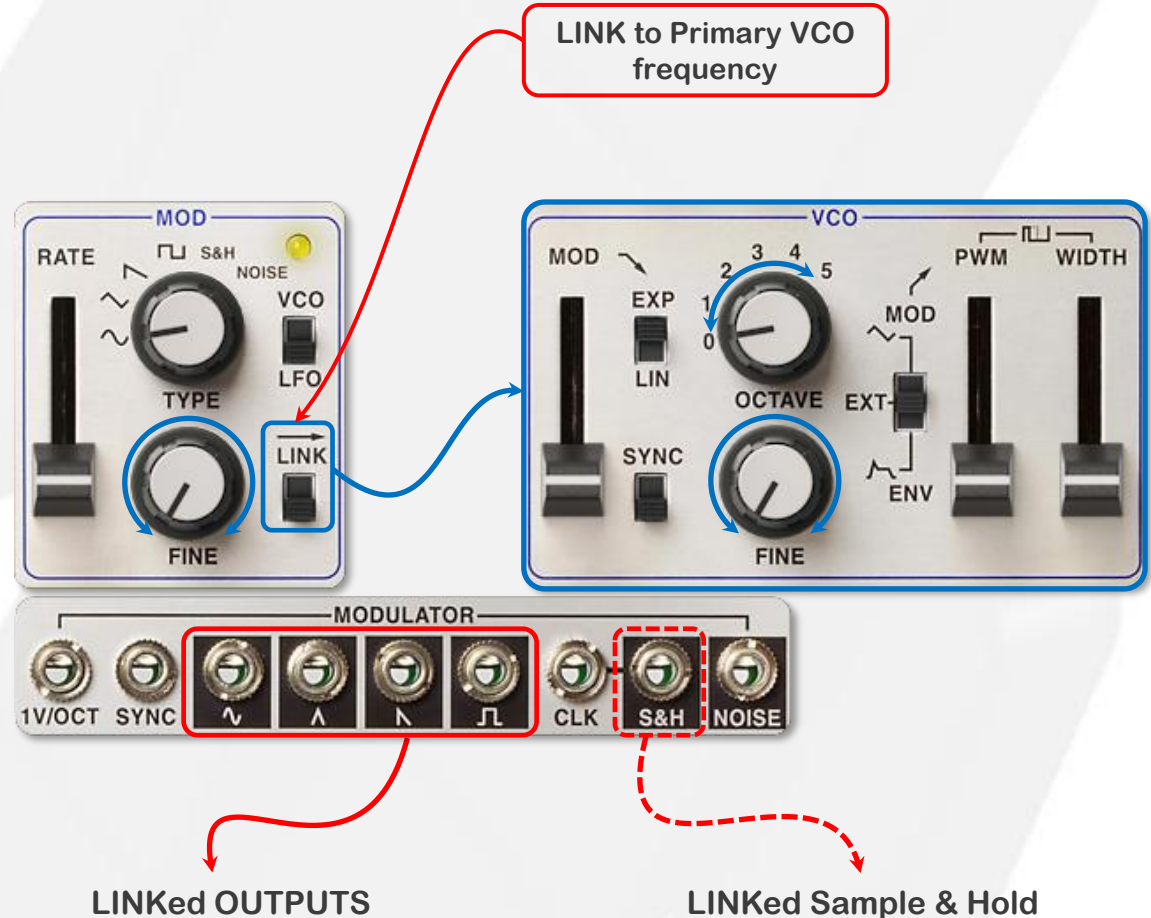
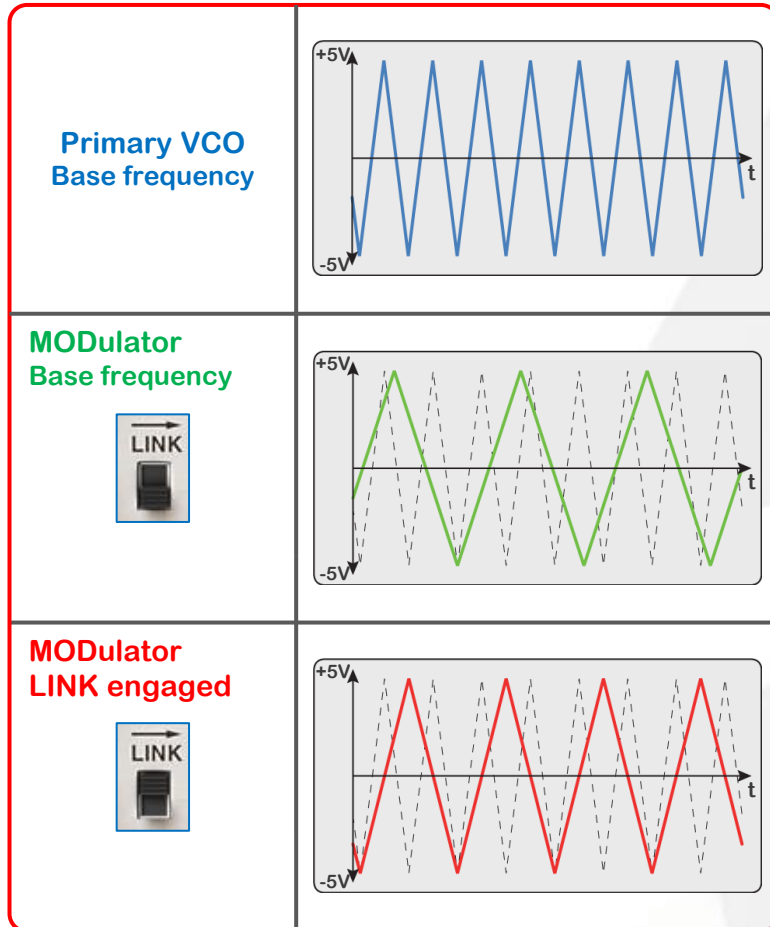
# Hard SYNC chart - part 2

<b>HARD SYNC</b>	<b>Synced sync signal</b>	<b>Slower sync signal</b>	<b>Faster sync signal</b>
 <p>Reset VCO to rising direction</p>			
<b>SQUARE</b> 			
<b>Sample &amp; Hold</b> 			



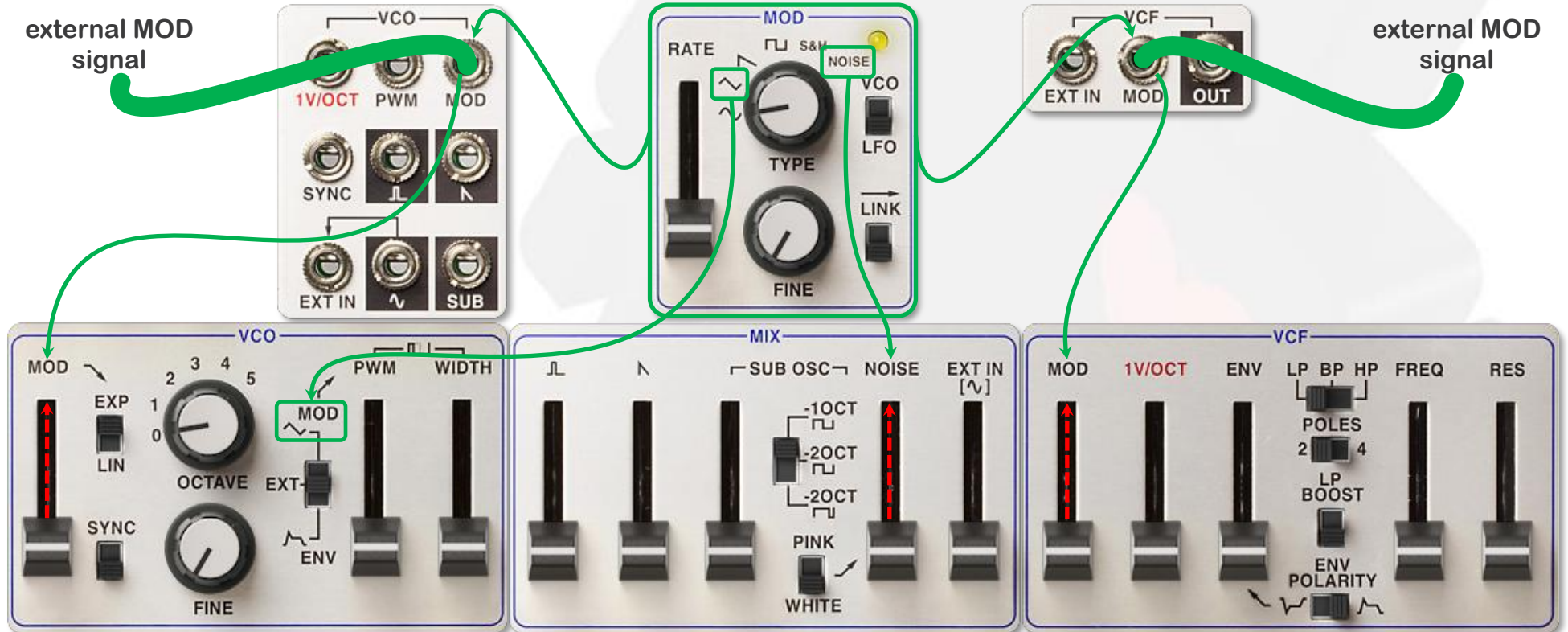
# LINK to Primary VCO

With the **LINK** switch engaged you can set the MODulator base frequency as a multiple of the Primary VCO frequency. It's a nice feature for create FM sounds or stack VCOs. By this way you can track both Primary and MODulator VCO with the 1V/OCTave input.

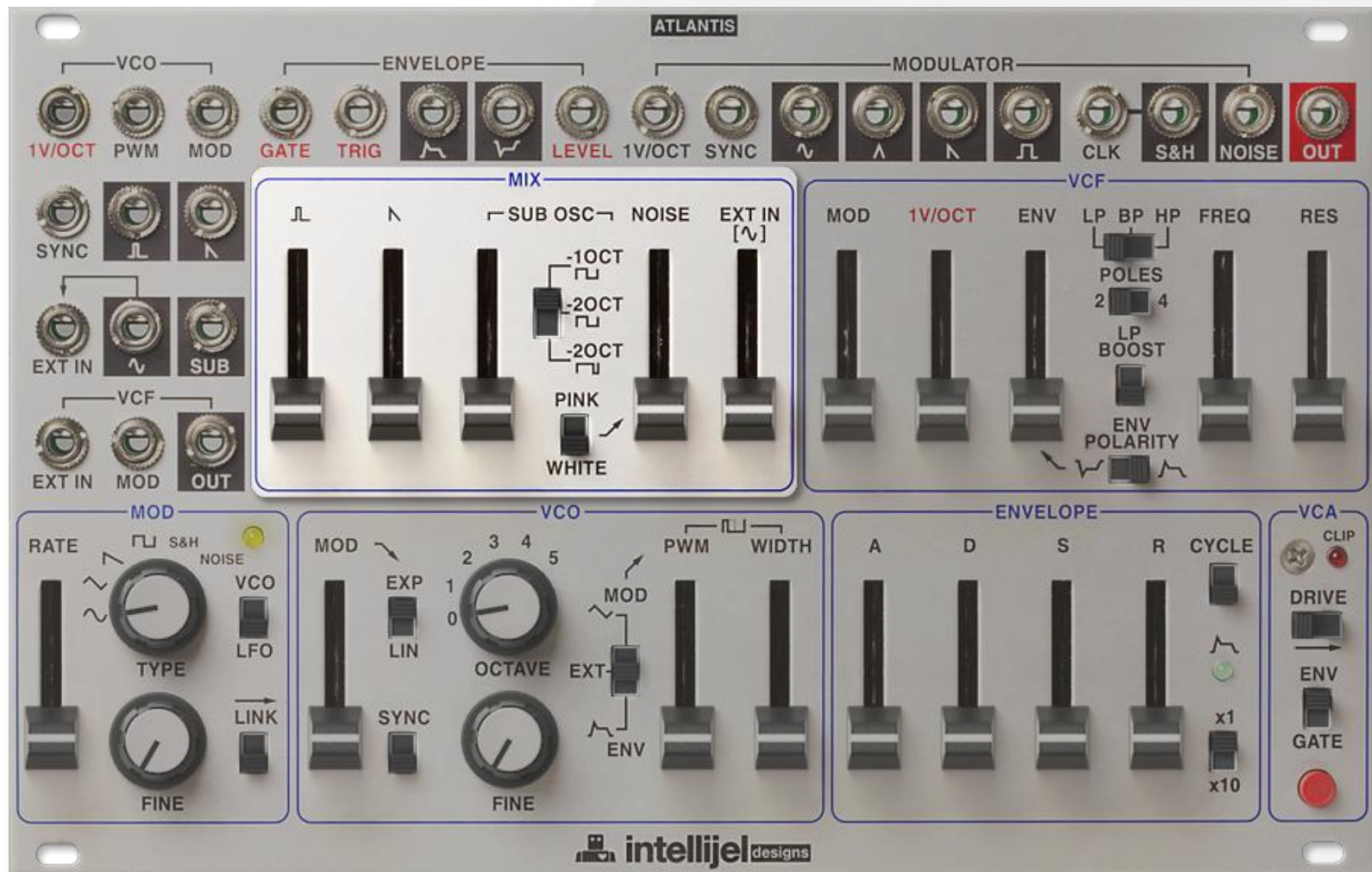


# MODulator bus

The MODulator section outputs are normaled to Primary VCO, MIXER and VCF sections. You can use MOD inputs of VCO and/or VCF sections for break MODulator routing.



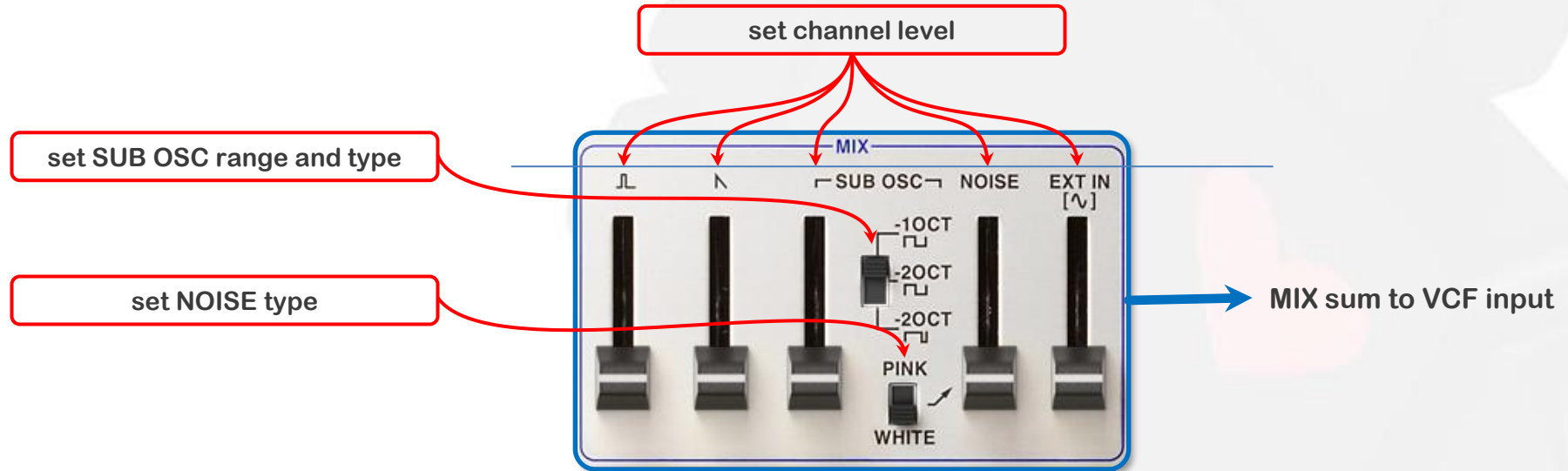
# MIXer section



# Overview

In the MIXer section you can mix up to 5 channels fed by 9 different sources : pulse, saw, SUB OSCillator -1OCT, SUB OSCillator -2OCT, SUB OSCillator -2OCT variation, white noise, pink noise, sine and EXTERNAL Input. Note that patching an external signal at the EXTERNAL INPUT will break the normal between Primary VCO sine wave and its related MIXer channel.


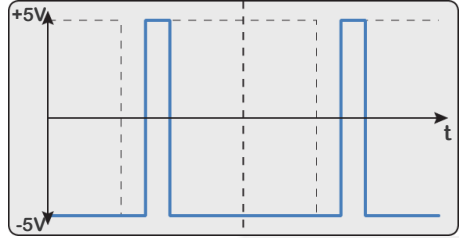

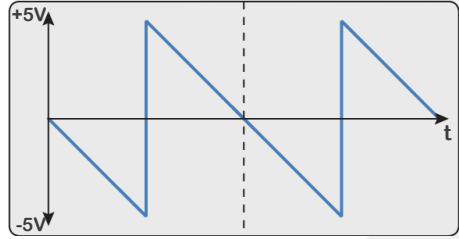



The MIXer total sum is internally routed to the Voltage Controlled Filter input.


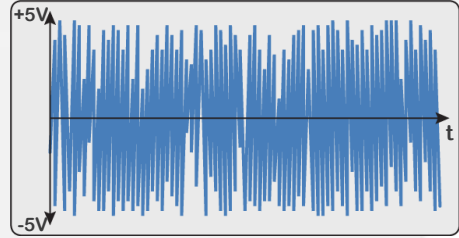

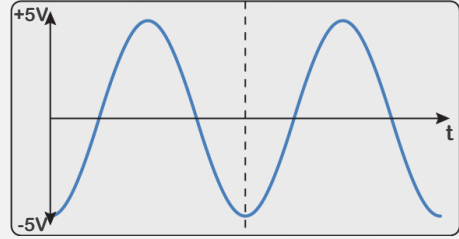

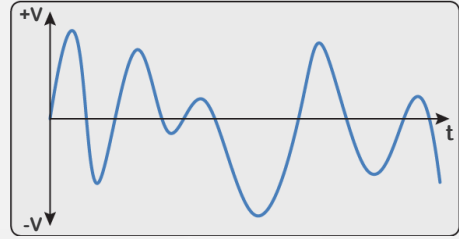




# Mixed waveforms

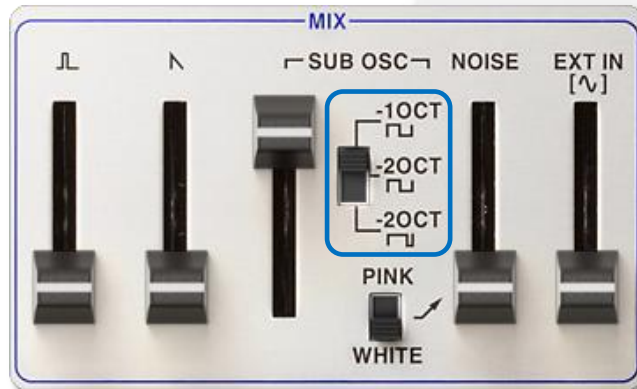
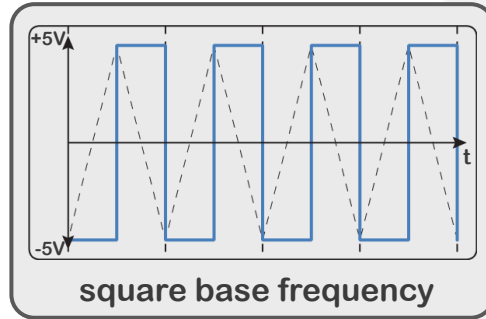
Pulse, saw, SUB OSCillator, noise and sine (or EXTERNAL INput if patched) channels are available in the MIXer section.

<b>PULSE</b> 	
<b>SAW</b> 	
<b>SUB OSCillator</b>  	

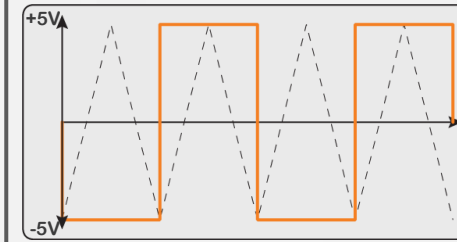
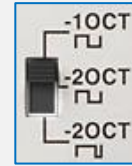
<b>NOISE</b> 	
<b>SINE</b> 	
<b>EXTERNAL INput</b> 	

# SUB OSCillator channel

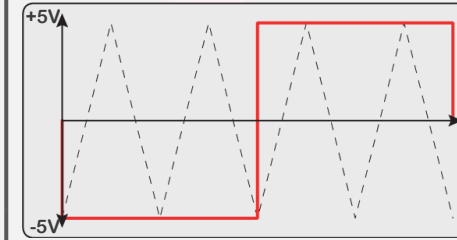
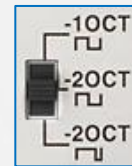
SUB OSCillator switch in the MIXER section sets the sub OCTave value. SUB can be 1 or 2 octaves down relative to the Primary oscillator frequency, with an alternative pulse waveform for the -2OCT position.



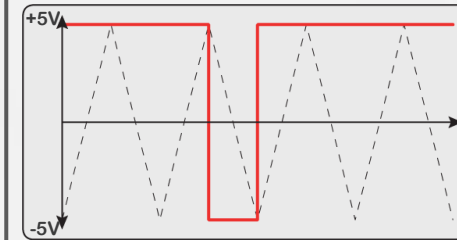
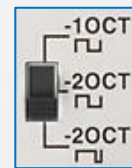
-1 OCTave



-2 OCTaves

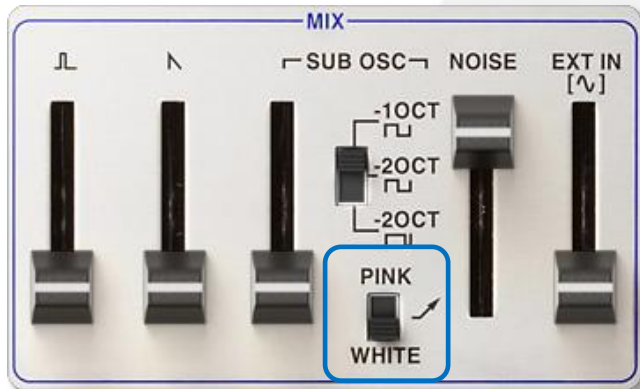


-2 OCTaves

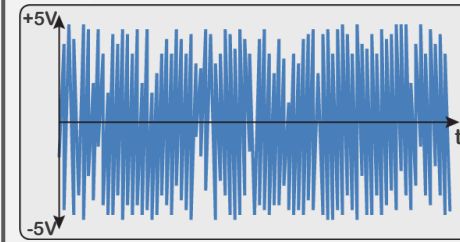


# NOISE channel

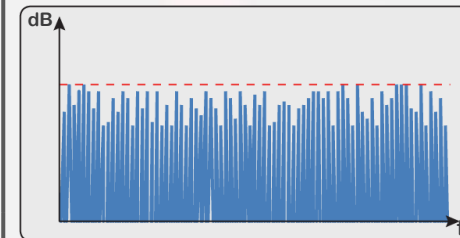
**NOISE** generator can produce **WHITE** or **PINK** noise, depending on the position of the related switch in the **MIXer** section.



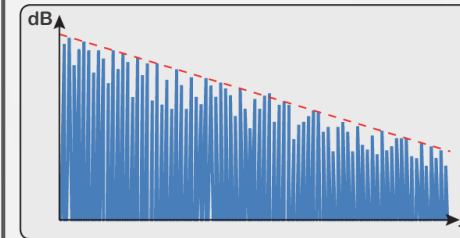
**NOISE channel**  
Audio illustration



**WHITE NOISE**  
equal energy per hertz



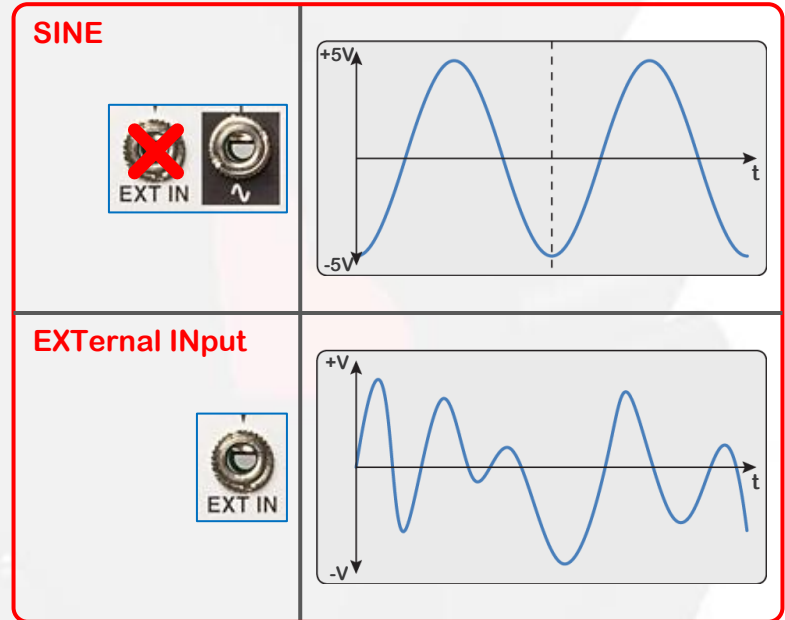
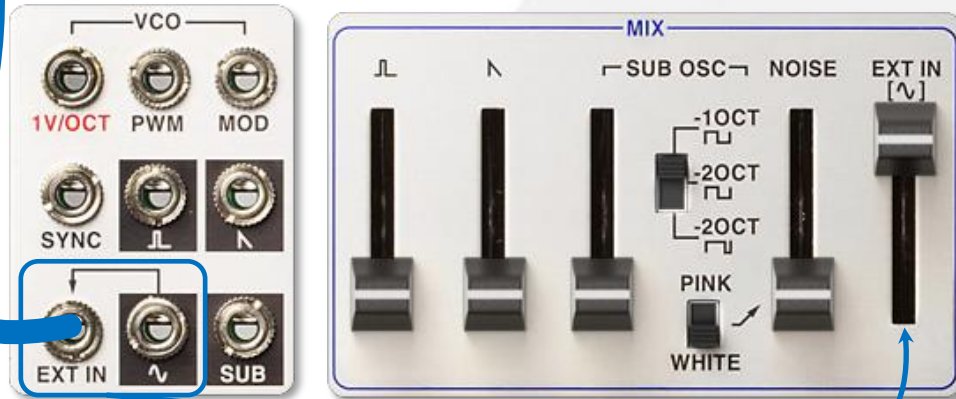
**PINK NOISE**  
equal energy per octave



# EXternal INput [SINE] channel

External INput allows you to use an external signal in the MIXer section. Note that if nothing is patched at the EXT IN, the SINE wave from the the Primary VCO is routed to the EXT IN channel.

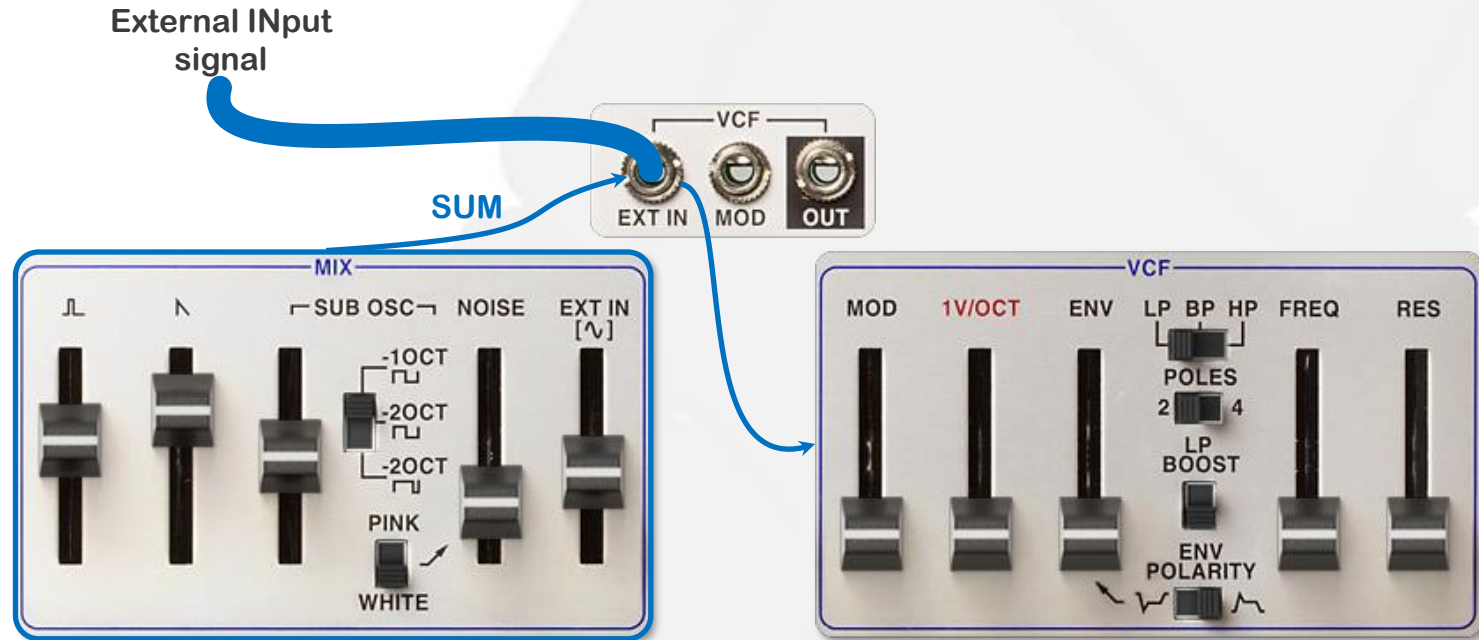
External INput signal



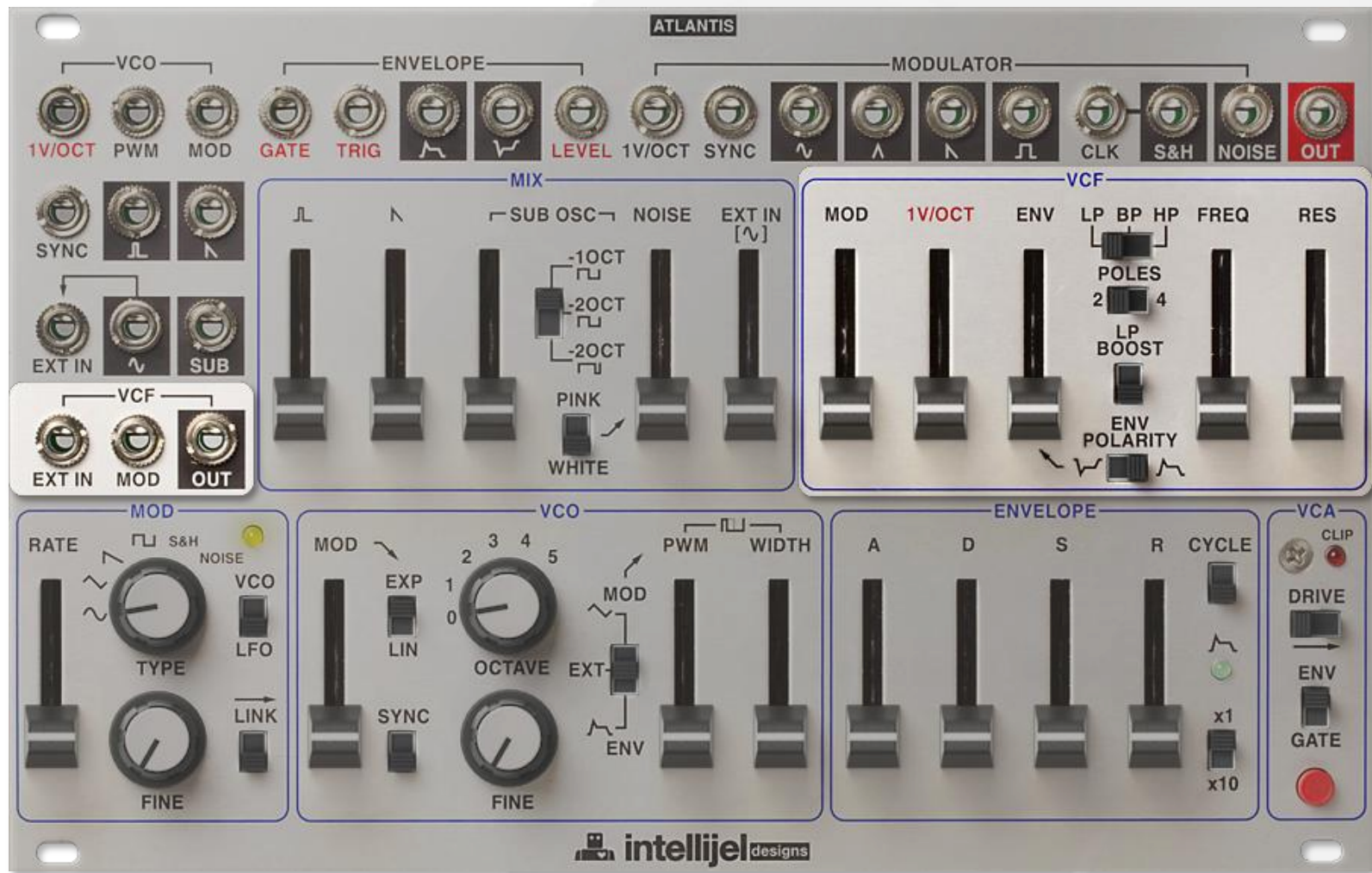


# MIX output

All the 5 channels of the MIXer section are summed and routed to the VCF section. This normal can be broken by patching an External INput signal into the VCF section.

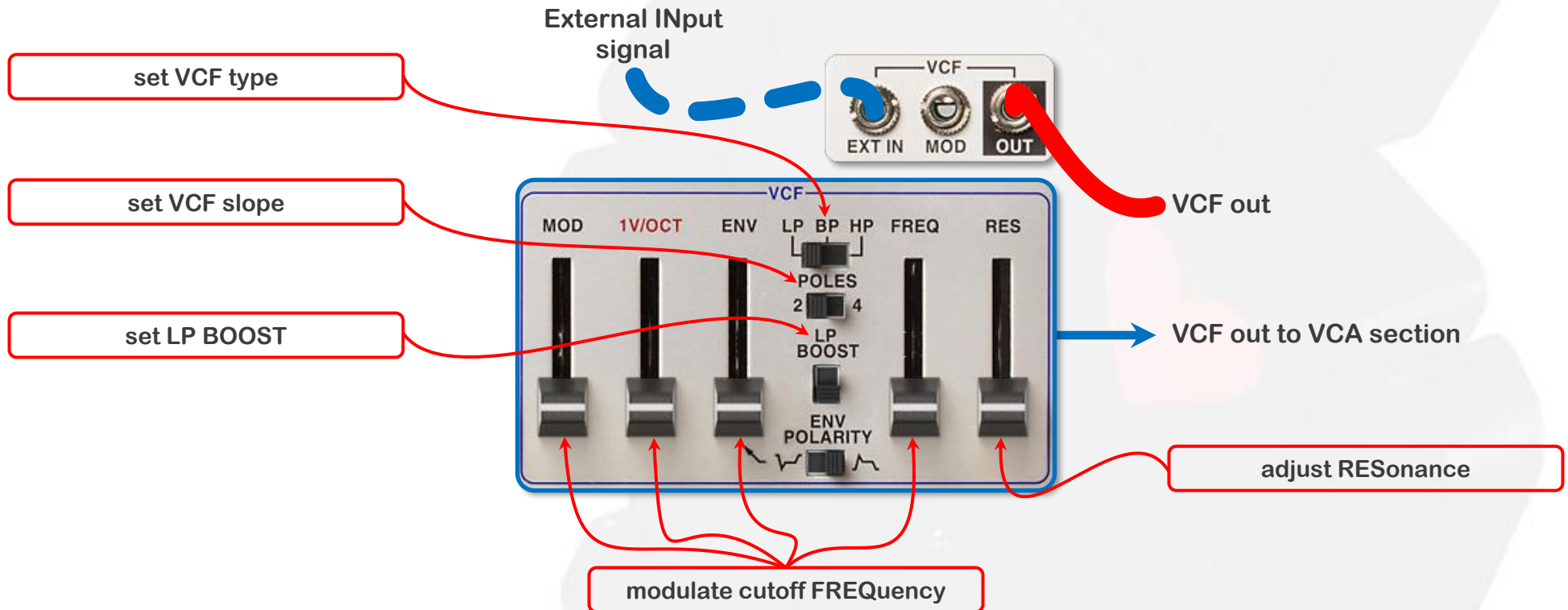


# VCF section



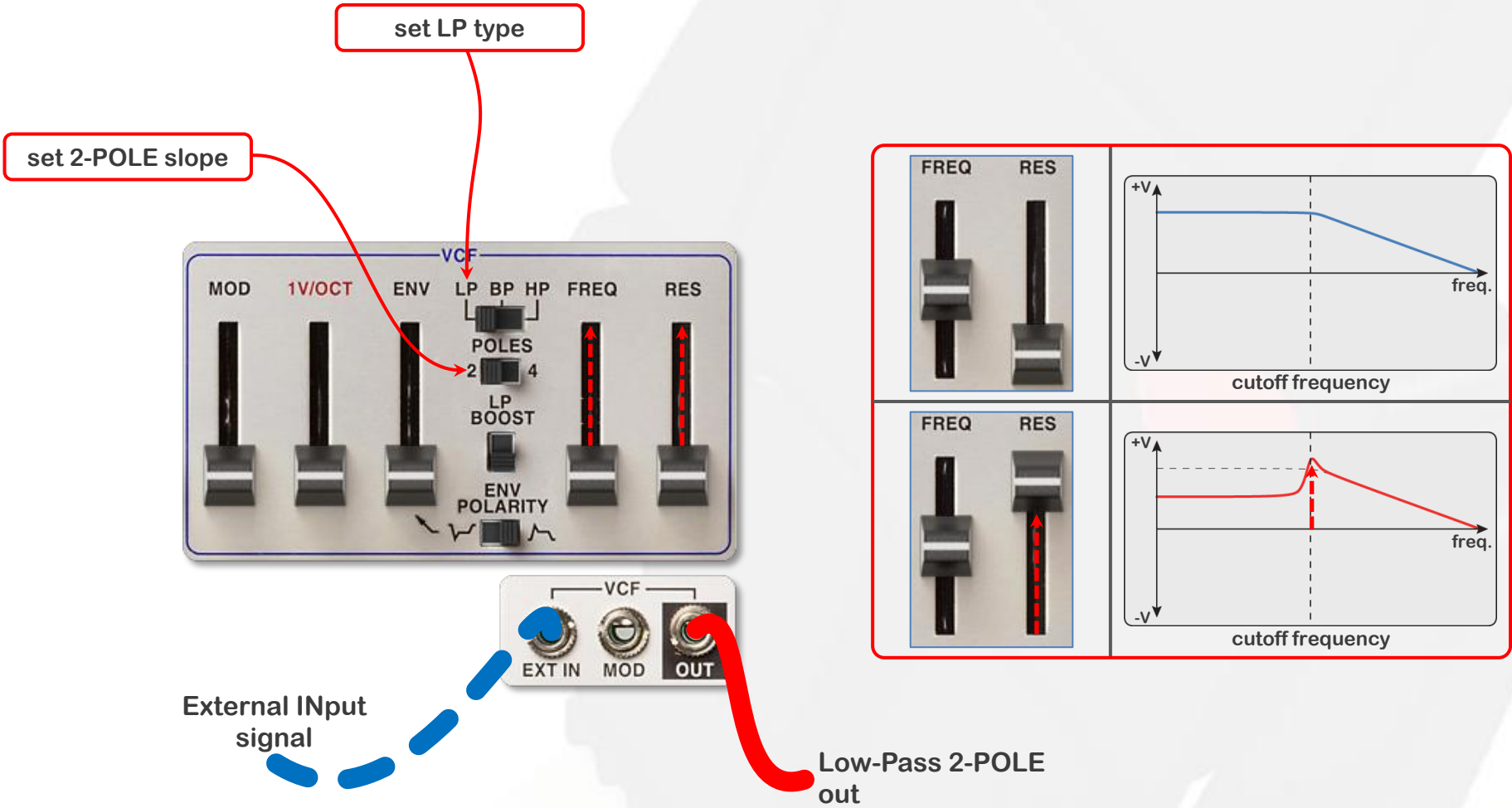
# Overview

The Voltage Controlled Filter section consists of a combination of 3 types of filter (Low-Pass, Band-Pass and High-Pass) switchable to 2 different slopes (12 and 24 dB). So you dispose of 9 filtering methods, plus BOOST for the LP mode. Each mode can self-oscillate and then produces a clean sine-wave that can be controlled at 1V/OCT (from the Primary VCO). The sum out of the MIXer section is normaled to the VCF input, you can break this normal with patching a signal at the EXTERNAL INPUT and by this way use the VCF section as a totally independent filter.



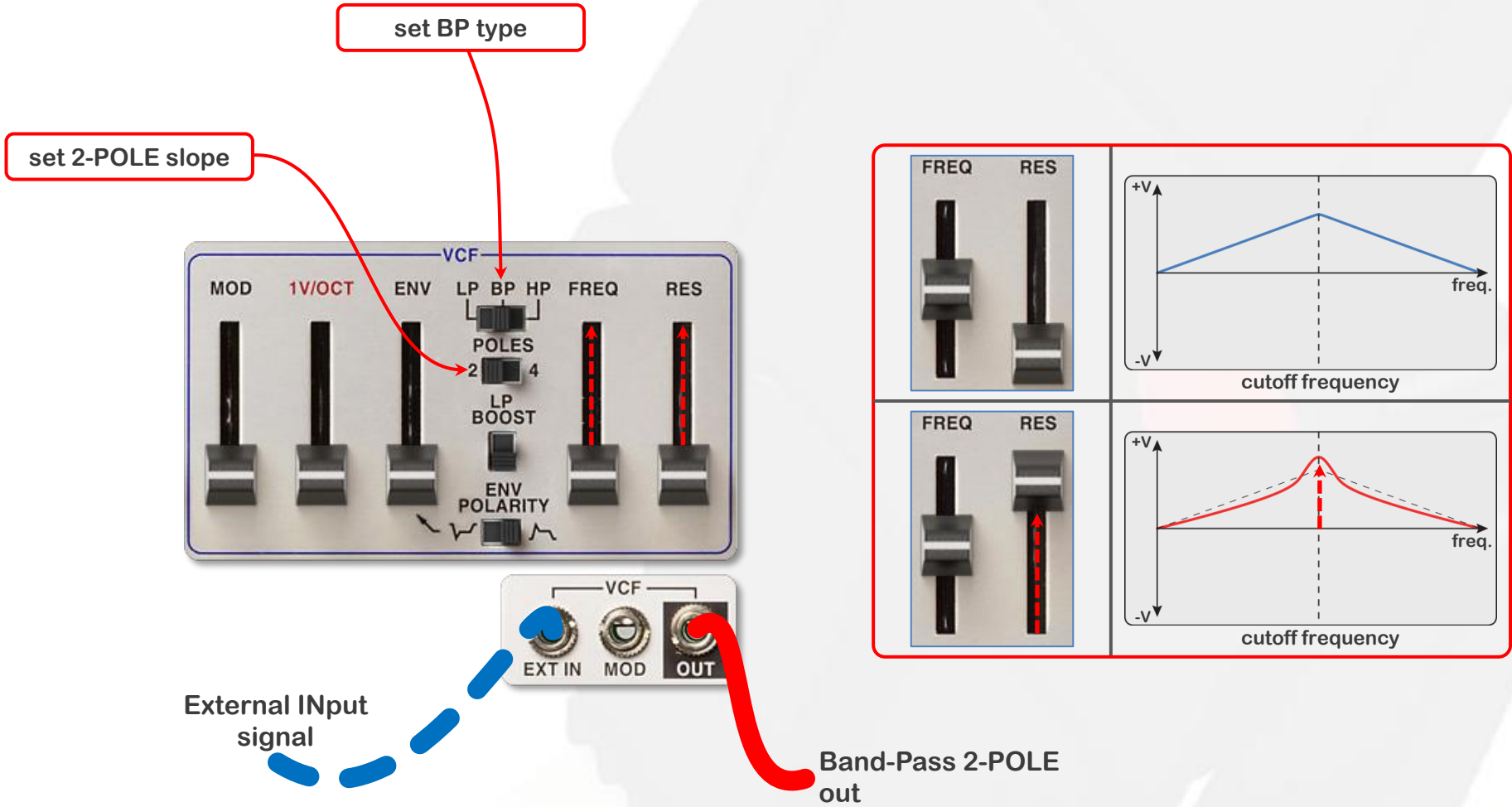
# Low-Pass 2-POLE

Low-Pass 2-pole (12 dB/OCTave) mode. Increase of RESonance will decrease signal input level.



# Band-Pass 2-POLE

Band-Pass 2-pole (12 dB/OCTave) mode. Increase of REsonance will decrease signal input level.



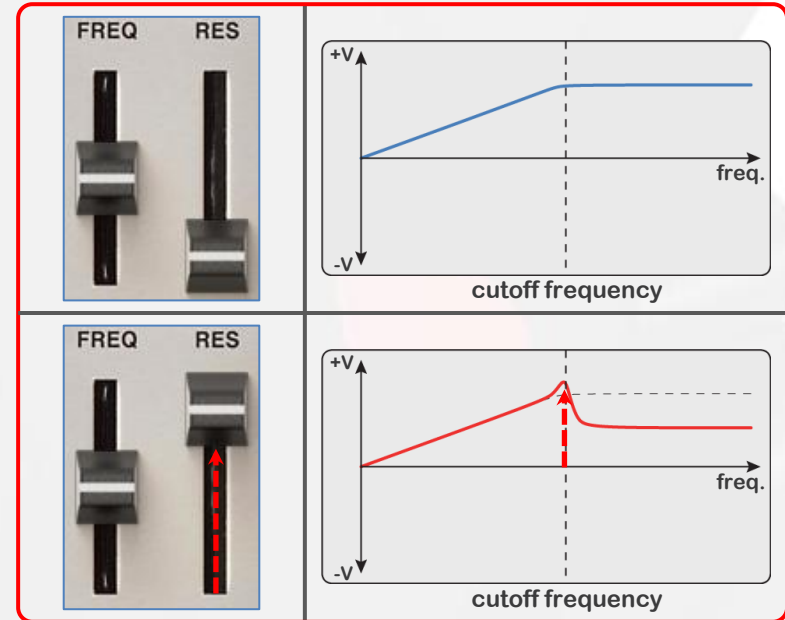
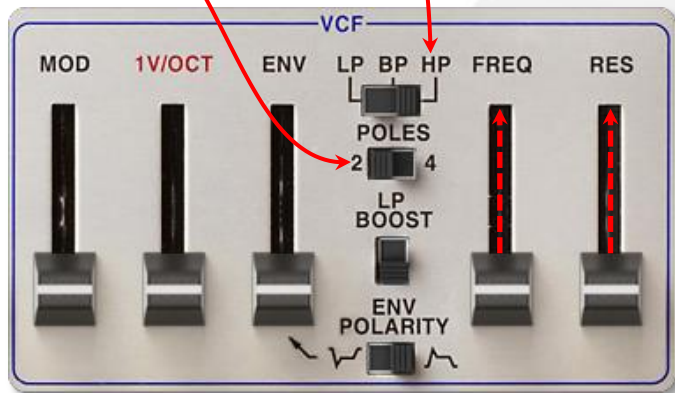


# High-Pass 2-POLE

High-Pass 2-pole (12 dB/OCTave) mode. Increase of REsonance will decrease signal input level.

set HP type

set 2-POLE slope



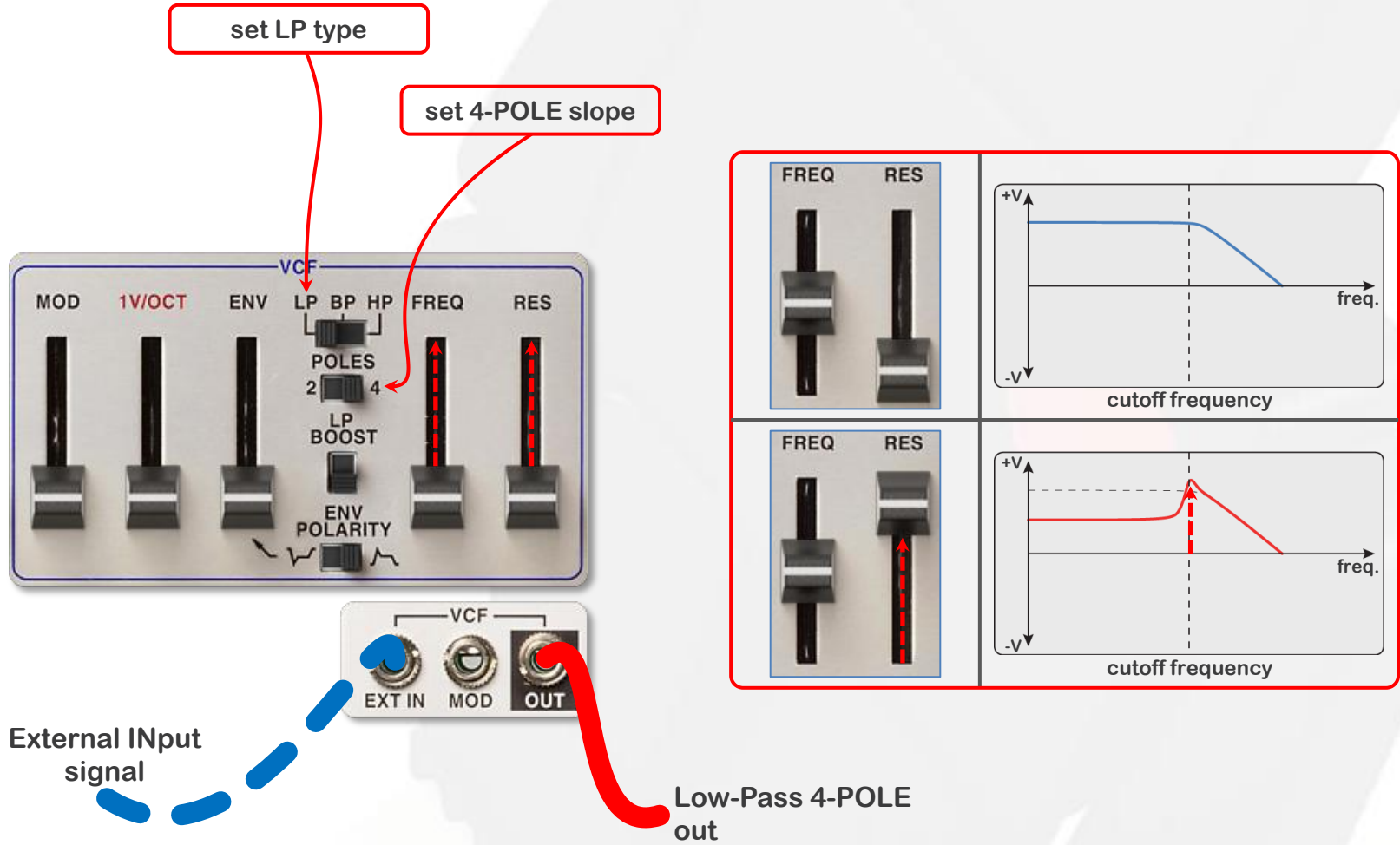
External Input signal



High-Pass 2-POLE out

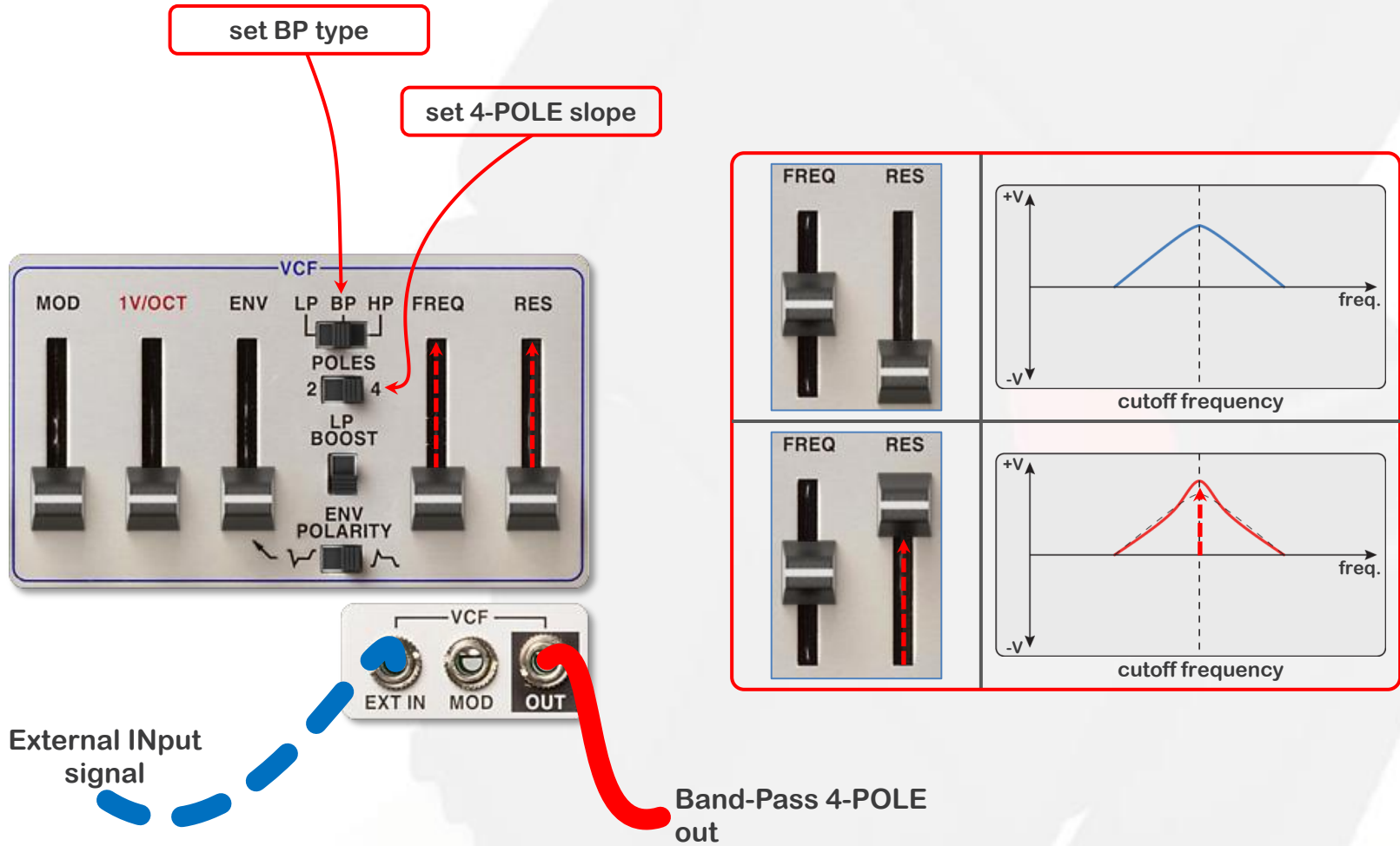
# Low-Pass 4-POLE

Low-Pass 4 -pole (24 dB/OCTave) mode. Increase of REsonance will decrease signal input level.



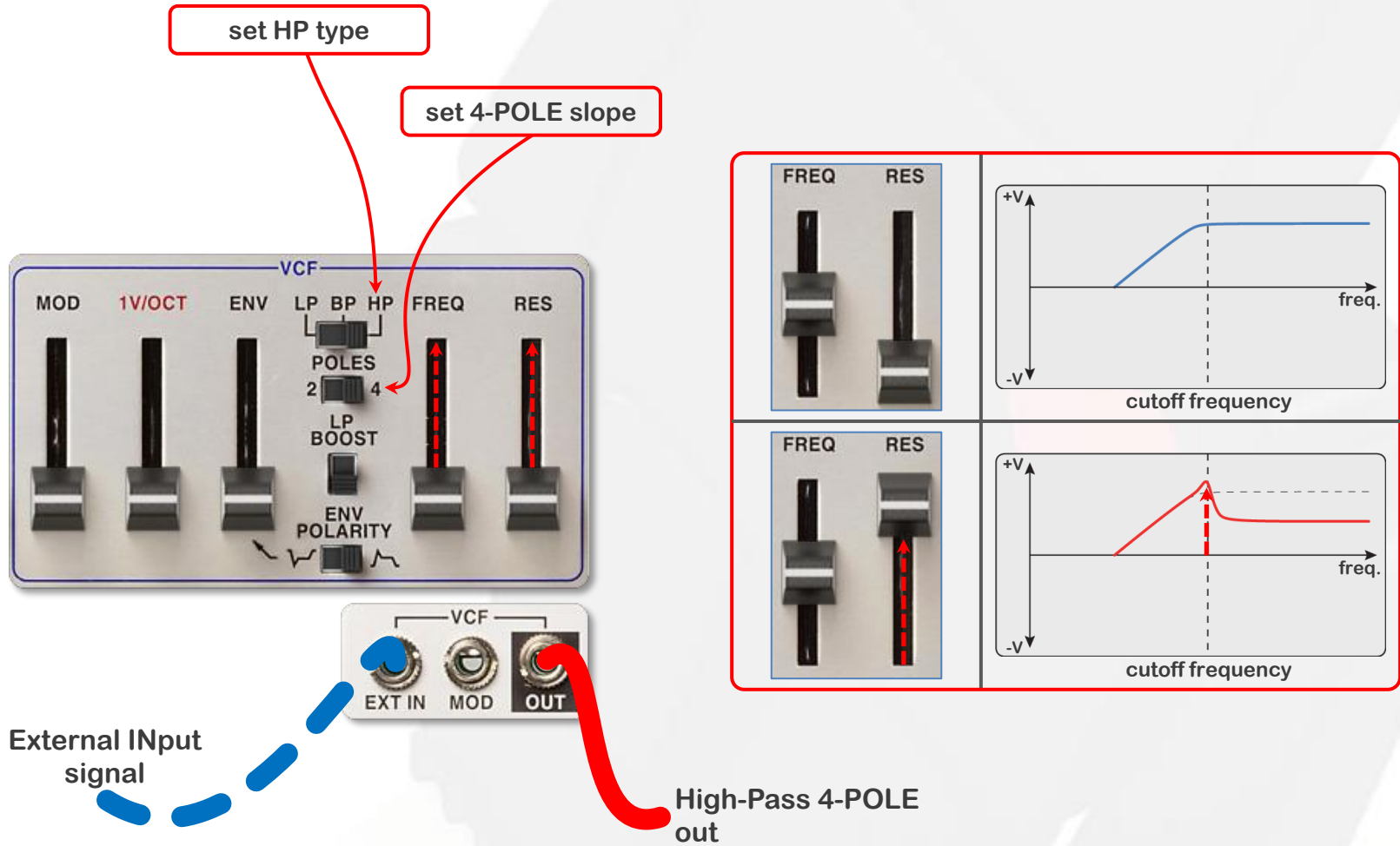
# Band-Pass 4-POLE

Band-Pass 4-pole (24 dB/OCTave) mode. Increase of REsonance will decrease signal input level.



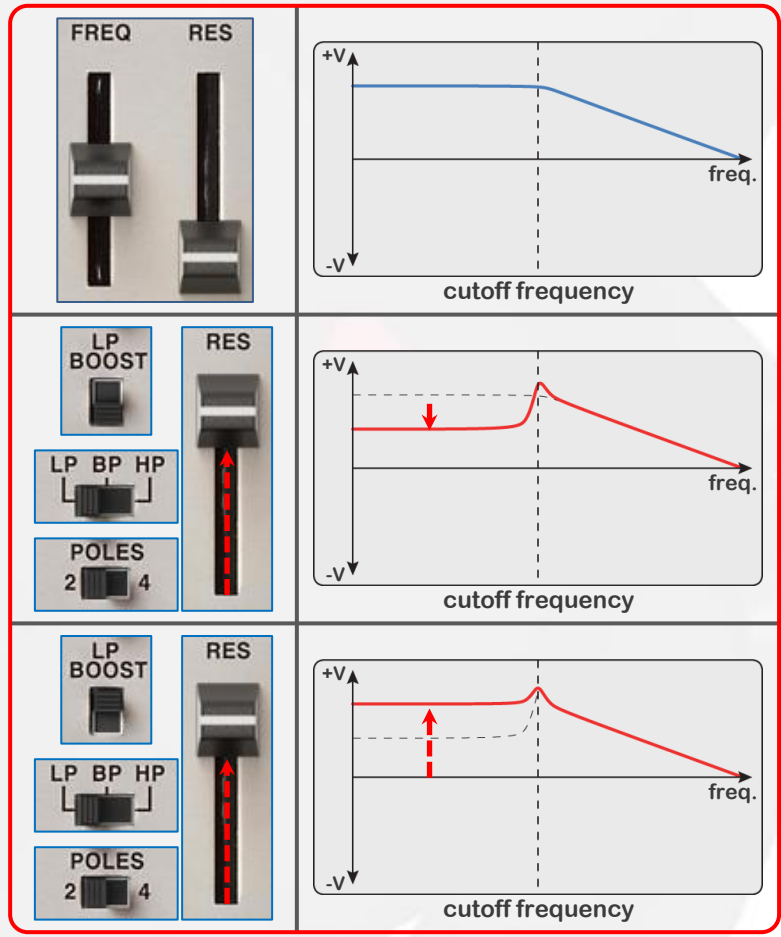
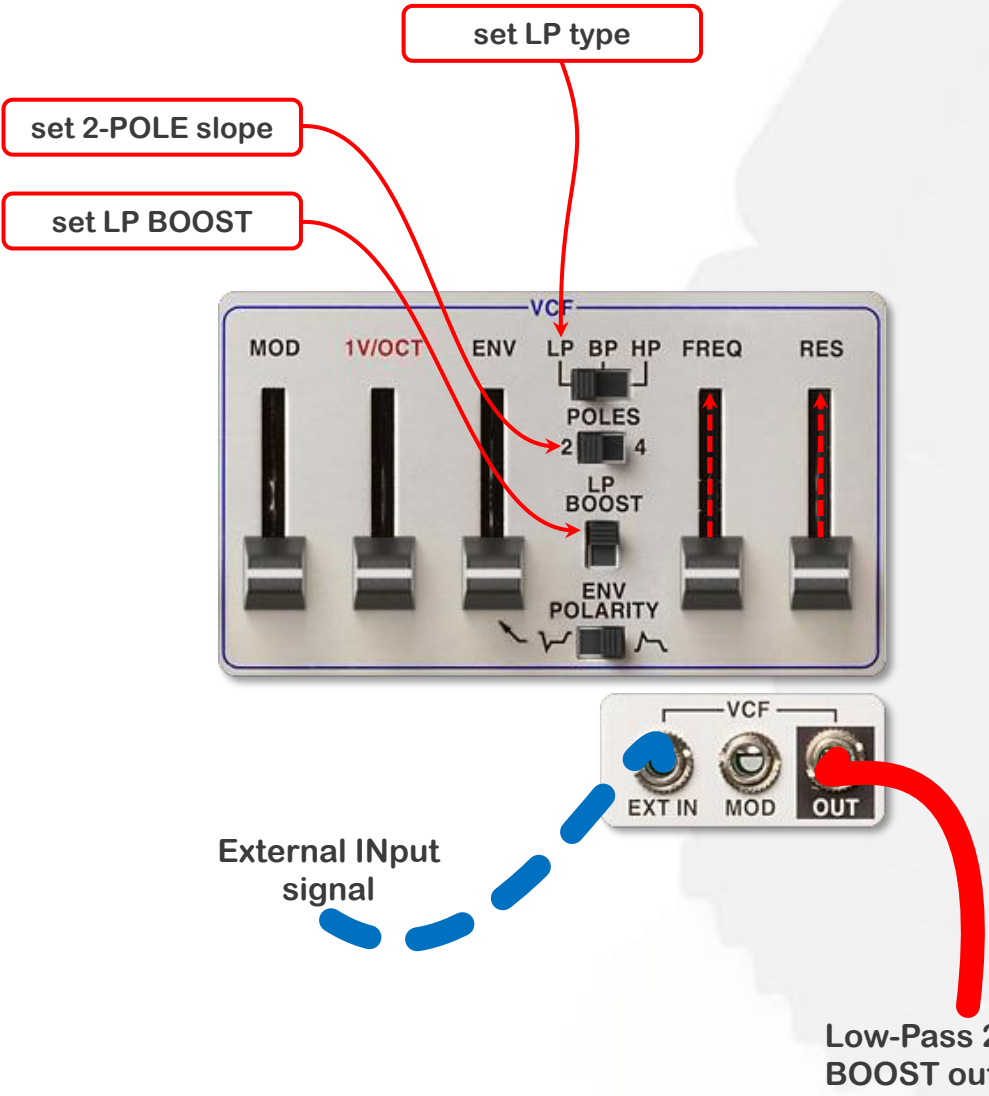
# High-Pass 4-POLE

High-Pass 4-pole (24 dB/OCTave) mode. Increase of REsonance will decrease signal input level.



# Low-Pass 2-POLE BOOST

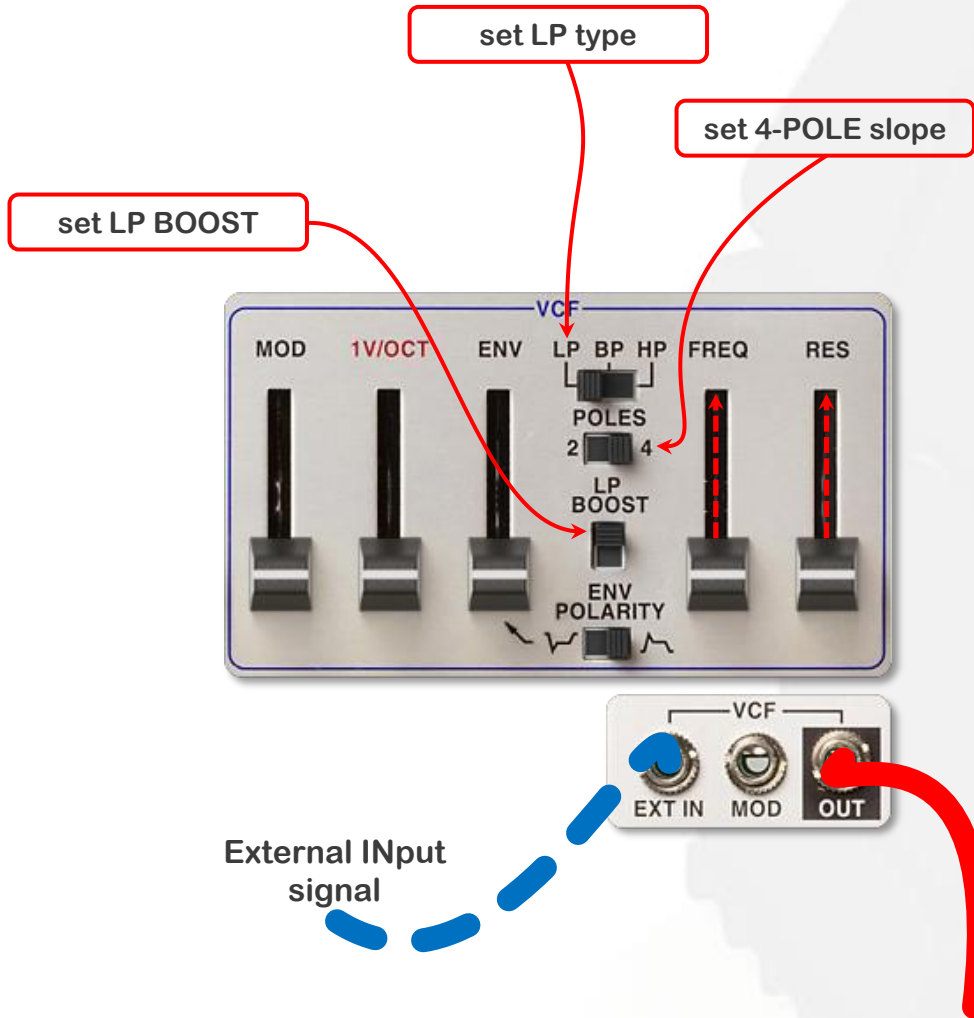
Low-Pass 2-pole (12 dB/OCTave) BOOST mode. With the **LP BOOST** switch engaged, increase of REsonance will not cause signal input drop down.





# Low-Pass 4-POLE BOOST

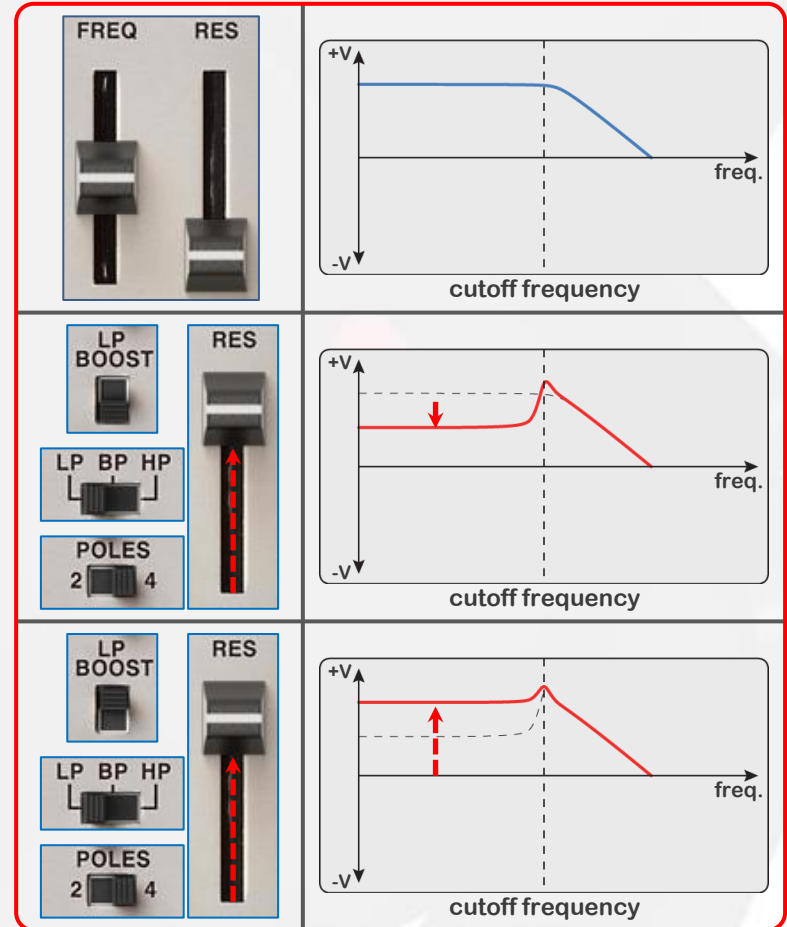
Low-Pass 4-pole (24 dB/OCTave) BOOST mode. With the **LP BOOST** switch engaged, increase of REsonance will not cause signal input drop down.



External Input signal

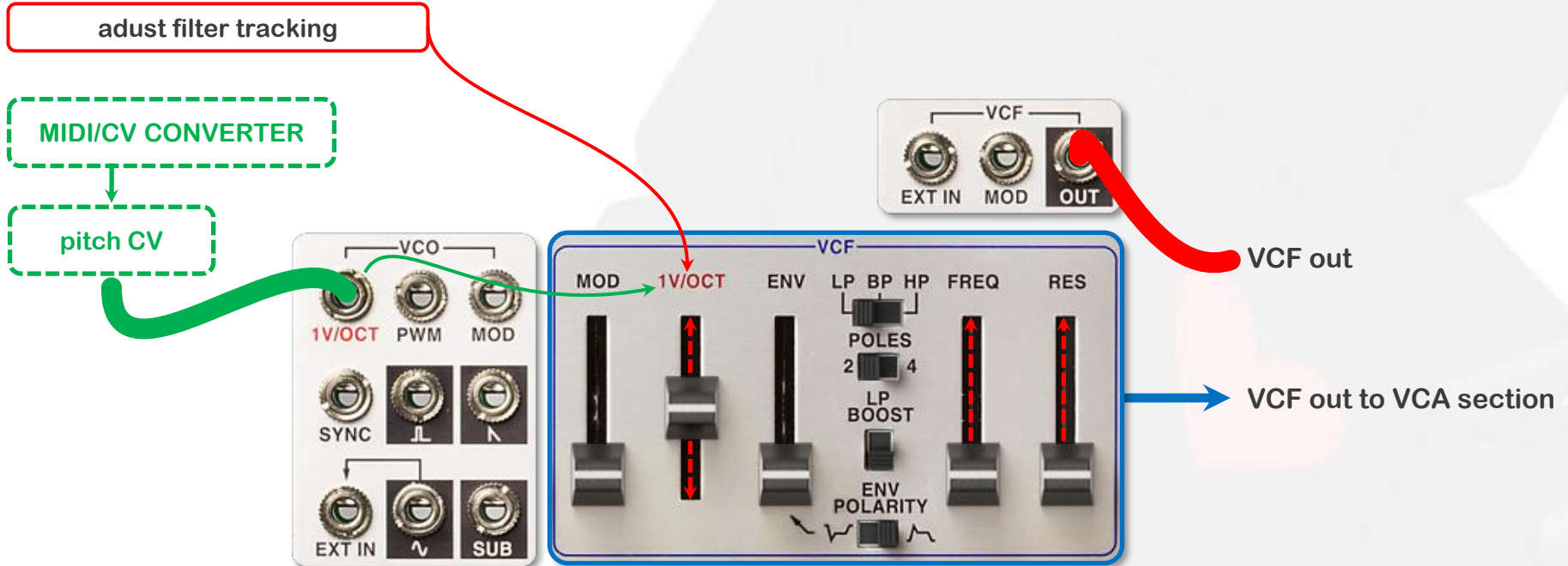


Low-Pass 4-POLE BOOST out



# Filter tracking

You can track filter's cutoff frequency up to 1V/OCTave, depending of the 1V/OCT slider position, which is normaled to the Primary VCO 1V/OCT input.

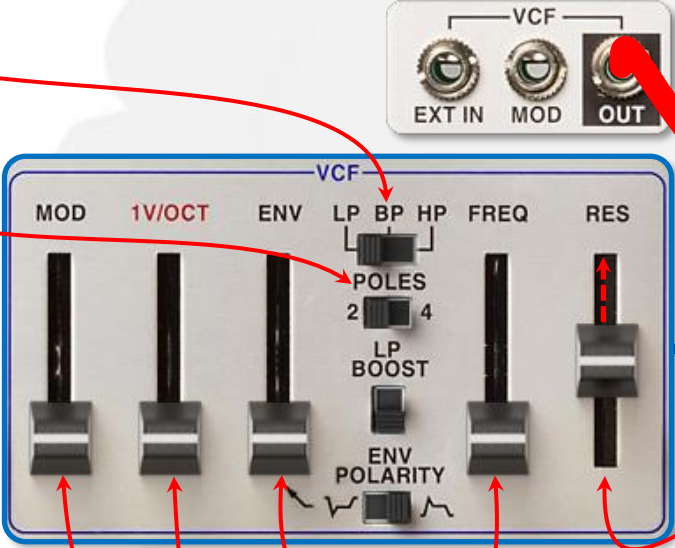


# Self-oscillation

All type of filter (Low-Pass, Band-Pass and High-Pass will self-oscillate for a RESonance slider set at last to mid position.

set VCF type

set VCF slope



self-oscillate VCF out

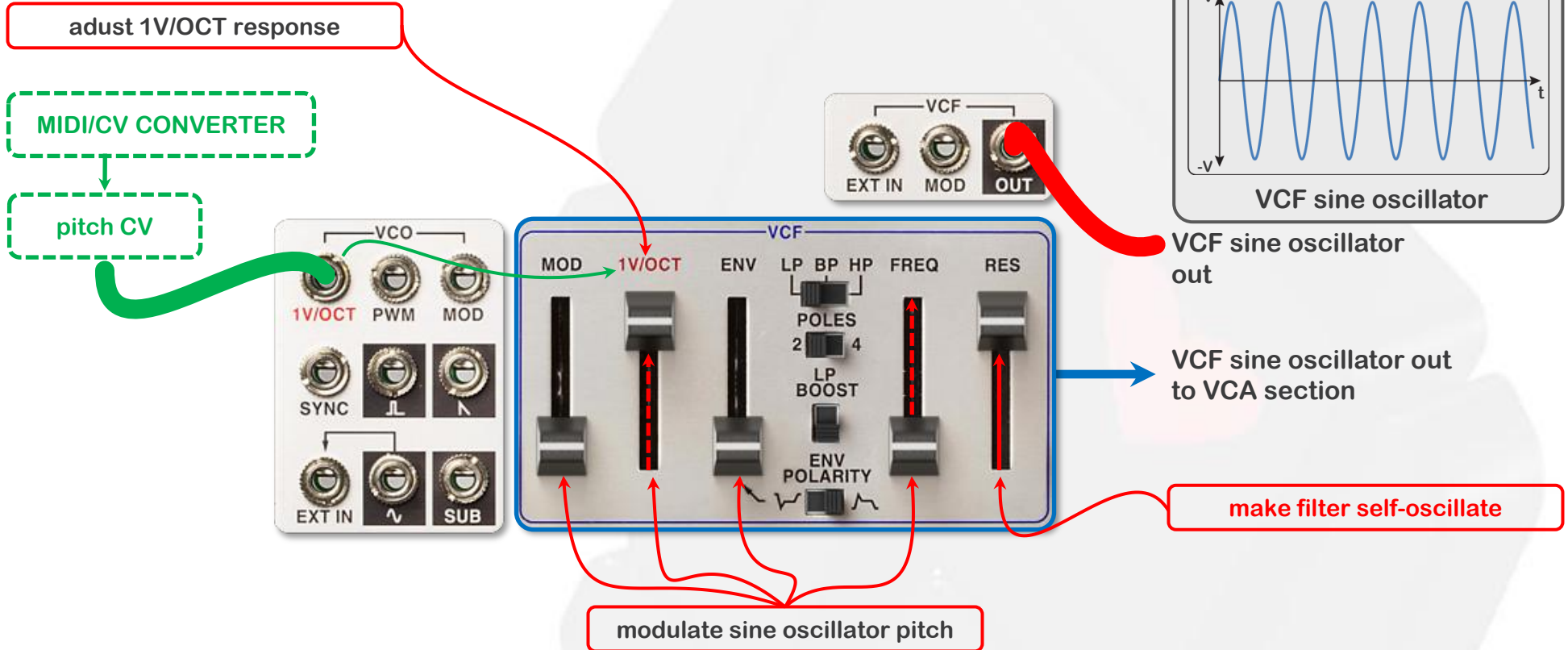
self-oscillate VCF out to VCA section

adjust RESonance self-oscillate past 5

modulate cutoff FREQUENCY

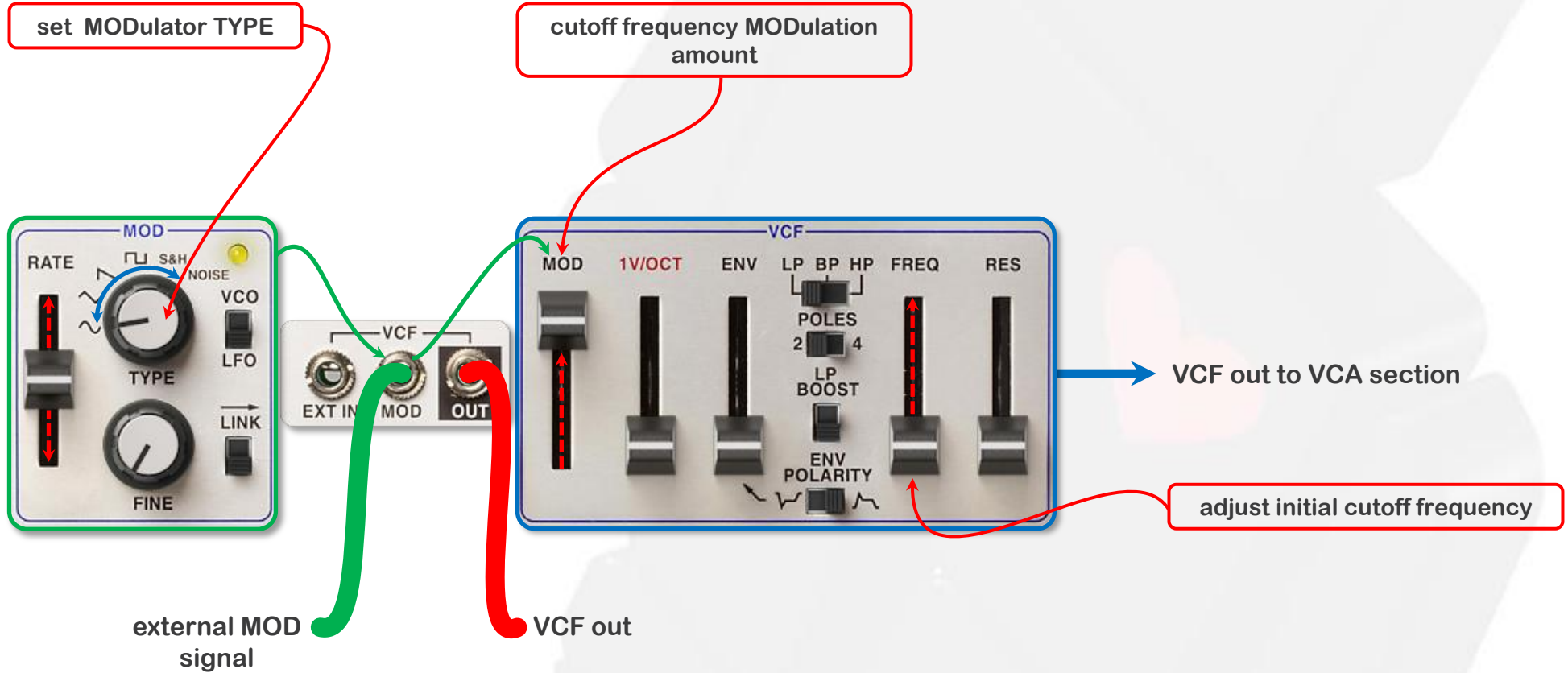
# 1V/OCTave sine oscillator

The clean sinewave produced by VCF in self-oscillation state can be used as a safe-scale oscillator. You can control it at 1V/OCTave with the related slider set to the max, which is normalized to the 1V/OCT Primary VCO input.



# FREQUENCY MODulation

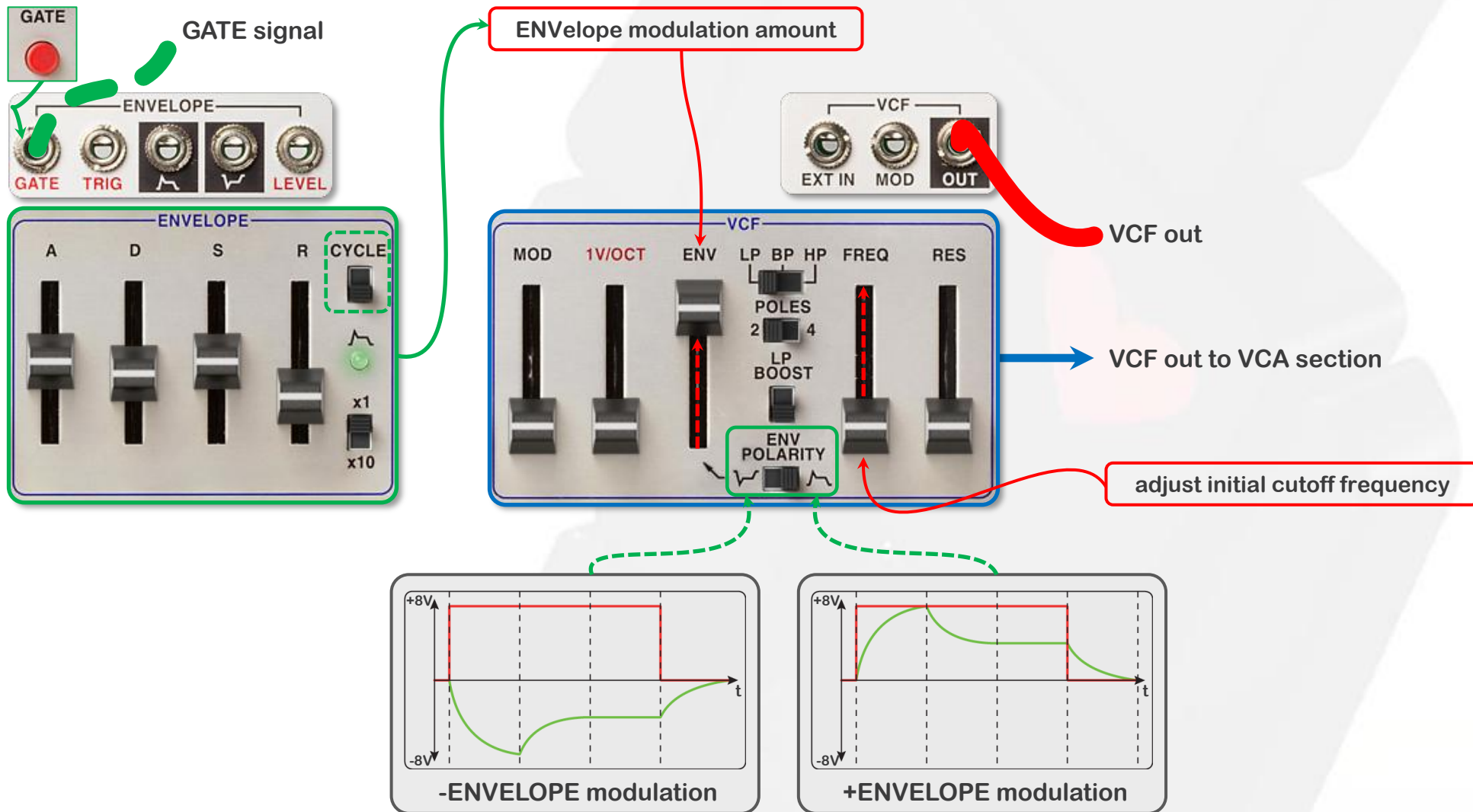
Amount of frequency modulation applied to the VCF cutoff frequency can be set with the MOD slider, that's acting as an attenuator for the MOD input if an external MOD signal is patched. MOD input is normaled to the MODulator VCO.



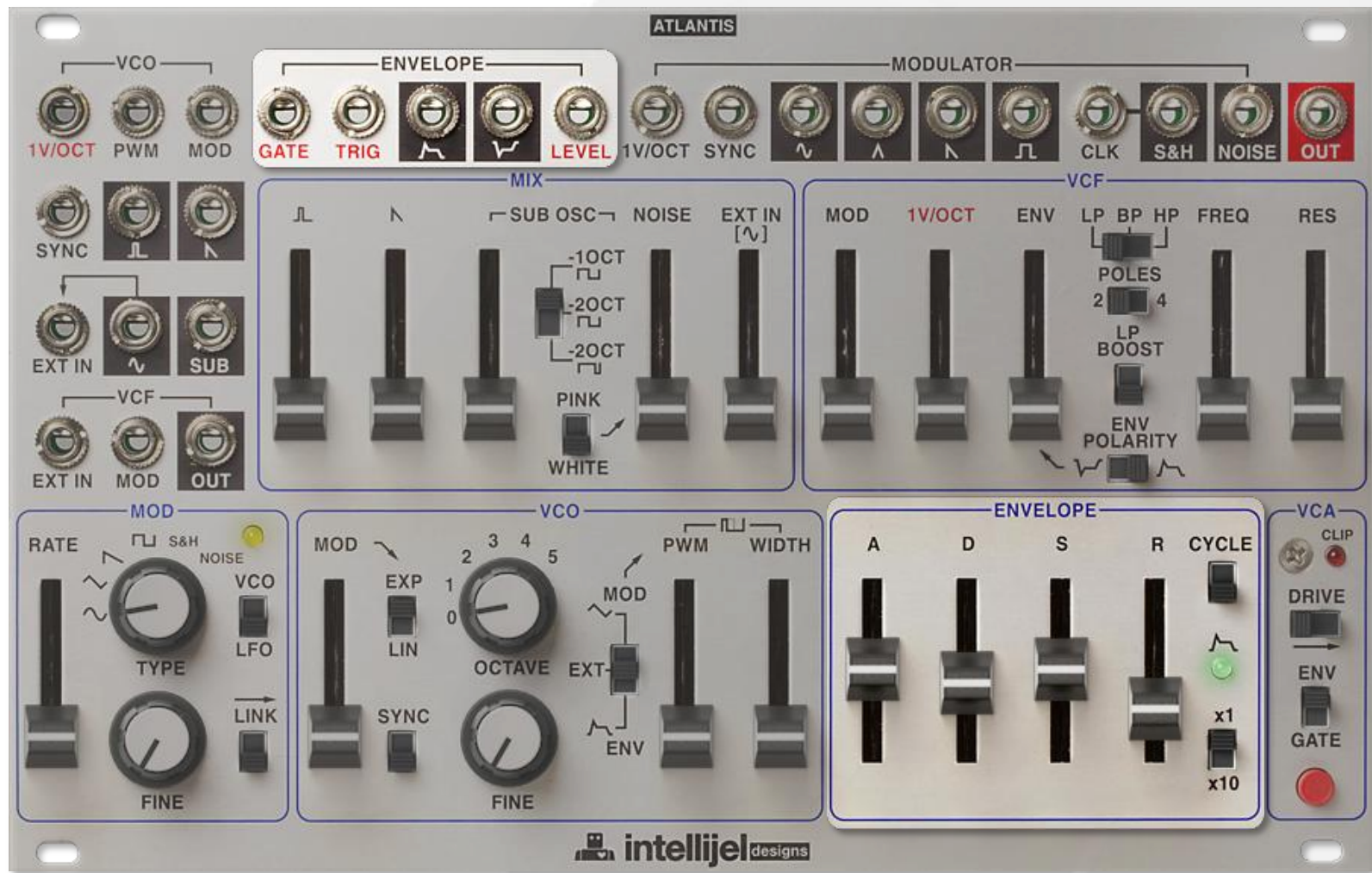


# ENVELOPE modulation

The cutoff frequency is normalized to the ENVELOPE section generator. Set the amount of ENVELOPE modulation with the **ENV** slider, and choose the polarity (positive or negative) with the **ENV POLARITY** switch. Note that you can engage the ENVELOPE generator by using a gate signal or with the CYCLE switch.

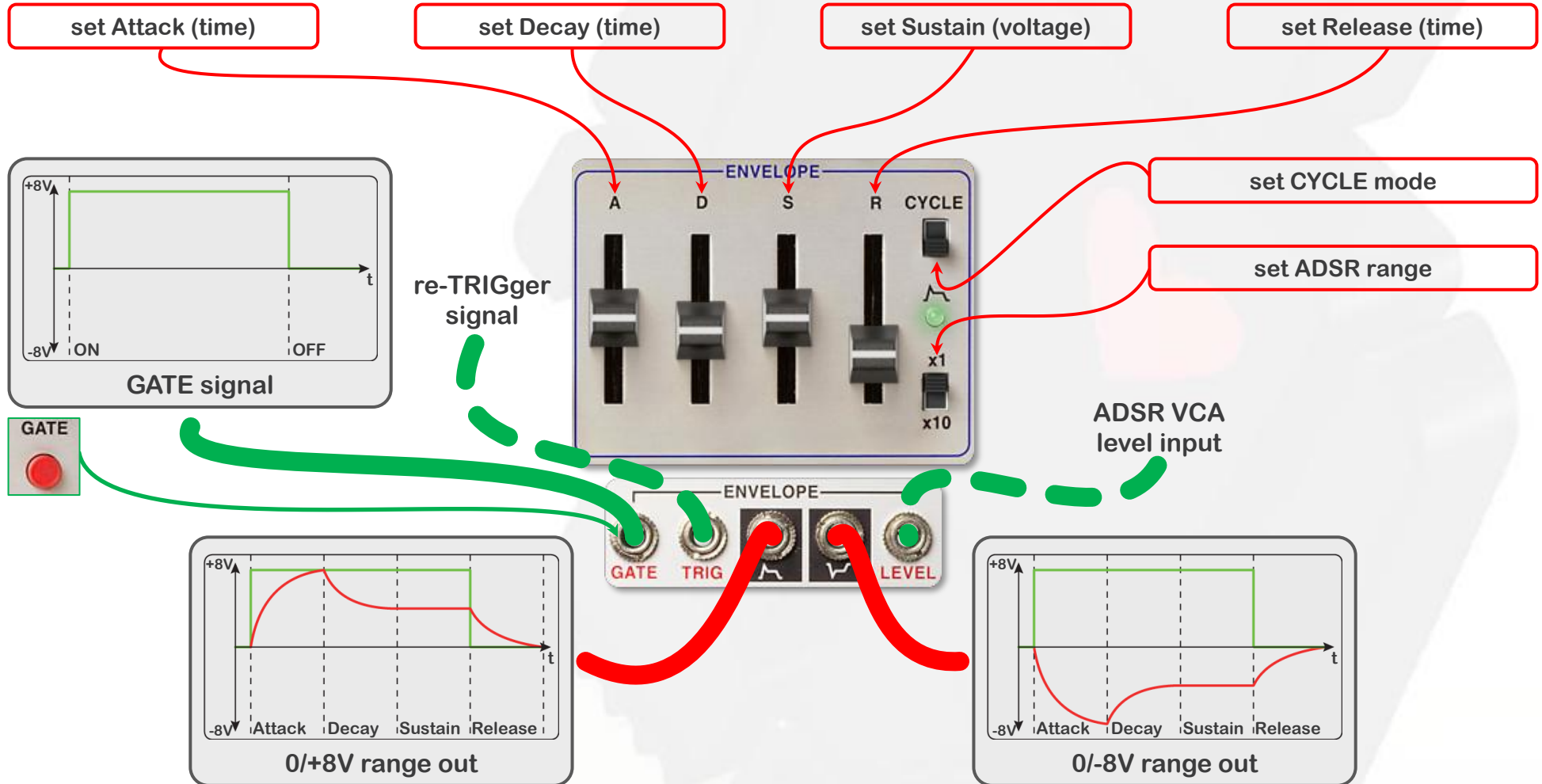


# ENVELOPE section



# Overview

The ENVELOPE section is an ADSR generator with two timing ranges (fast x1 and slow x10) selectable with a switch. This ADSR can be re-triggered with the TRIG input. LEVEL input sets the ENVELOPE VCA level Envelope VCA level which means you can have control over ADSR global velocity. Amplitude range : 8V (positive or negative). The CYCLE switch sets the ENVELOPE in cycle mode, by this way the ADSR acts as an A, A/D, or D LFO/VCO, depending of the A/D/S/R settings.



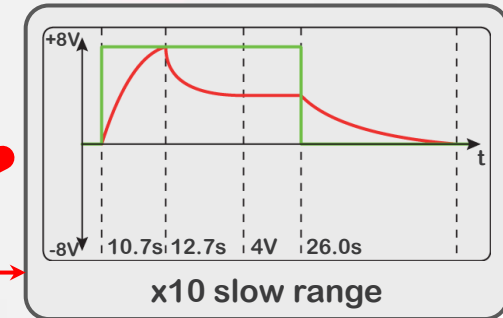
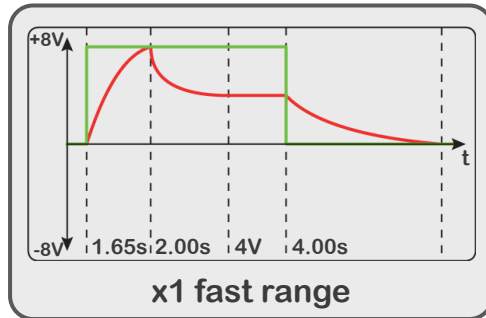
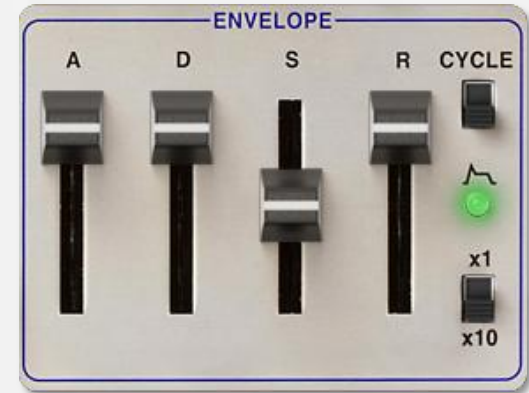
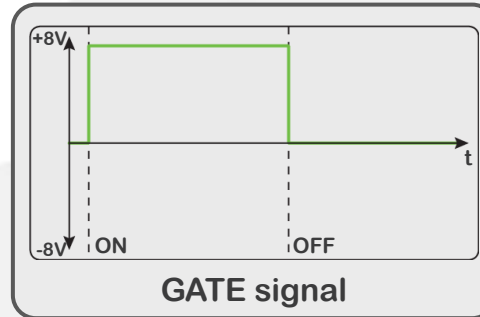
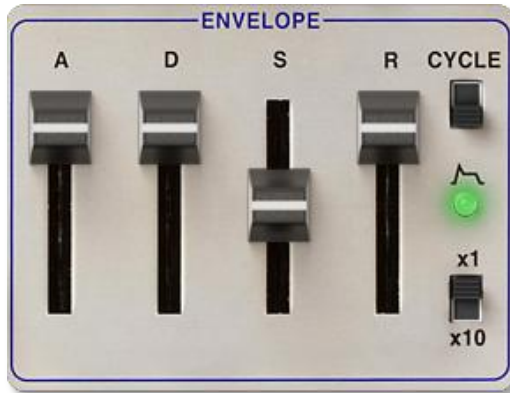
# Range

The range switch allows you to select **fast x1** or **slow x10** time range for ADSR generator. You can expect an approximative 6.5 time factor between those two ranges.

Positive out illustrated here.

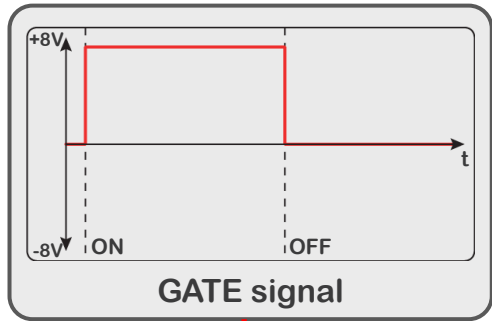
**Range x1** : A/ 1.65 sec. - D/ 2.00 sec. - R/ 4.00 sec.

**Range X10** : A/ 10.7 sec. - D/ 12.7 sec. - R/ 26.0 sec.

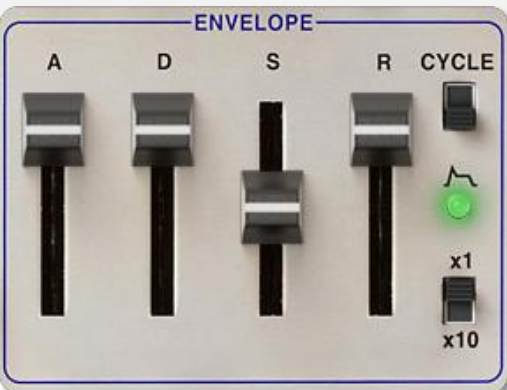





# OR GATES

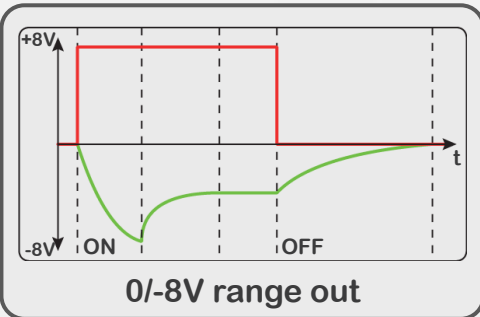
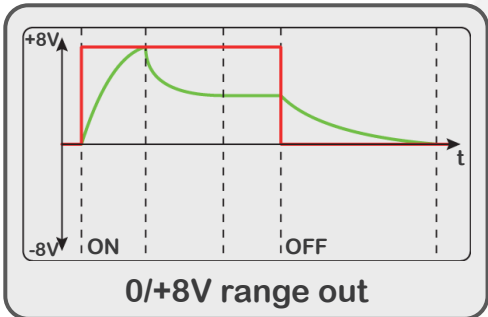
GATE signal input and manual GATE button from VCA section are combined in a logic OR relationship. You can use them both for triggering ENVELOPE section.



OR





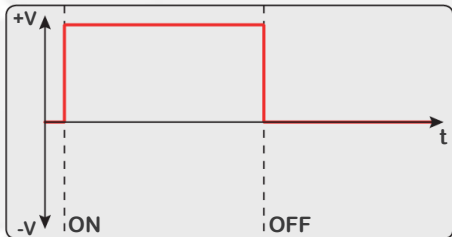
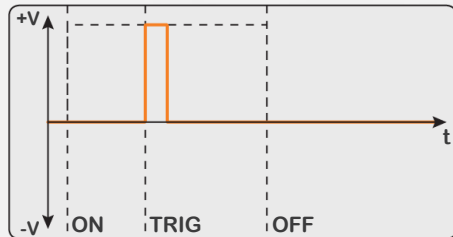
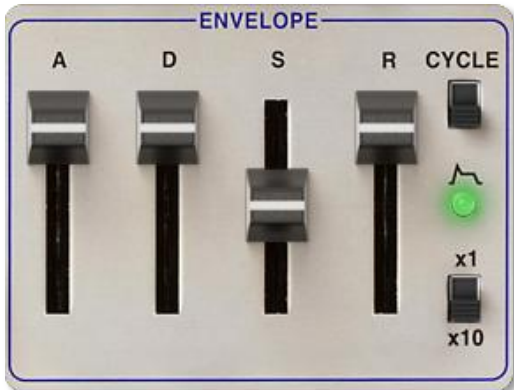
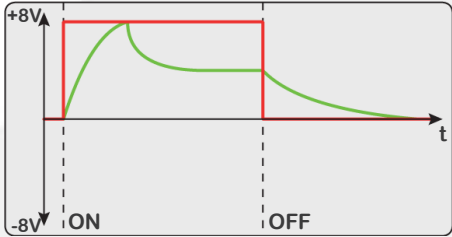
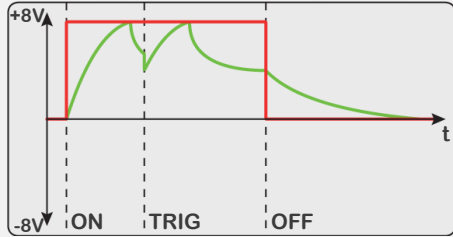
 GATE	 GATE	
OFF	OFF	OFF
ON	OFF	ON
OFF	ON	ON
ON	ON	ON





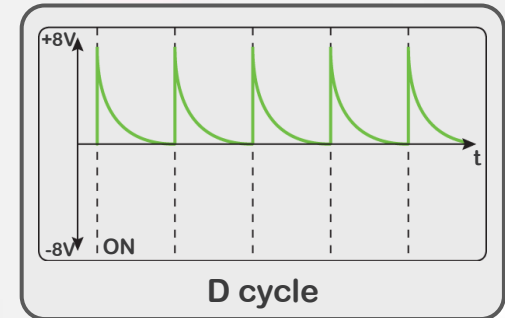
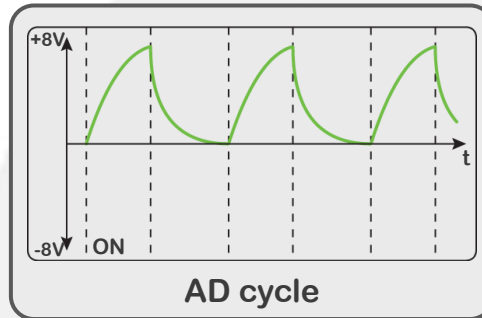
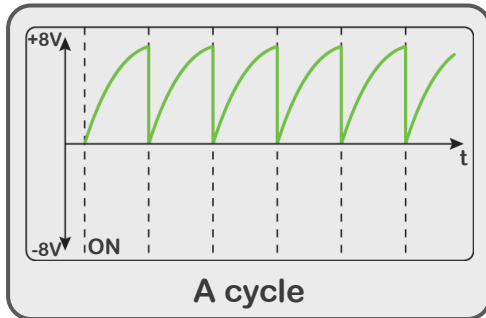
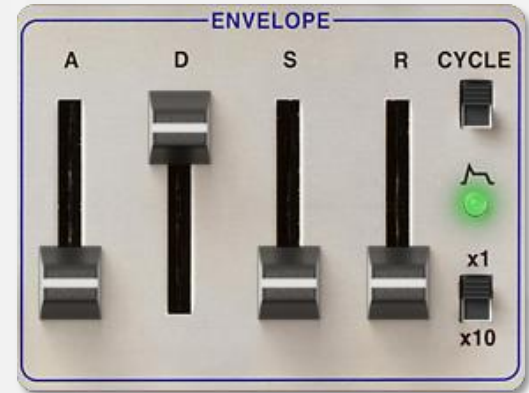
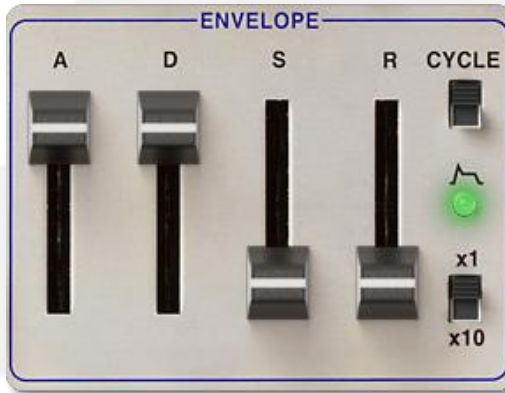
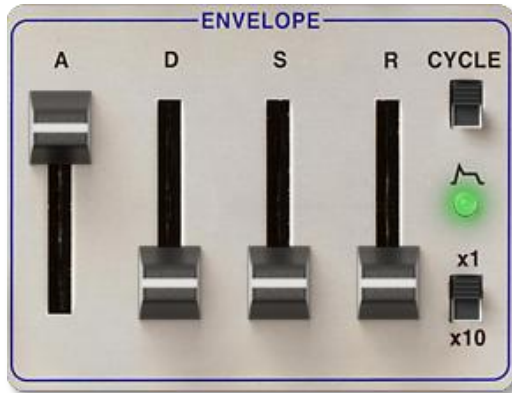
# re-TRIGger

Re-TRIGger input allows the envelope to be restarted by a pulse trigger if it is being held in A, D or S phase via a GATE signal. The re-triggered starting level is offset by the sustain slider.

<p>Decay stage re-triggering - Positive ADSR out illustration</p>		
		
		

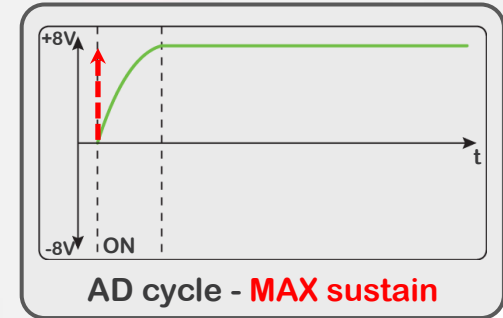
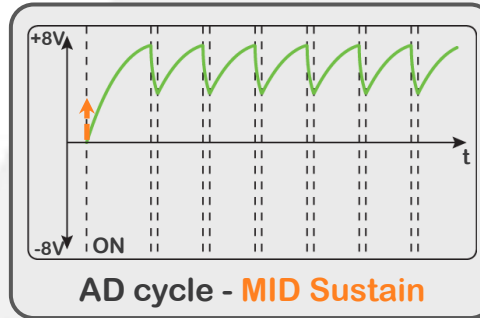
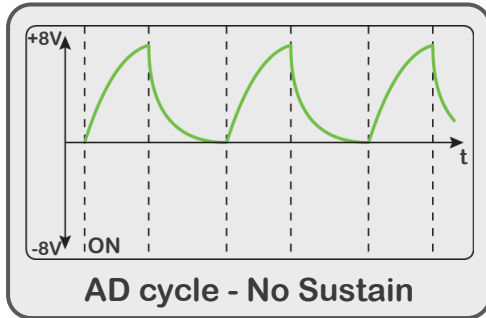
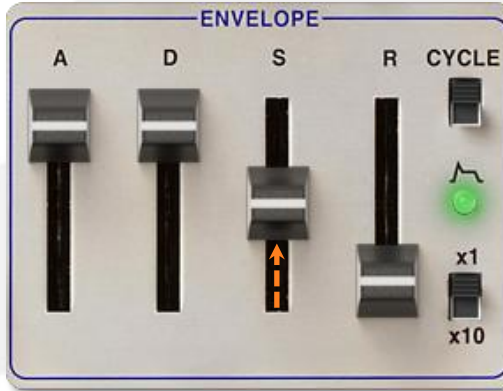
# CYCLE mode - waveforms

With the **CYCLE** switch engaged, ENVELOPE will self-cycle. It can range from LFO rate right up to audio rate in the kHz range depending on the positions of the A and D sliders which primarily affect the rise and fall time of the cycling envelope.



# CYCLE mode - Sustain offset

In CYCLE mode, Sustain can be used as an offset generator. At max position, ENVELOPE section will deliver a constant voltage of about 8V (-8V in inversed polarity).



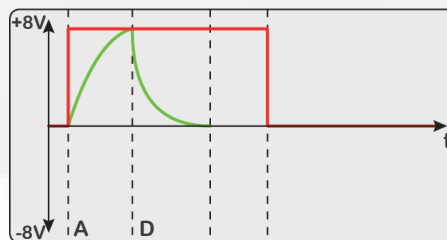
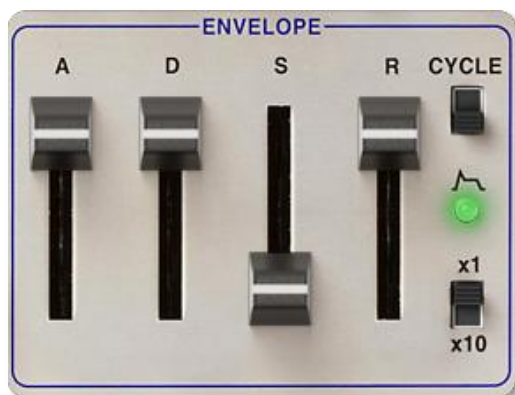
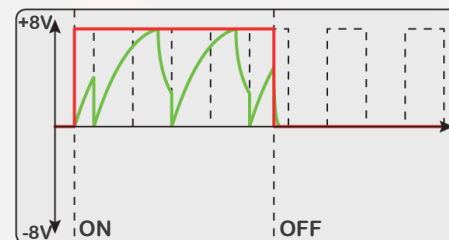
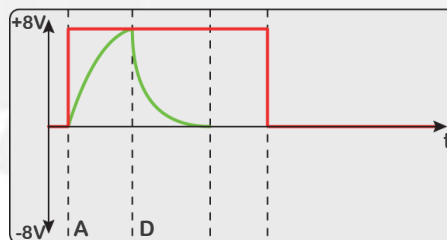
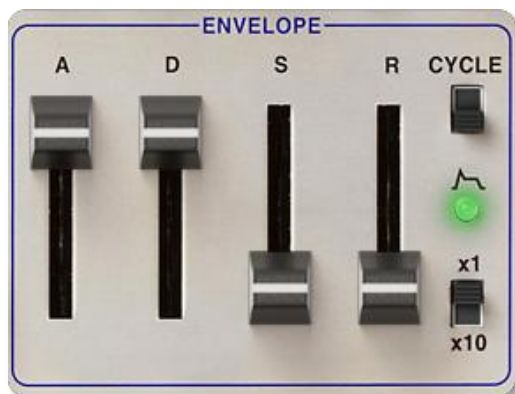
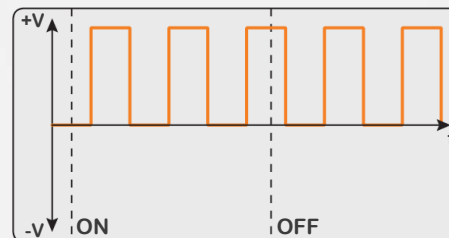
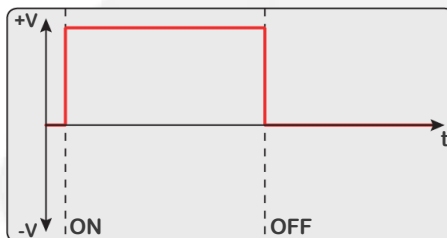
→ Increase AD cycle speed

# Fire ADSR ! - part 1

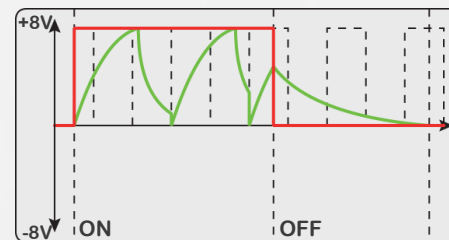
ENVELOPE triggering

Sustain OFF

CYCLE mode OFF



Attack stage doesn't re-trigger if Release ON

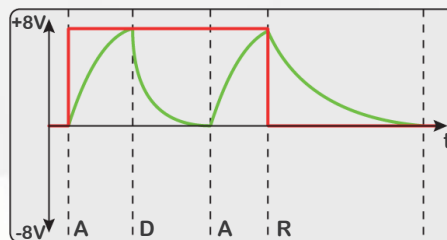
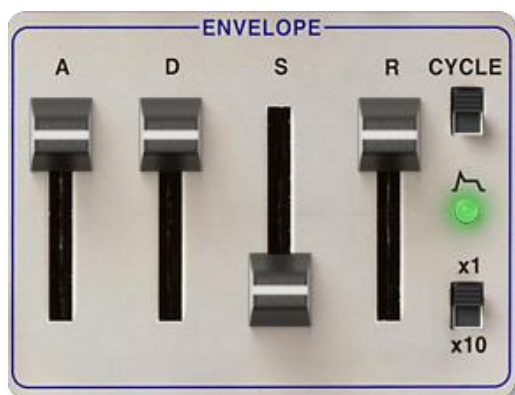
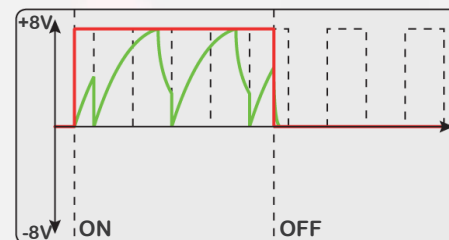
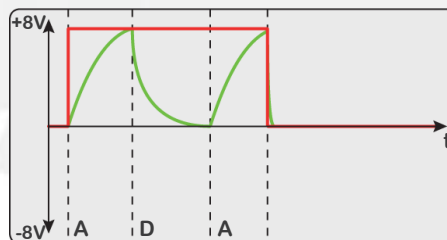
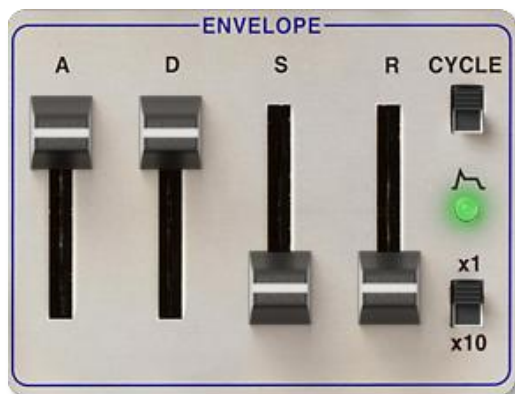
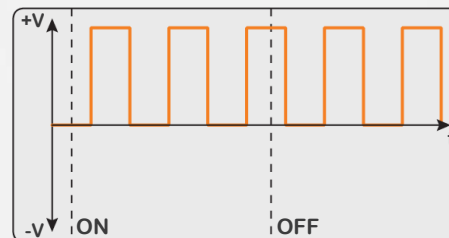
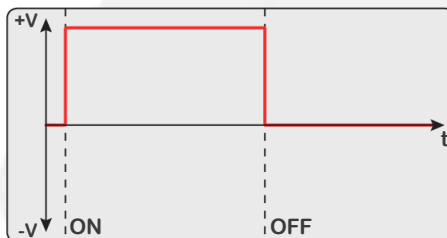


# Fire ADSR ! - part 2

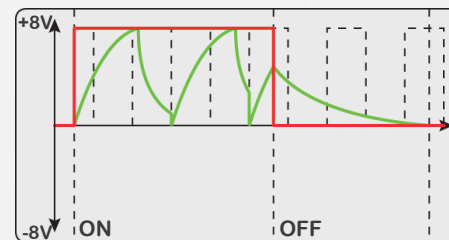
ENVELOPE triggering

Sustain OFF

CYCLE mode ON



Attack stage doesn't re-trigger if Release ON



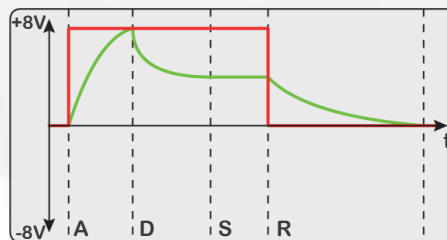
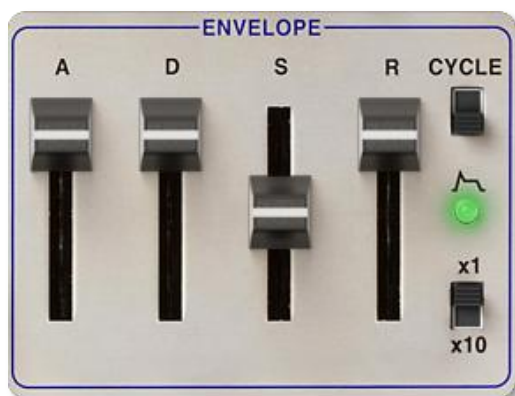
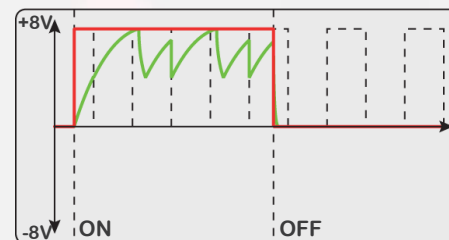
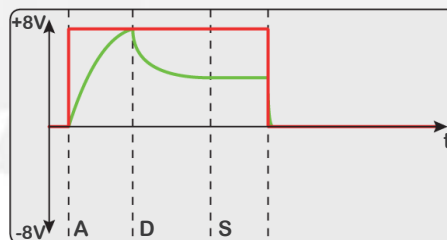
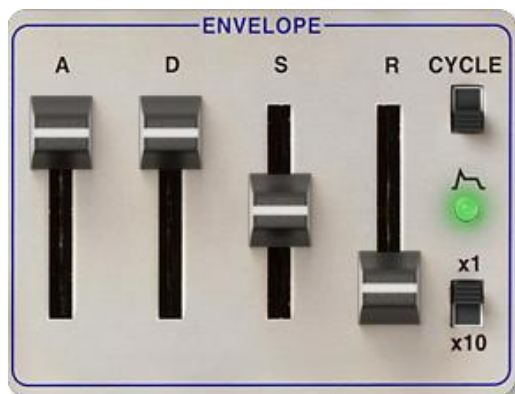
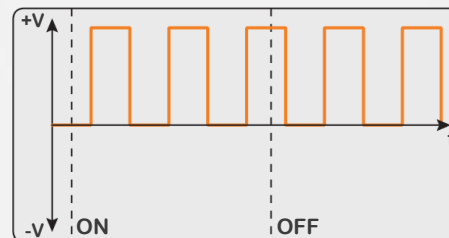
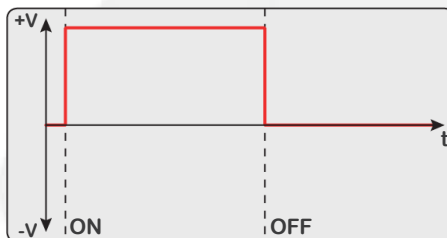


# Fire ADSR ! - part 3

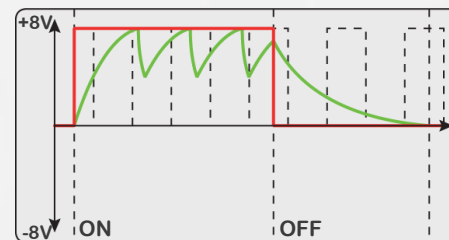
ENVELOPE triggering

Sustain ON

CYCLE mode OFF



Attack stage doesn't re-trigger if Release ON

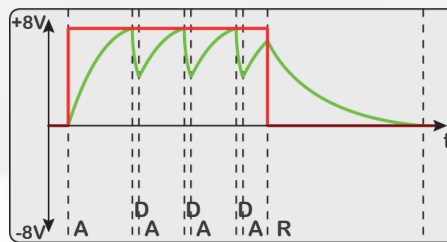
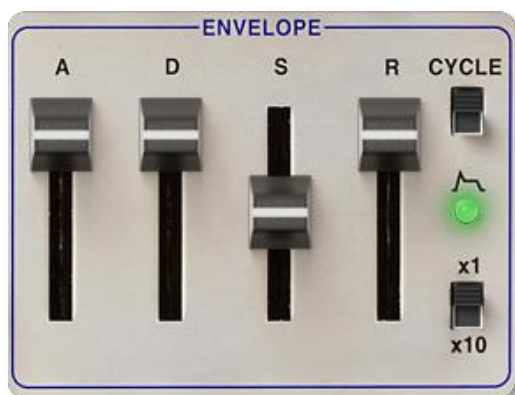
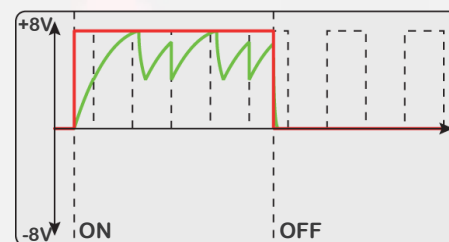
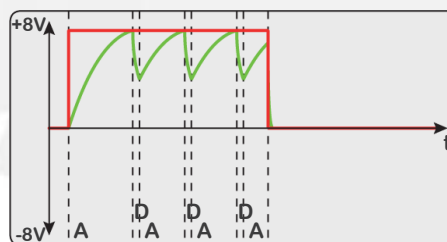
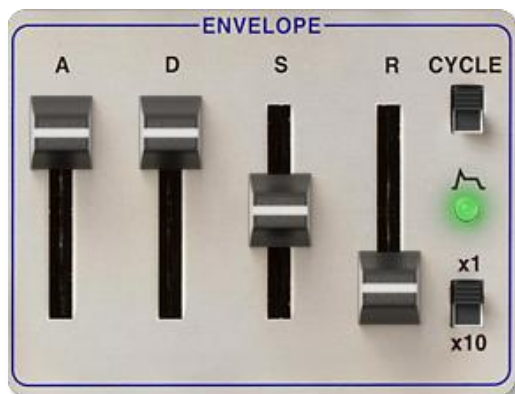
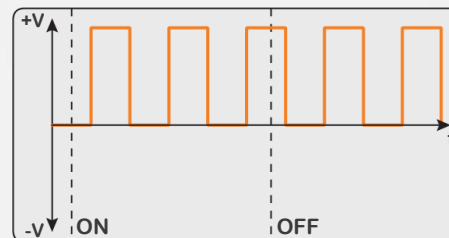
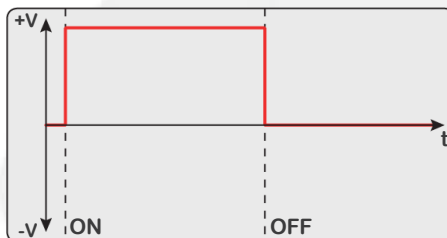


# Fire ADSR ! - part 4

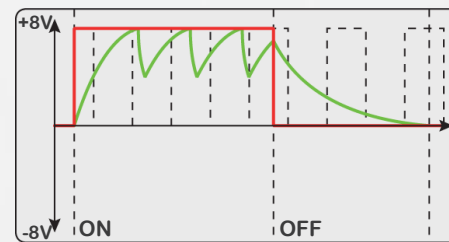
ENVELOPE triggering

Sustain ON

CYCLE mode ON

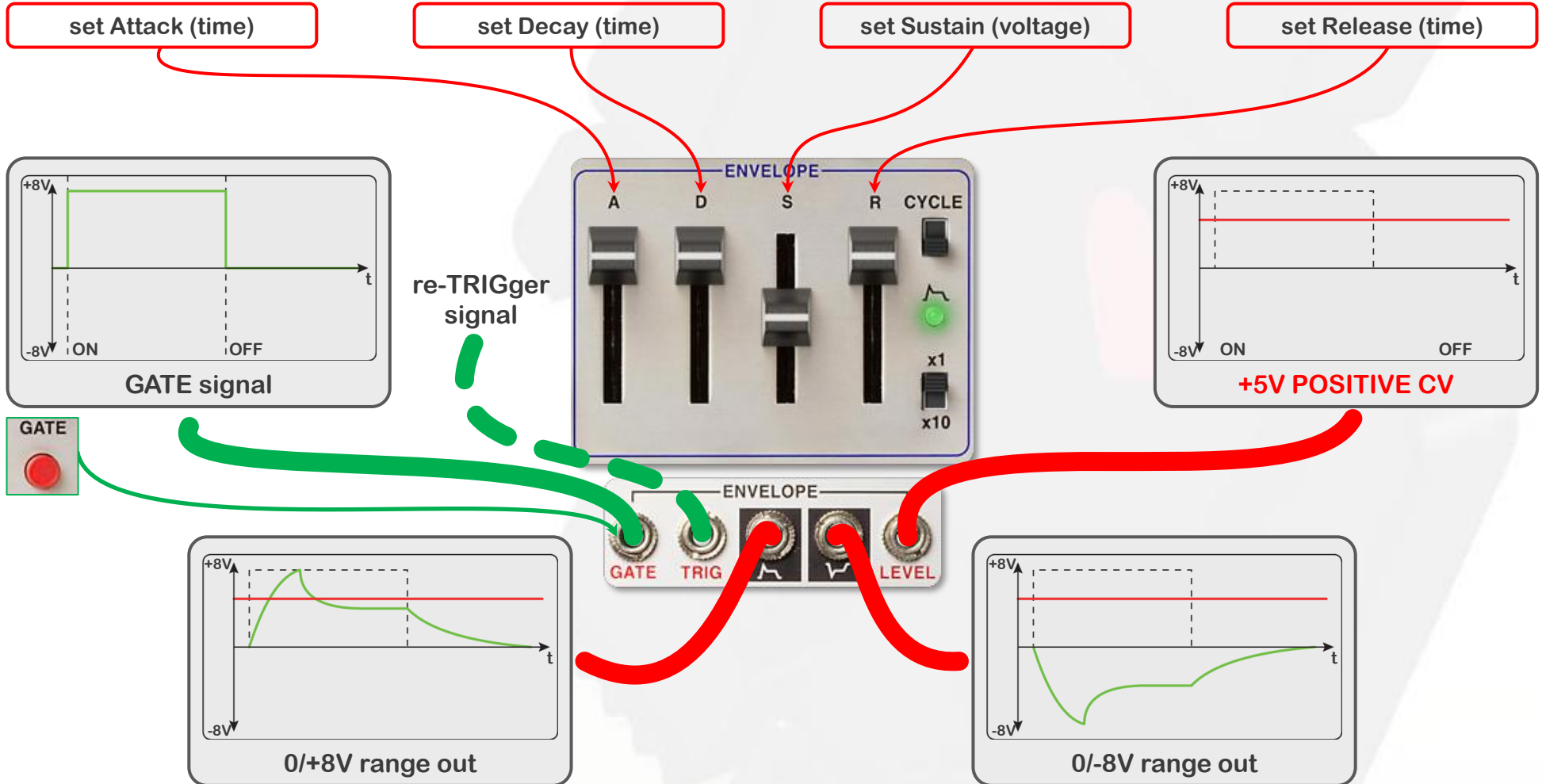


Attack stage doesn't re-trigger if Release ON

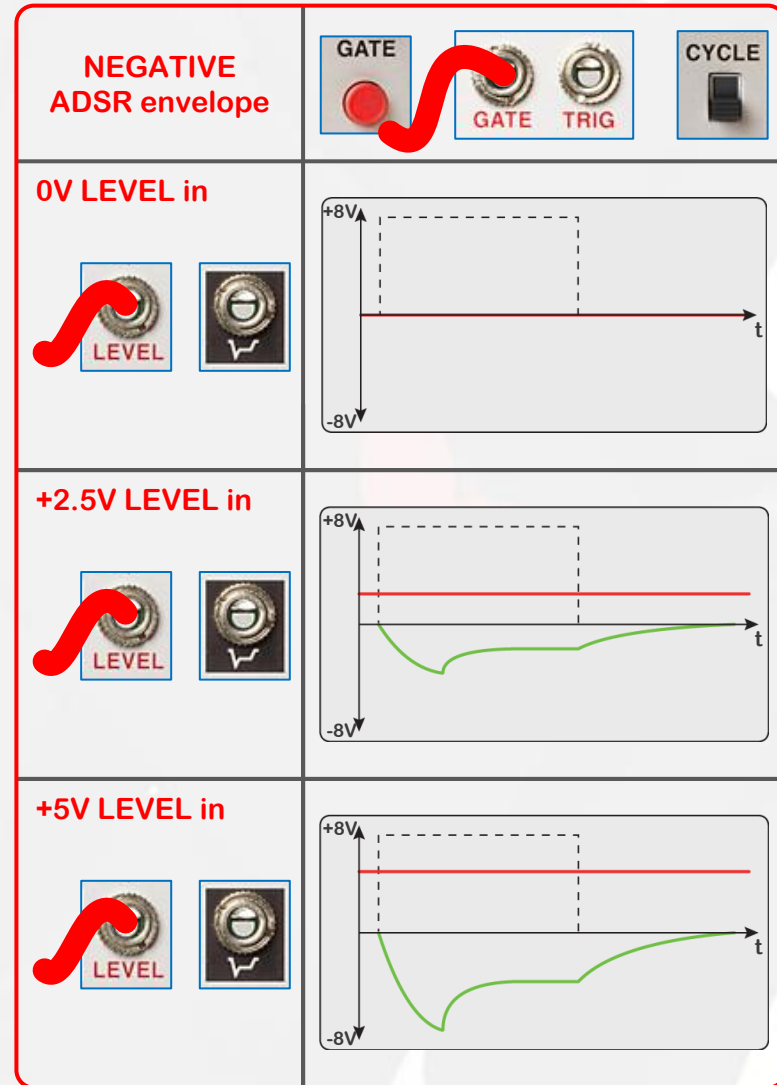
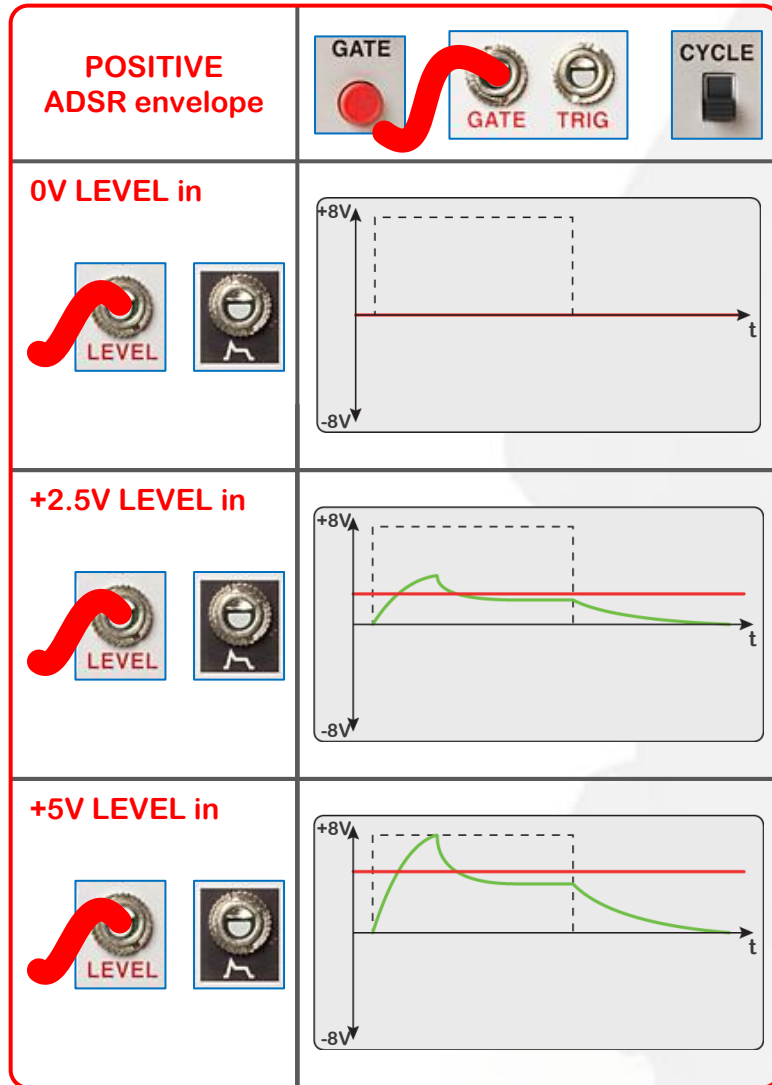


# LEVEL input

The **LEVEL** input acts as Control Voltage input (0-5V input for 0-8V ADSR out range) for the VCA's envelope. With LEVEL input, you can have control over global velocity of the ENVELOPE section.

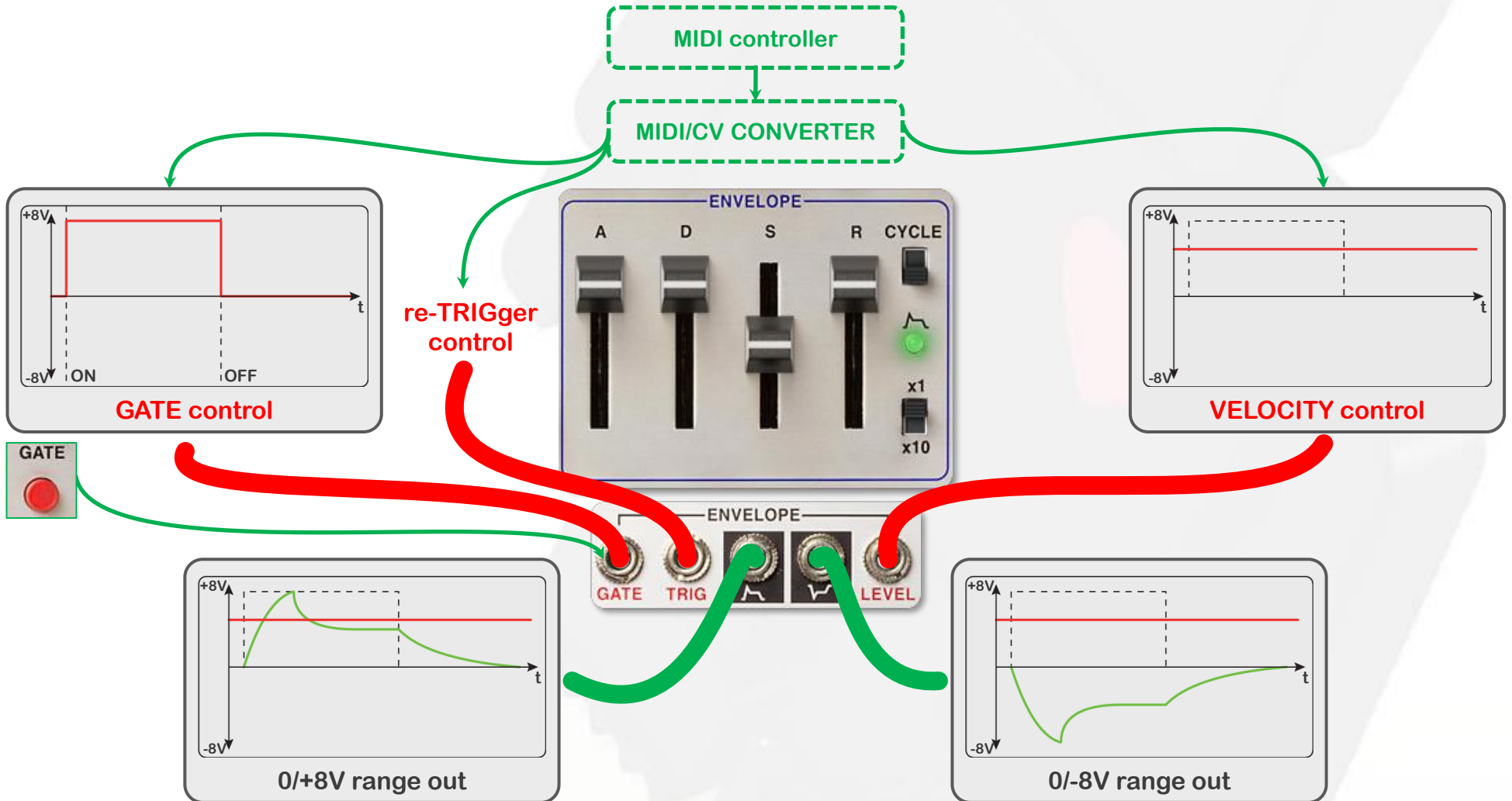


# LEVEL input chart



# KEYBOARD control

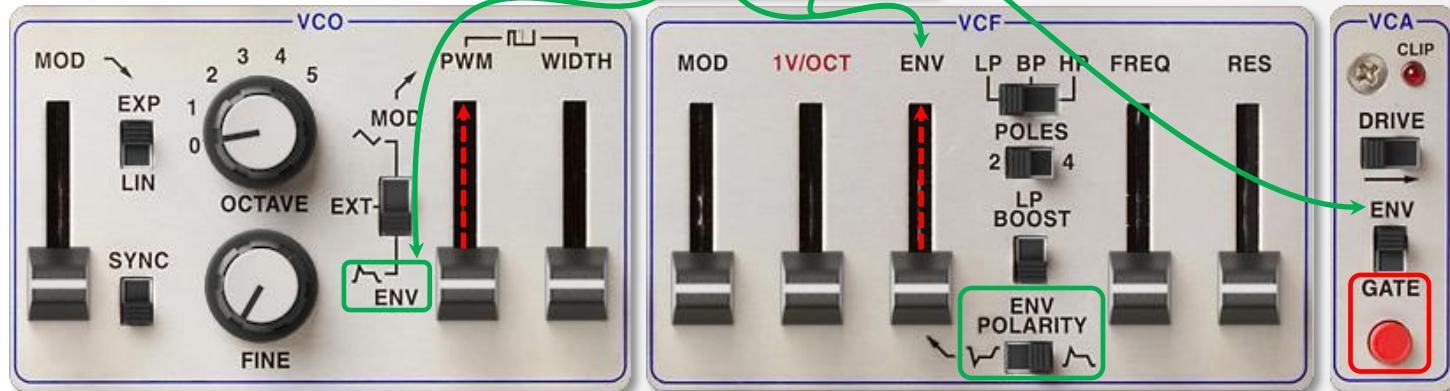
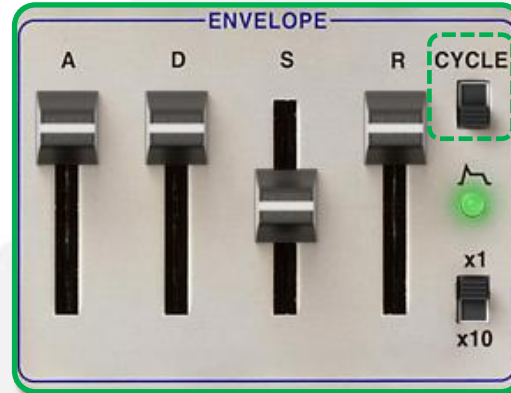
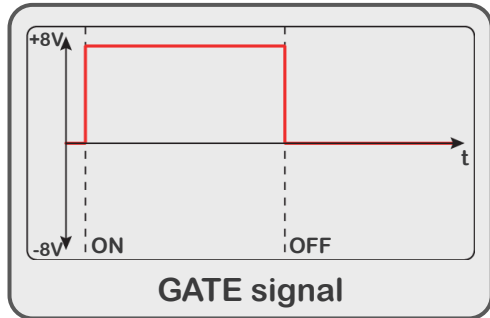
You can use any MIDI controller (like a keyboard) coupled with a MIDI CV converter for controlling GATE, re-TRIGger and VELOCITY of the played envelope.



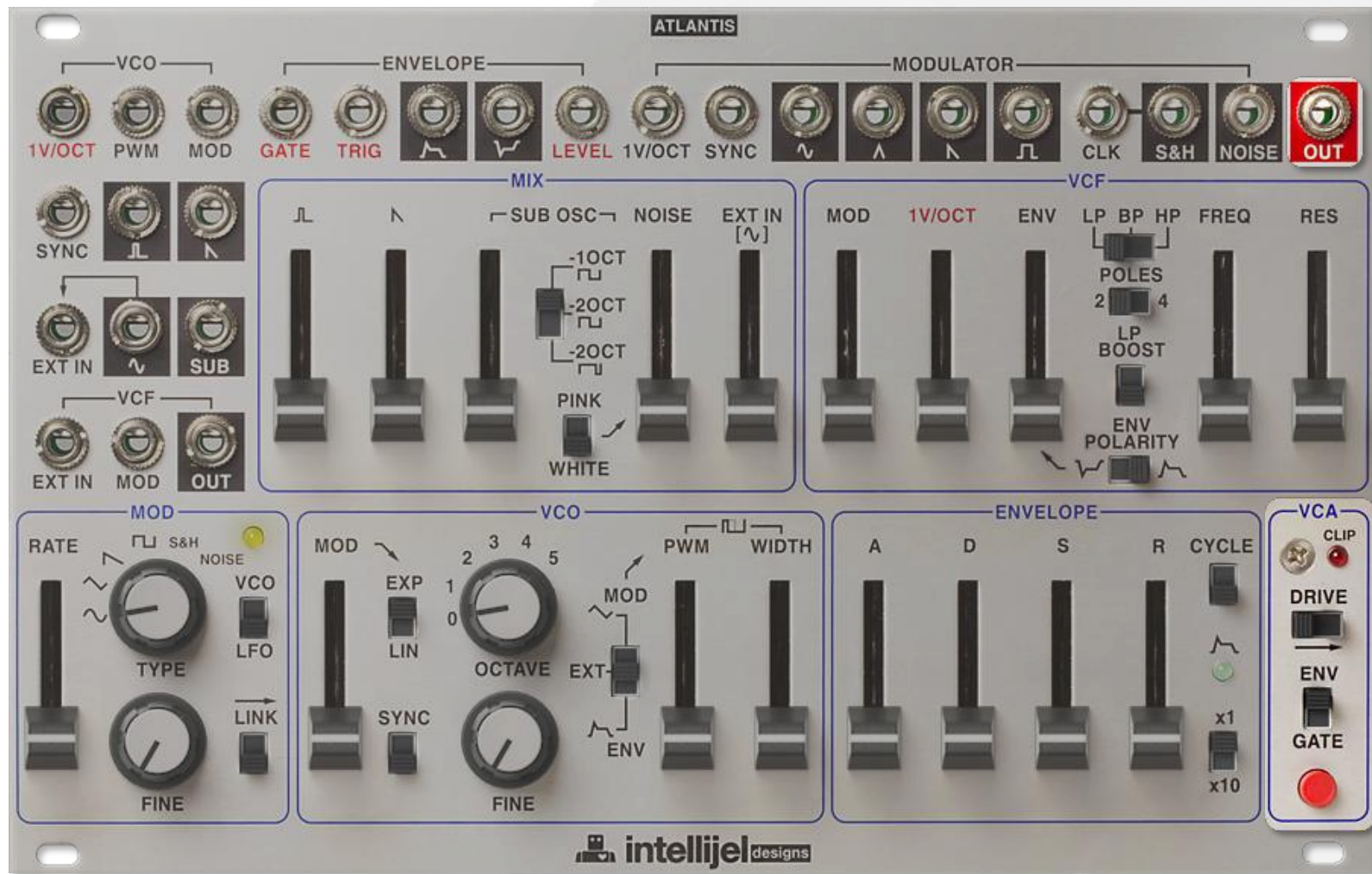


# ENVELOPE bus

The ENVELOPE section outs are normalized to Primary VCO PWM, VCF cutoff and VCA level, in the related sections. Note that you can change ENVELOPE polarity in the VCF section.

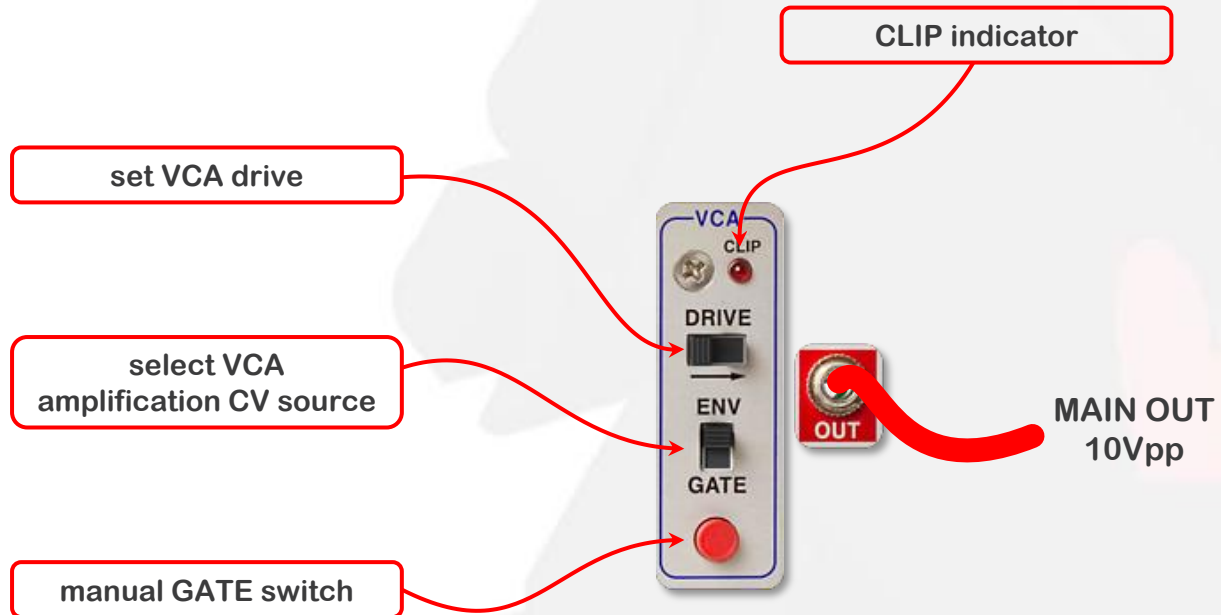


# VCA section



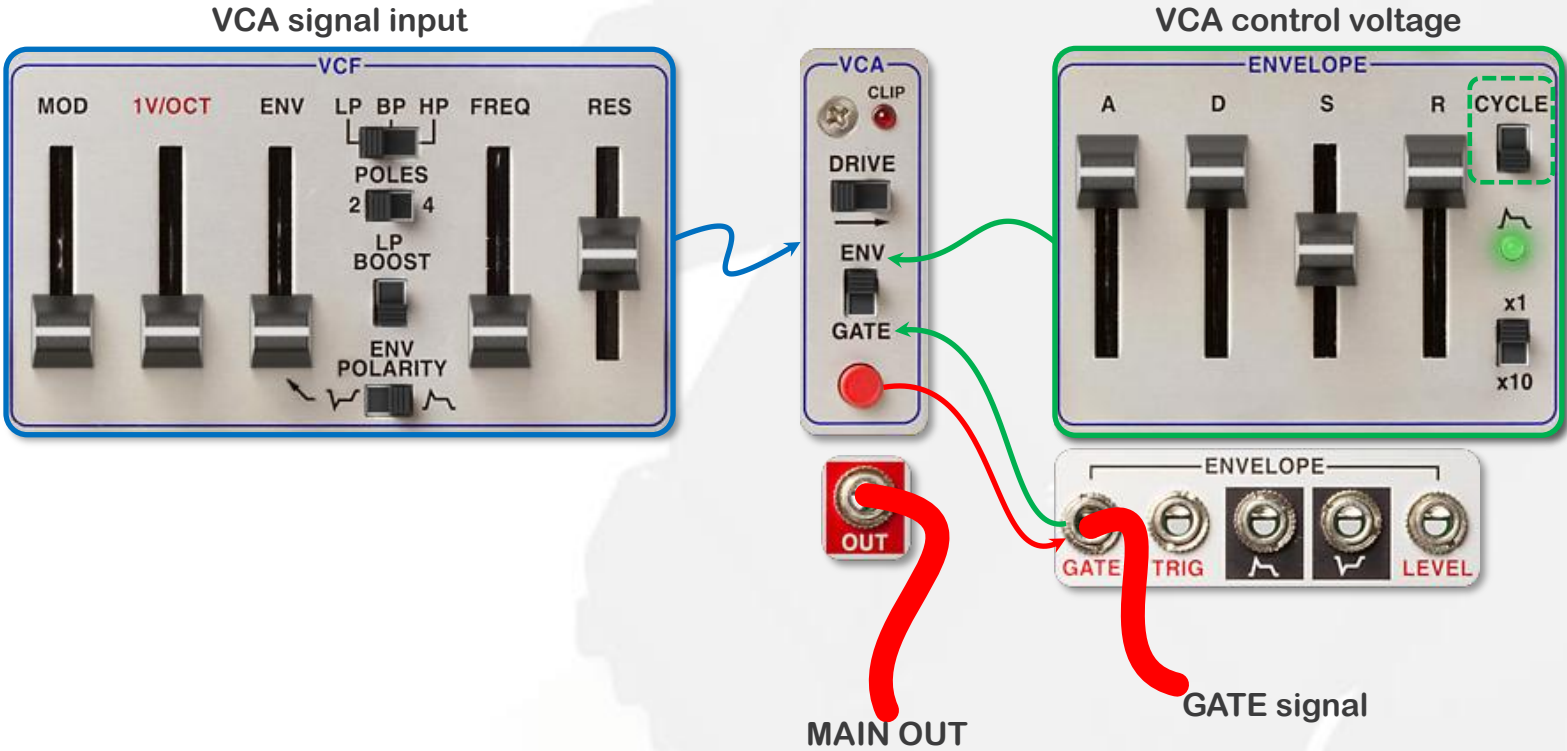
# Overview

The Voltage Controlled Amplifier is the final stage of the Atlantis signal path. The input of this section is normaled to the VCF section out. You can set no, soft or hard clip for signal amplification to get more abrasive sounds. The ENV/GATE switch selects the source of the control voltage that open the VCA, between the positive ENvelope section out and GATE signal (from GATE input or with manual button).  
Output range : 10Vpp.



# Normalled inputs

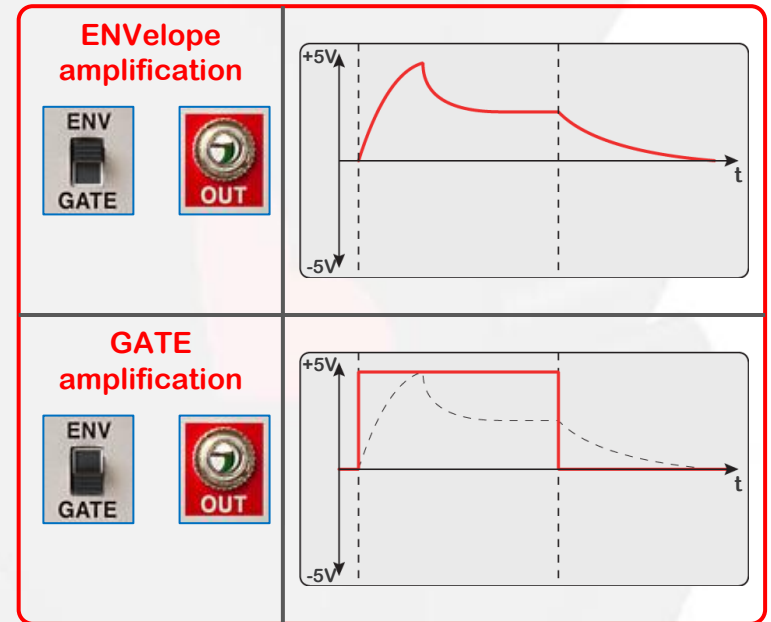
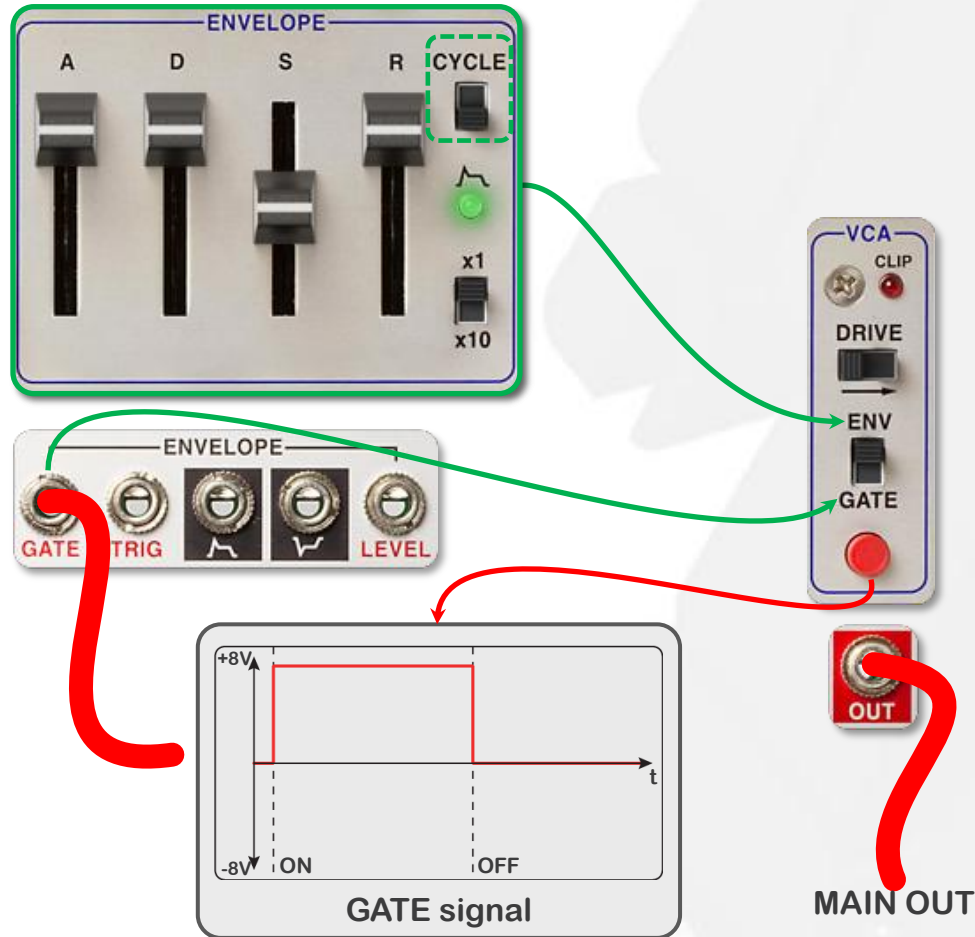
The input of VCA section is normalized to the VCF section out. The control voltage of amplification is normalized to the ENVELOPE section (out and gate input) and manual GATE button.



# ENvelope / GATE selection

The input of the VCA section is normalized to the VCF section out. The control voltage of amplification is normalized to the ENvelope section (out and gate input) and manual GATE button.

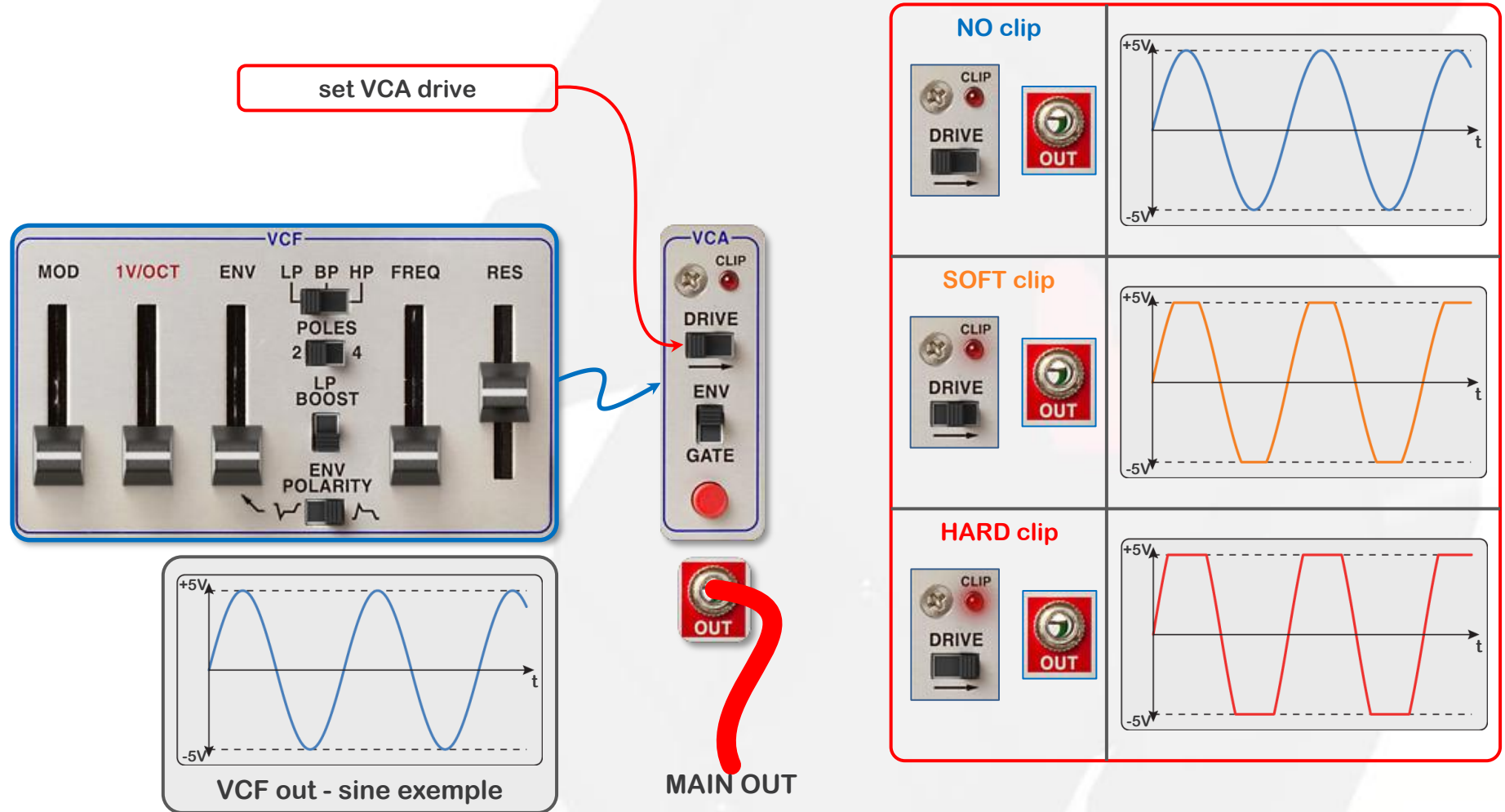
NOTE : In GATE mode the VCA can be either fully open or fully closed, there is no modulation cv from the ADSR.



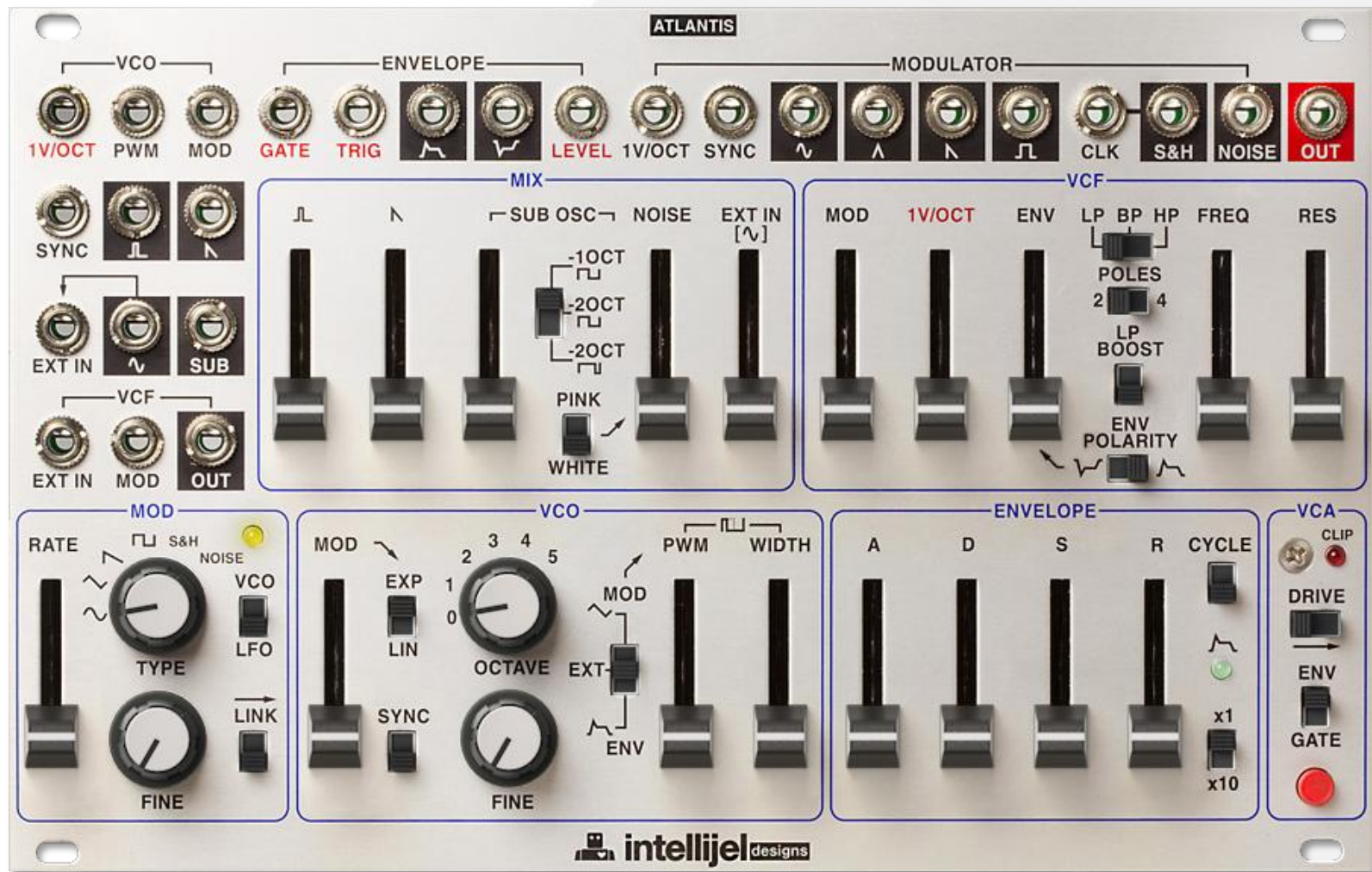


# DRIVE amplification

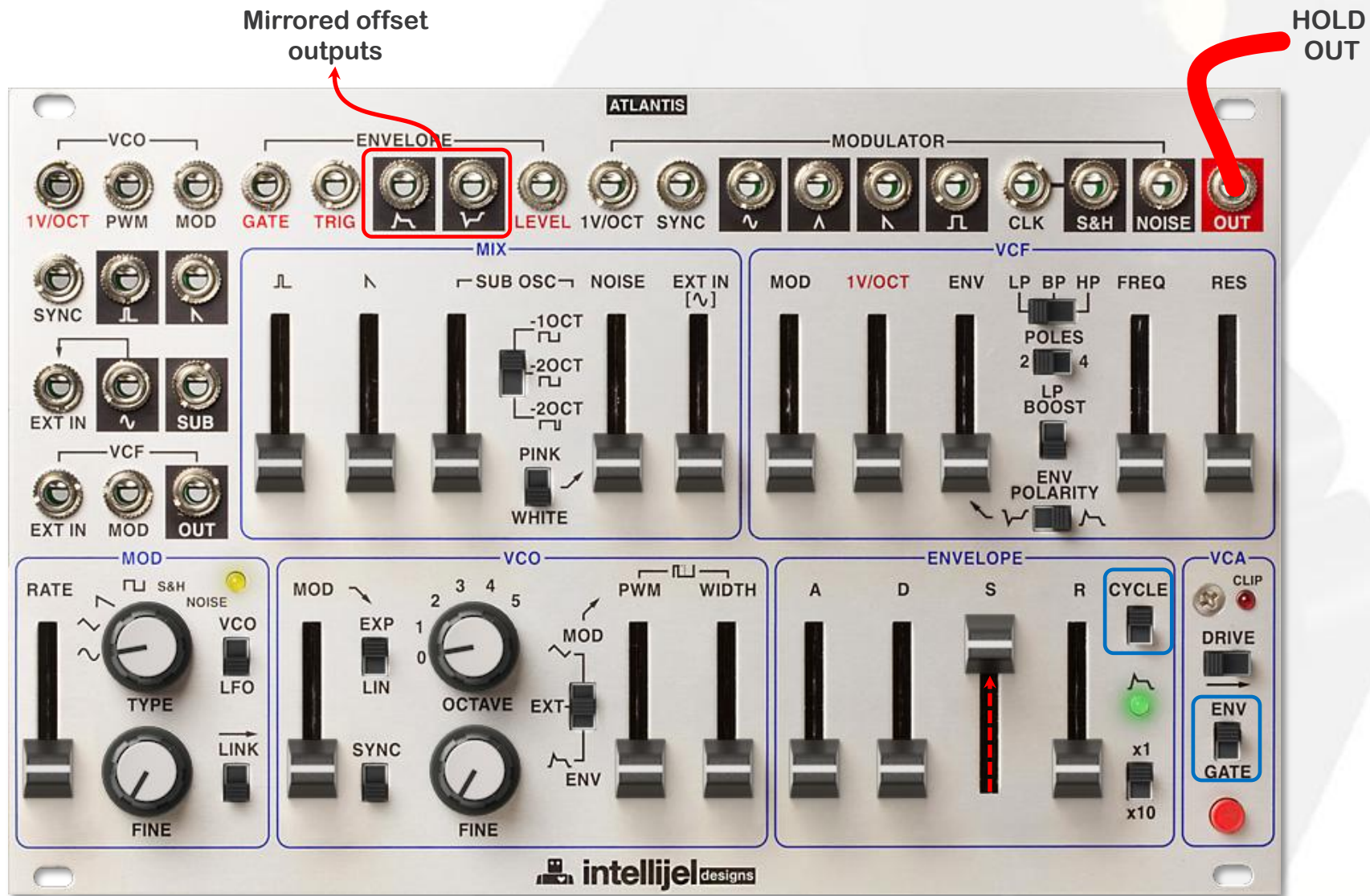
The input of VCA section is normalized to the VCF section out. The control voltage of amplification is normalized to the ENVelope section (out and gate input) and manual GATE button.



# Patches & Tips



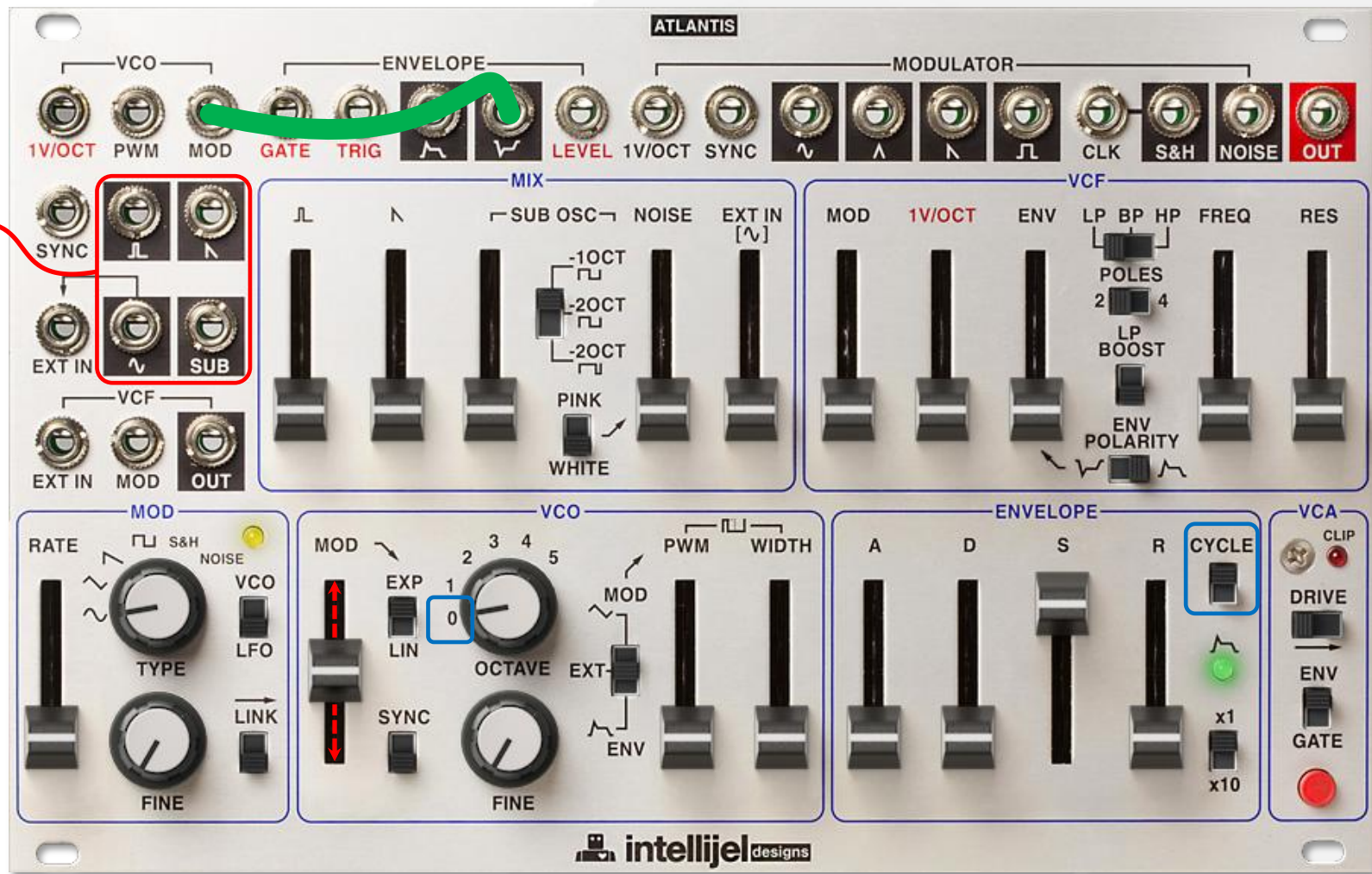
# HOLD output - Mirrored offset generator



For holding VCA main output without GATE signal or GATE switch, set ENVELOPE section on CYCLE and adjust volume with Sustain. Set VCA CV source to ENV. You get at the same time mirrored offset generator (+/-8V range) at ENVELOPE section outputs.



# Primary VCLFO

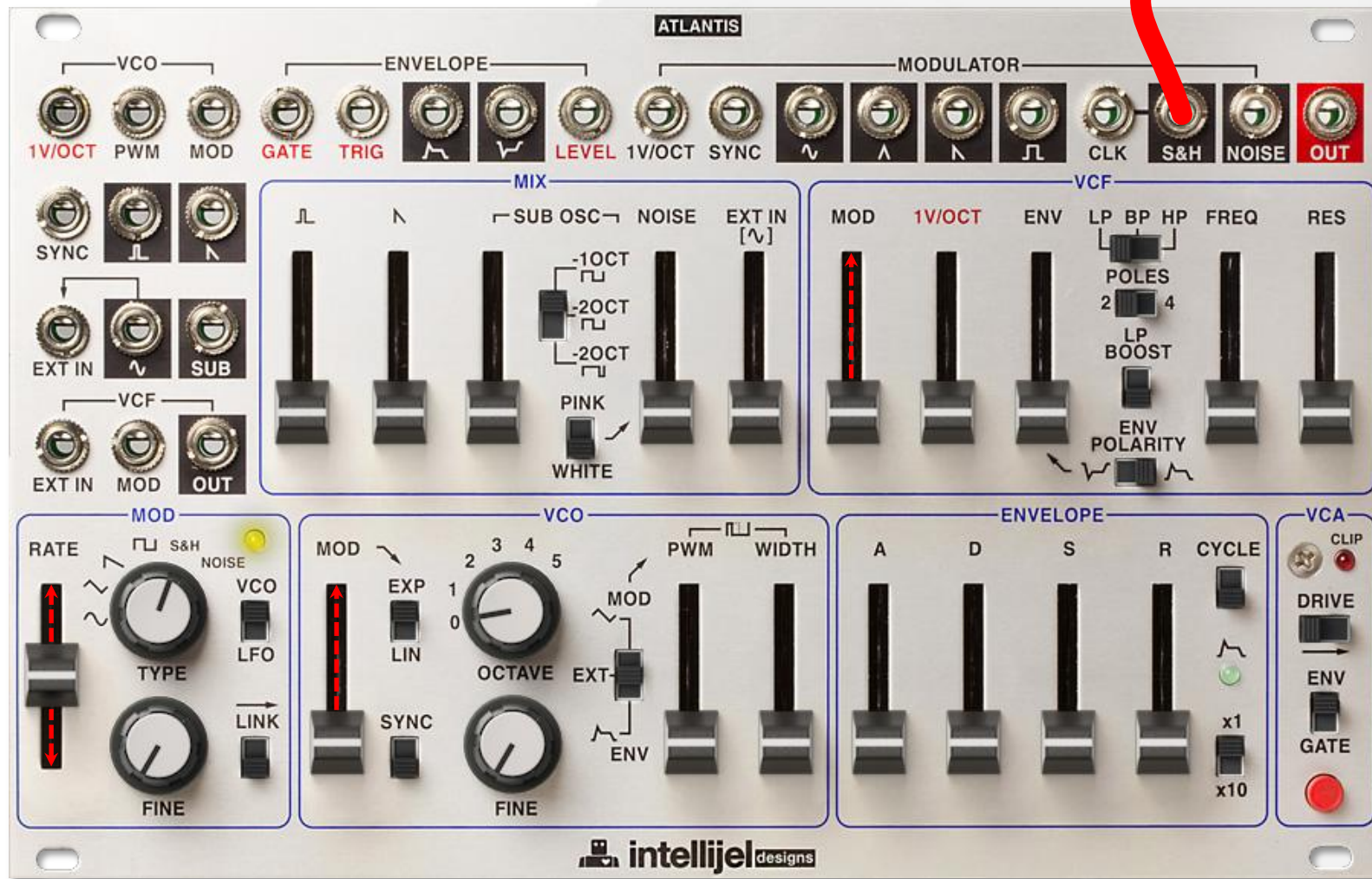


Primary LFO raw OUTPUTs

You can go to LFO range with the Primary VCO. To do this just apply a negative voltage to the MOD input of the Primary VCO set to 0 octave and control the speed with the MOD slider. You can use previous HOLD patch for generate the negative offset signal, as illustrated here.

# Pseudo-digital noise

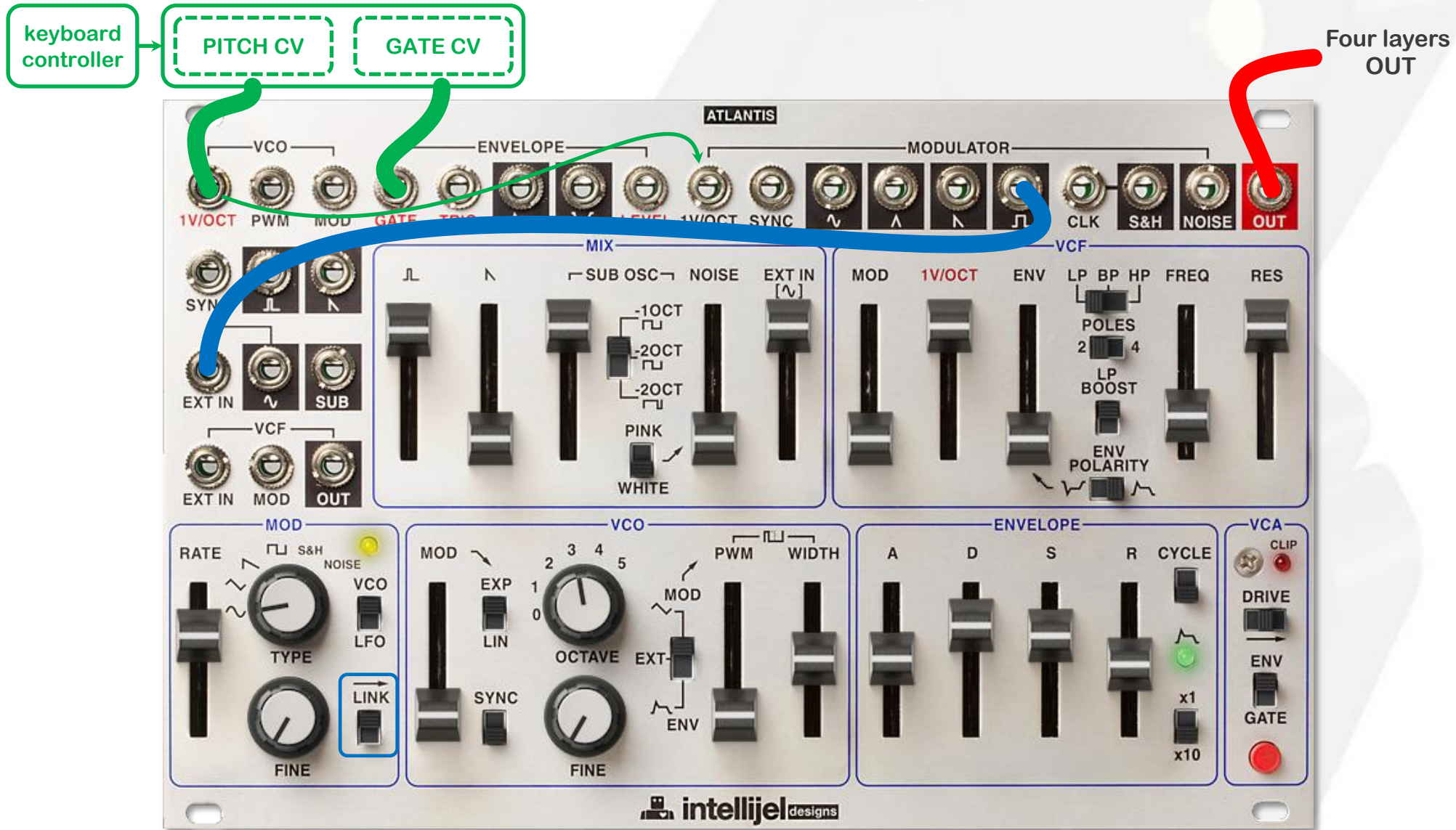
Pseudo-digital  
noise OUT



You can get a kind of digital noise by clocking Sample&Hold of MODulator at audio rate. Just set MODulator to VCO range and adjust tone of pseud-digital noise with the RATE slider.

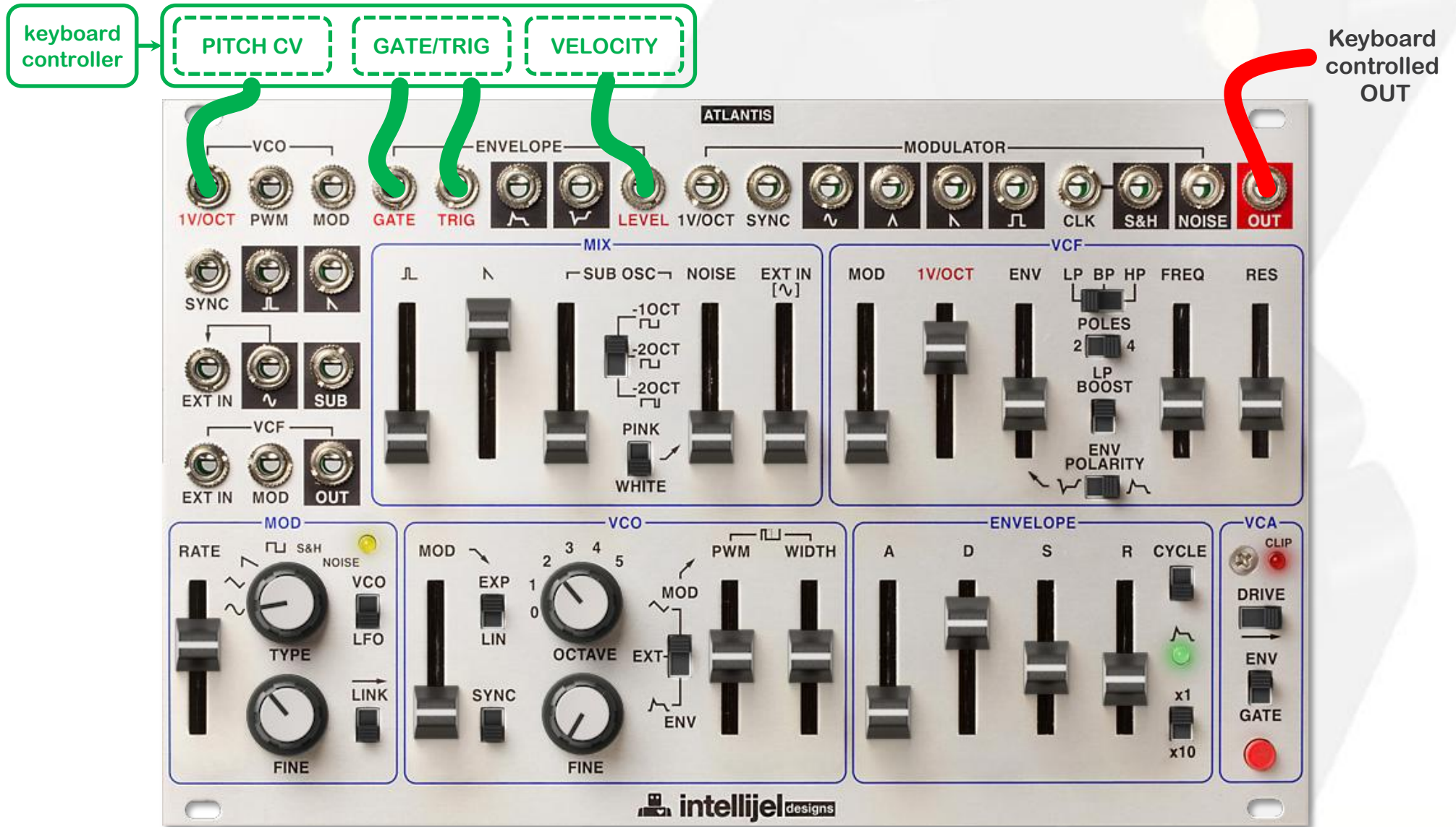


# Four layers patch



Massive four oscillators layer can be generated by stacking primary, SUB , MOD and VCF sine VCOs. With the LINK switch, all the four can be driven at 1V/OCTave with the 1V/OCTave input of Primary VCO section.

# Keyboard controller



Use a keyboard controller to get control over pitch tracking, gate and velocity of the played notes.

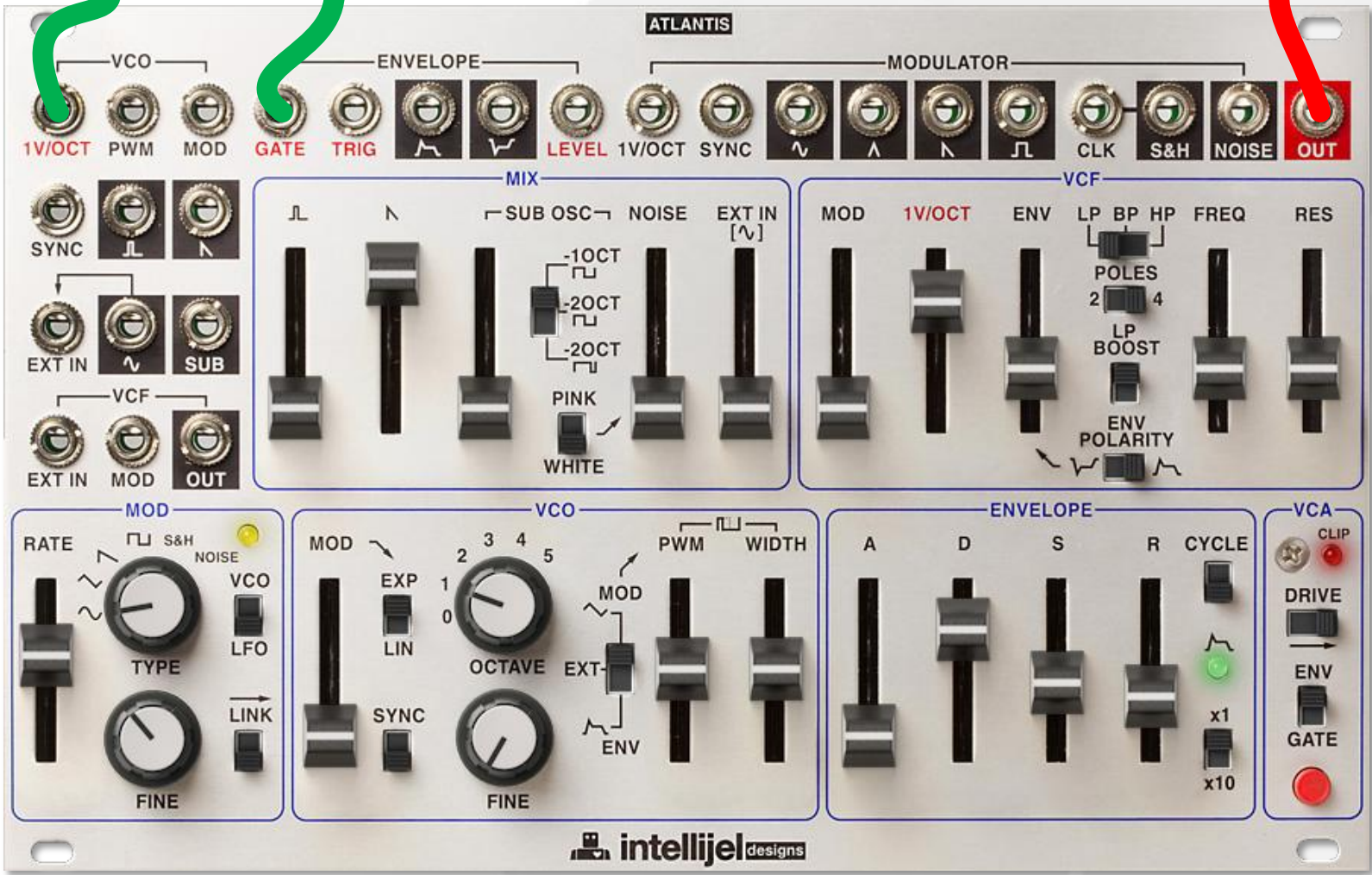


# Arpeggiated sequence (Danjel van Tijn)

sequencer arp.

PITCH CV  
GATE CV

Arpeggiated sequence OUT



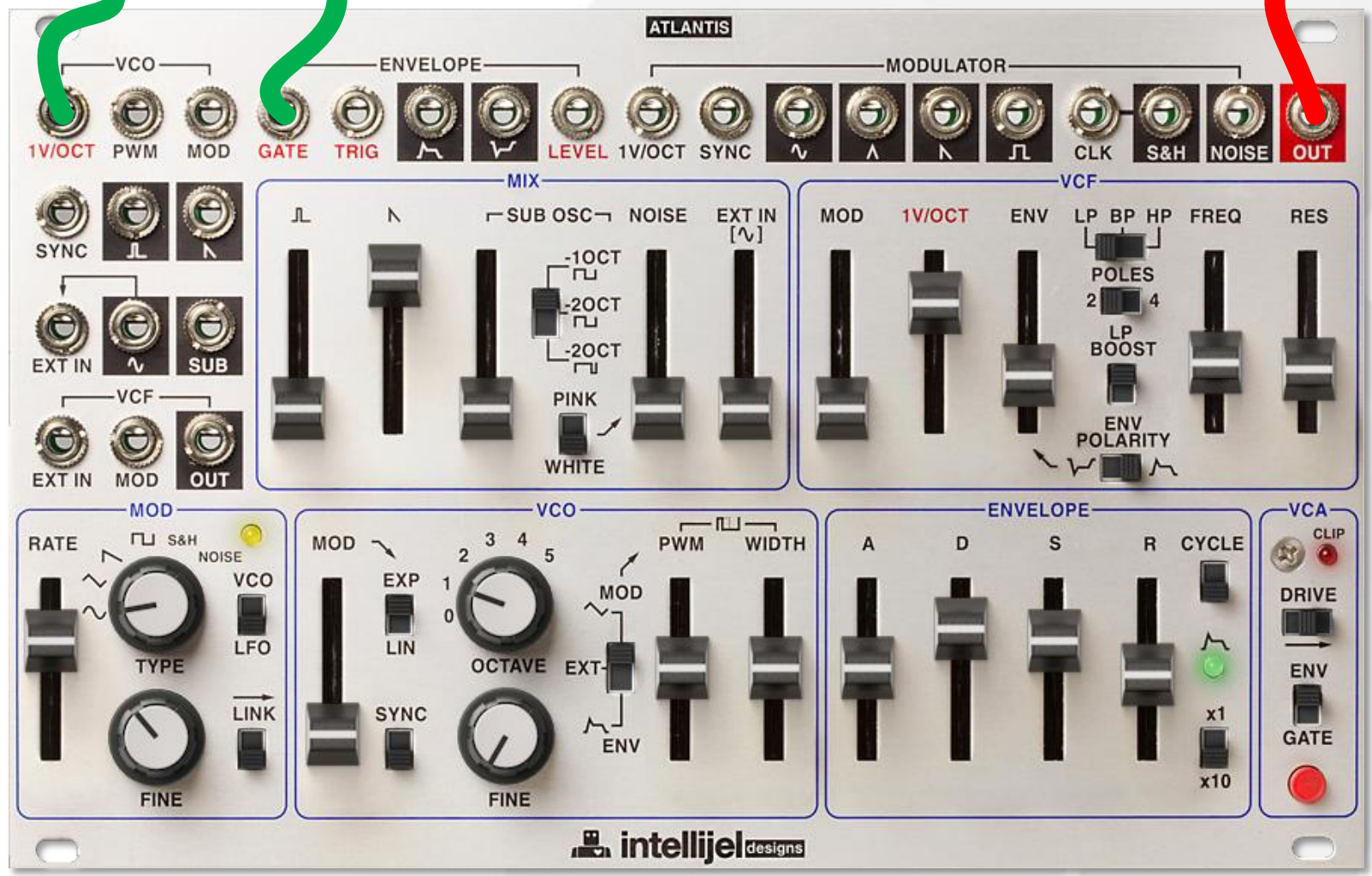
Control Primary VCO and VCF at 1V/OCT with an arpeggiator, taste different settings for VCF and MOD sections.

# Longer notes played from keyboard (Danjel van Tijn)

keyboard controller

PITCH CV  
GATE CV

Longer notes  
OUT



Play longer notes with a CV keyboard.



# S&H modulation of VCF (Danjel van Tijn)

sequencer arp.

PITCH CV  
GATE CV

S&H modulated VCF out



Set MODulator section on S&H and adjust MOD slider in VCF section for random modulation of filter's cutoff frequency.

# PWM+SUB (Danjel van Tijn)

keyboard controller → PITCH CV GATE CV

PWM + SUB OUT



Pulse with PWM layered with -1 Octave SUB.



# Dual VCO pads - part 1 (Danjel van Tijn)

keyboard controller

PITCH CV  
GATE CV

Dual VCO pads OUT



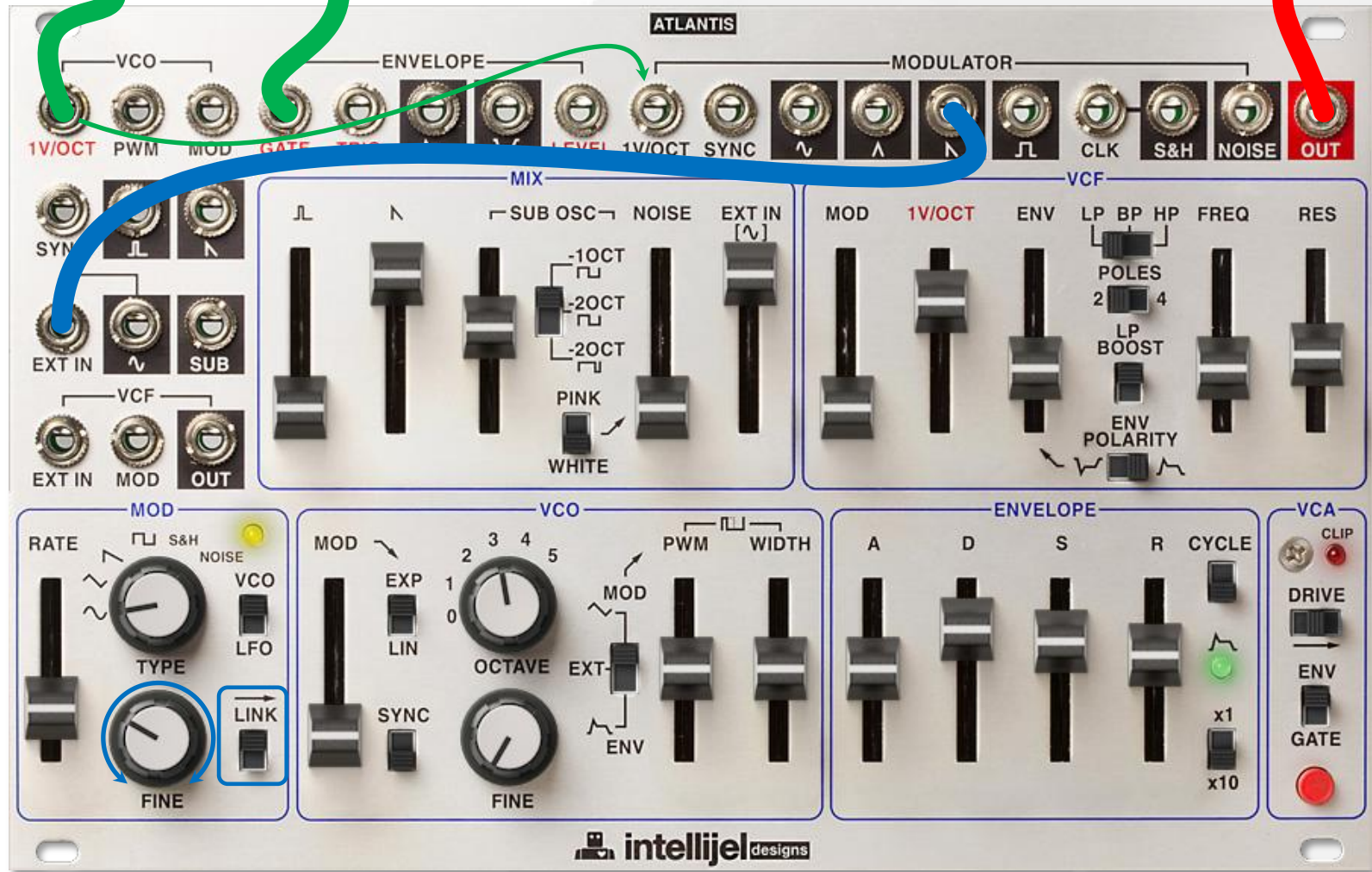
SAW from MOD VCO patched to EXT IN to create a dual VCO. MOD link is on so that the MOD VCO tracks the primary VCO. Fine tune the offset between the two VCOs to get a lush sounding interval.

# Dual VCO pads - part 2 (Danjel van Tijn)

keyboard controller

PITCH CV  
GATE CV

Dual VCO pads OUT



Add a third layer with -1 Octave SUB to the dual VCO stack.



# VCO FM (Danjel van Tijn)

keyboard controller → PITCH CV GATE CV

FM OUT



Use the MOD oscillator FM the primary VCO. Try EXP or LIN frequency MODulation response.

# Bell tones - part 1 (Danjel van Tijn)



Bell tones OUT



Use LINK to maintain a constant FM ratio. This is great for classic analog bell.



# Bell tones - part 2 (Danjel van Tijn)

keyboard controller → PITCH CV GATE CV

Bell tones OUT



Add in self-oscillating VCF for an additional sine wave.

# Bell tones - part 3 (Danjel van Tijn)



Bell tones  
OUT



Add Noise and Attack time to get spaced noisy bell tones.



# Hard SYNC - part 1 (Danjel van Tijn)

sequencer arp.

PITCH CV  
GATE CV

HARD SYNCED OUT



Primary VCO is HARD SYNCED to the MOD VCO.

# Hard SYNC - part 2 (Danjel van Tijn)

sequencer arp. → PITCH CV GATE CV

HARD SYNCED OUT



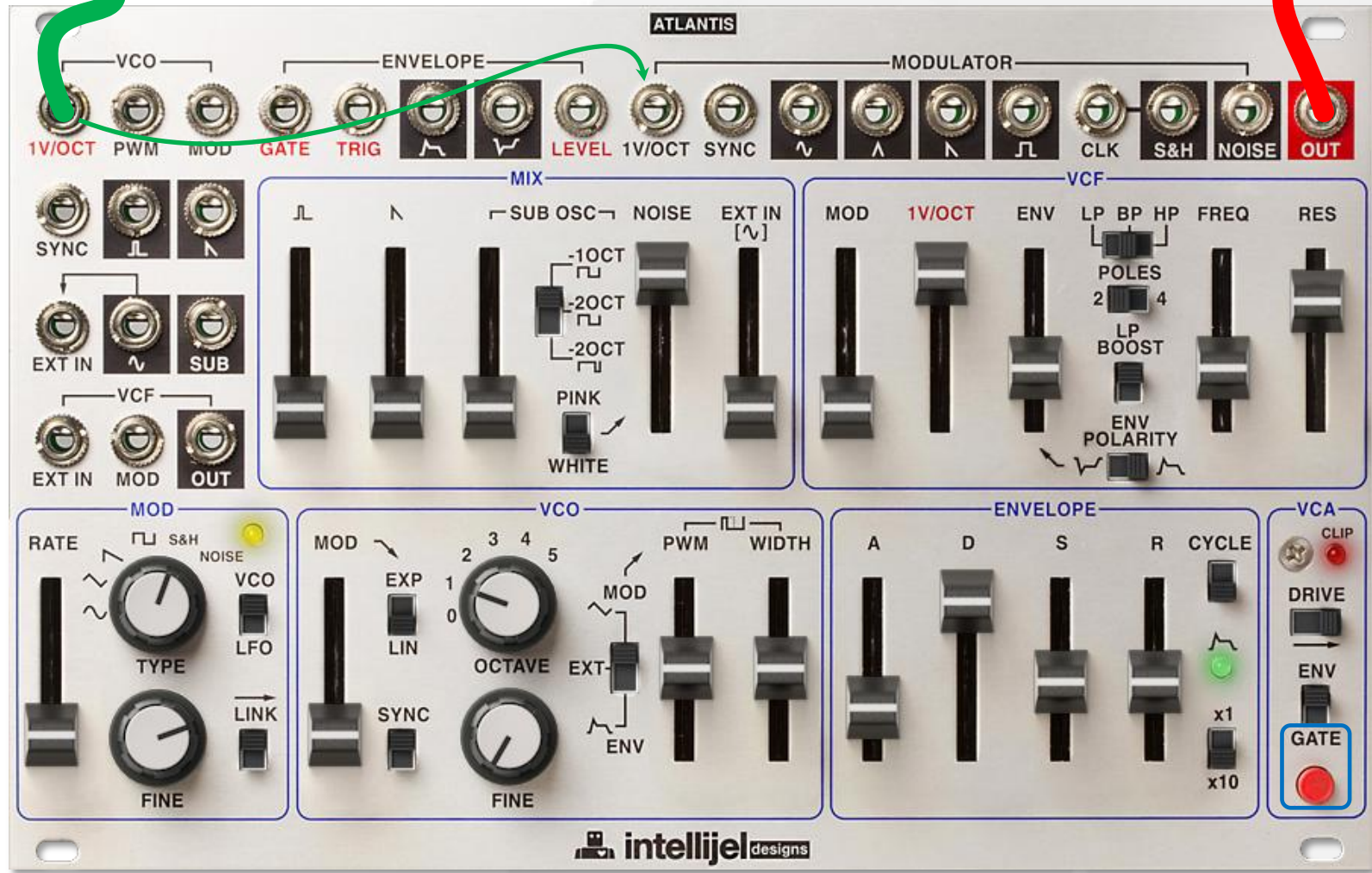
Add SAW form more fatter out.



# Manual gate (Danjel van Tijn)

sequencer arp. → PITCH CV GATE CV

GATE triggered OUT



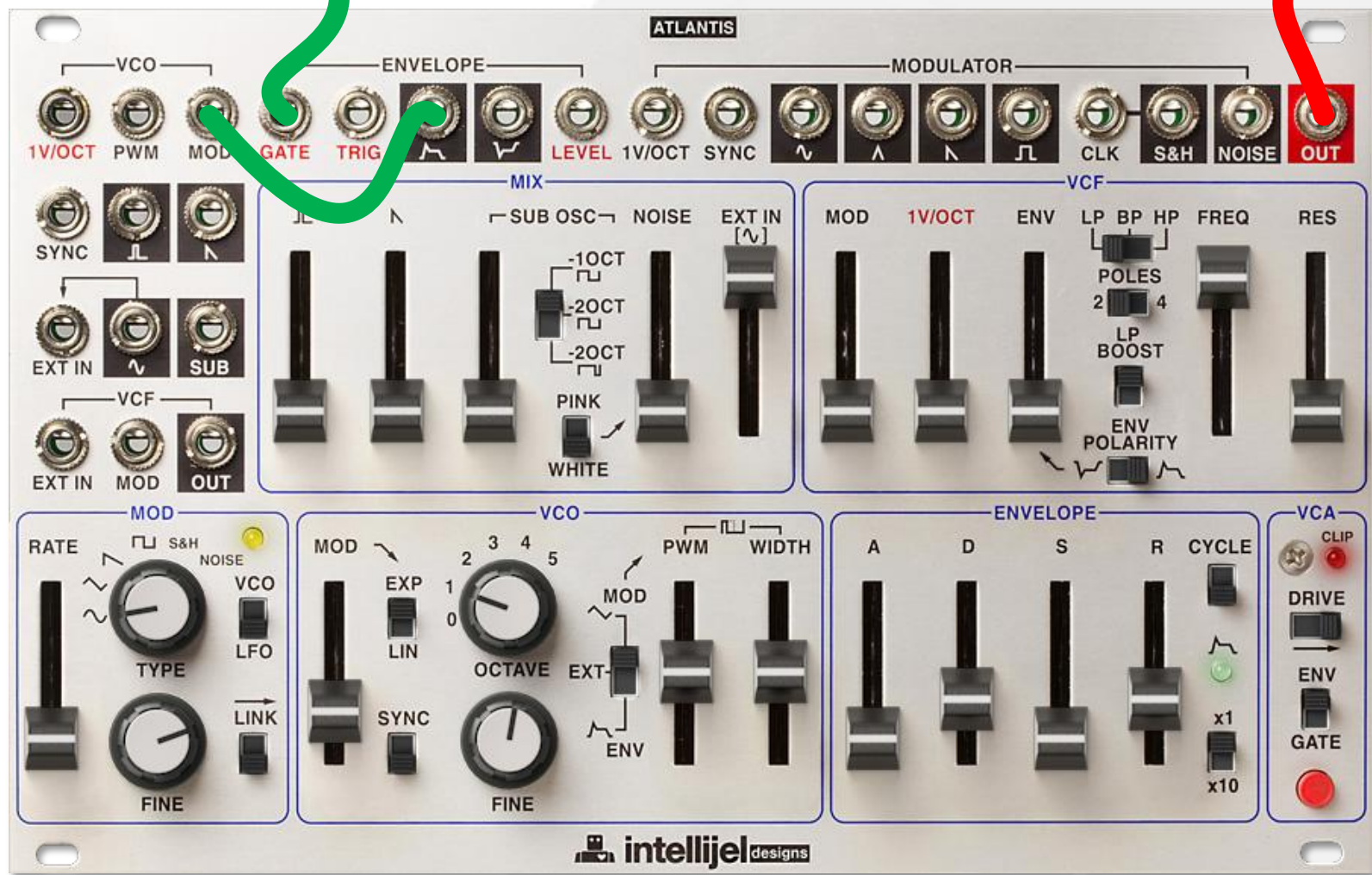
Using the manual gate button to trigger the envelope.

# Kick drum patch - part 1 (Danjel van Tijn)

sequencer arp.

PITCH CV  
GATE CV

KICK DRUM OUT



KICK DRUM PATCH : envelope out patched to VCO mod input.



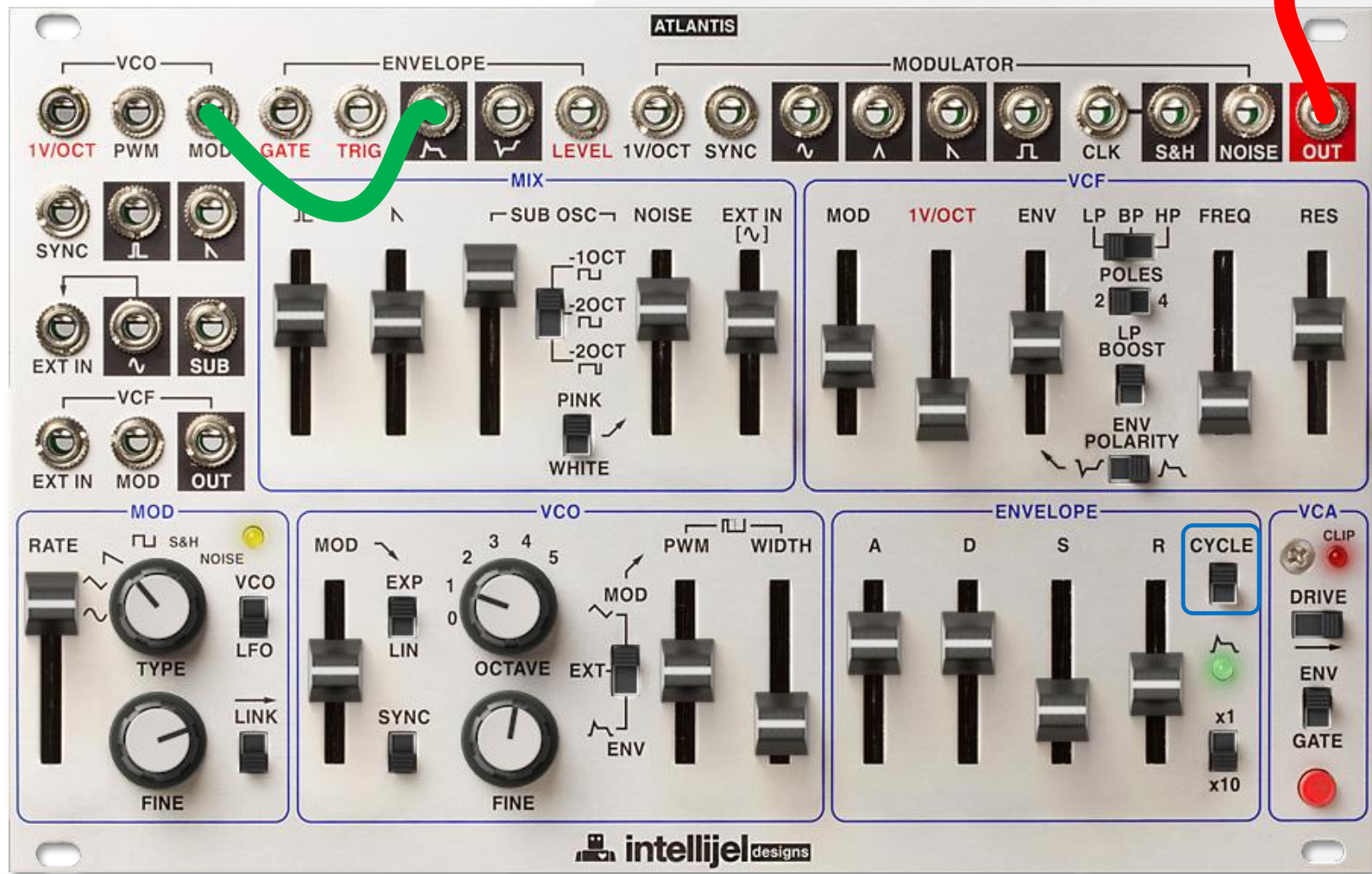






# Self-cycling patch - part 2 (Danjel van Tijn)

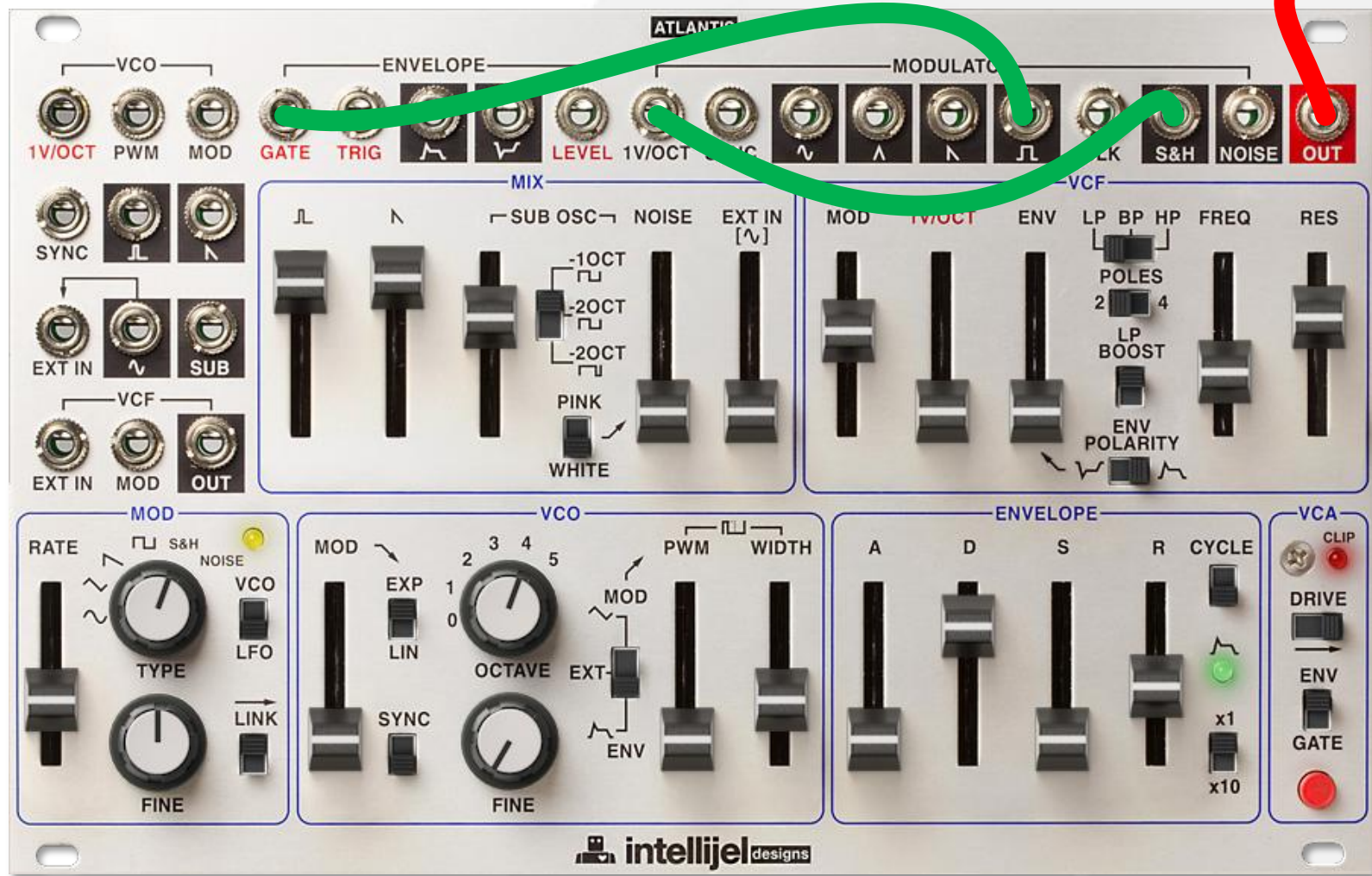
Self-cycling  
OUT



External trigger removed and envelope in CYCLE mode.

# Space communication one

Spaced com  
OUT

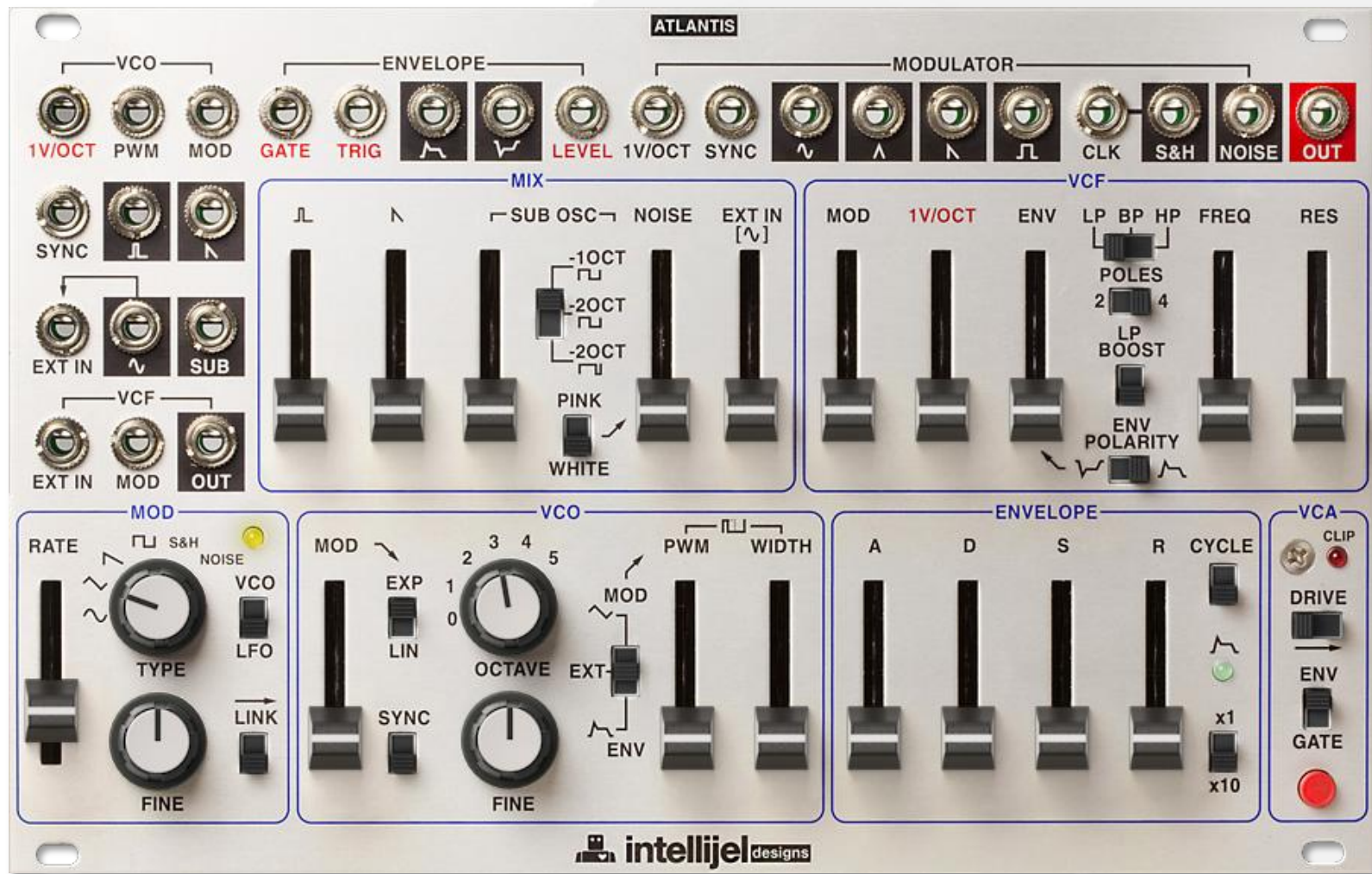


Create feedback random GATES with S&H out patched to MOD 1V/OCT input. MODulator RATE and FINE set the amount of feedback.



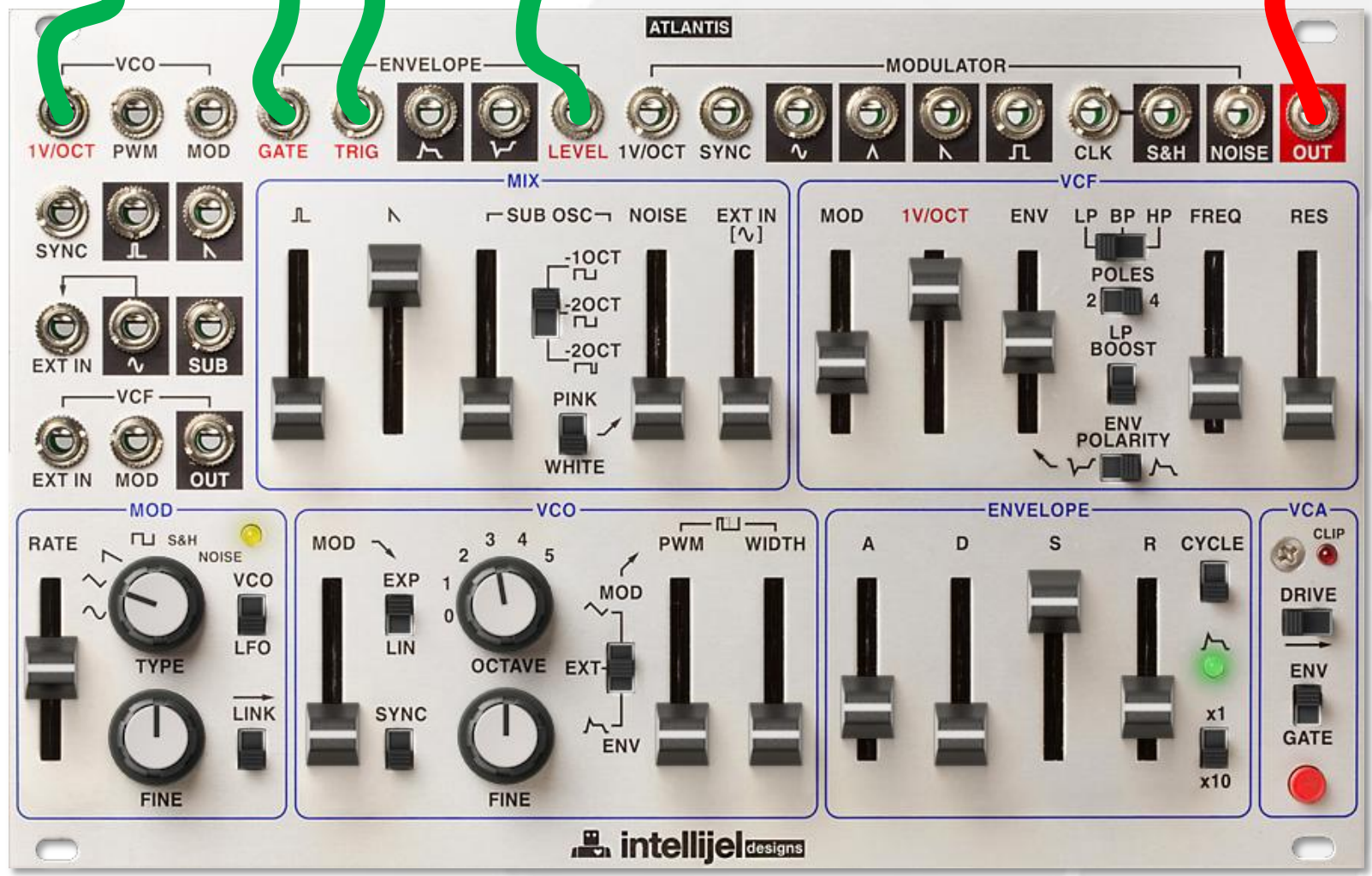
# SH-101 original patches

**IMPORTANT NOTE** : Those patches are direct raw conversion from patches the original SH-101 manual (sliders positions), you may have different results than those expected because of differences between Atlantis and SH-101. Don't forget to tweak !



# 01 - FLUTE

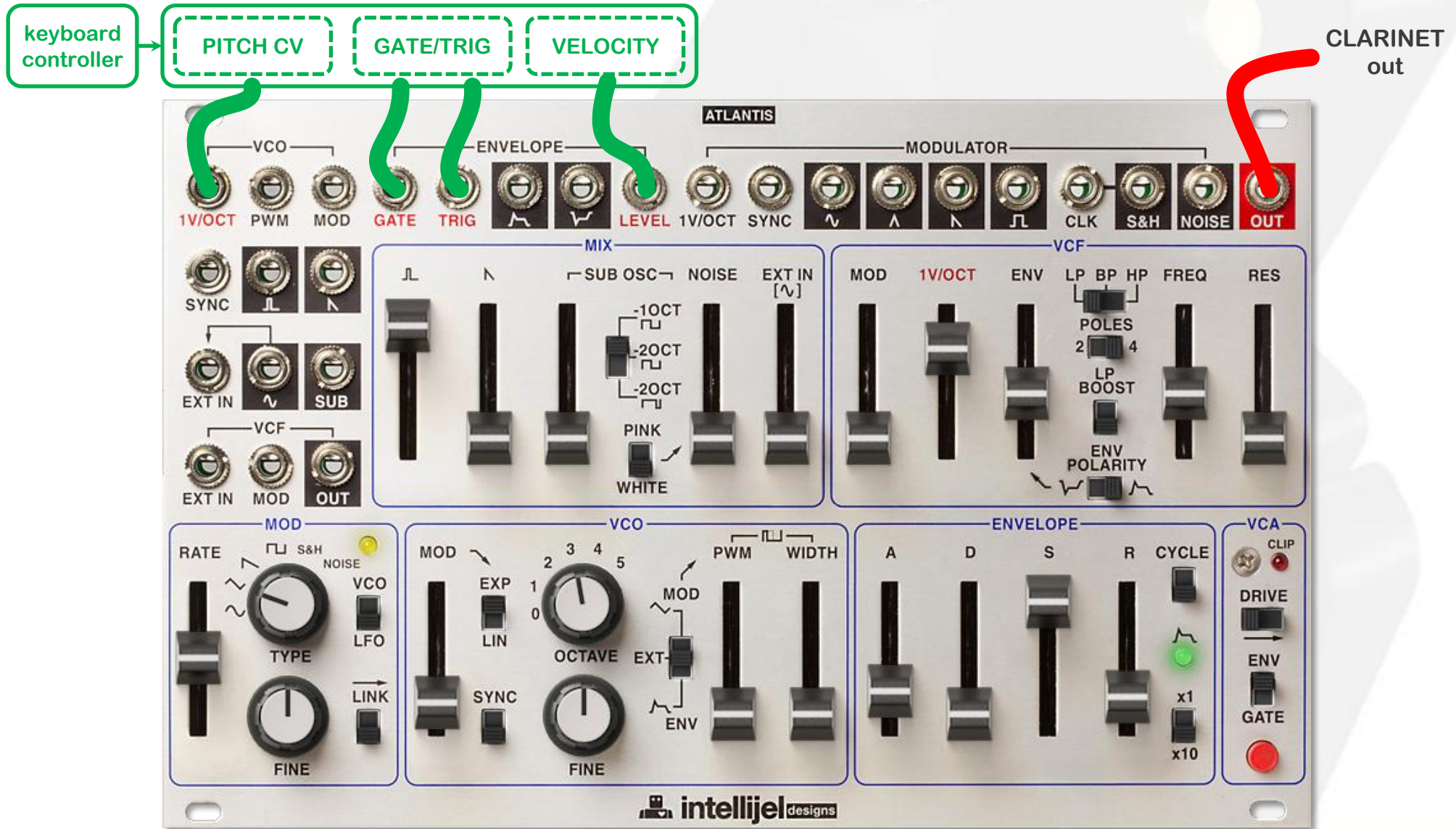
FLUTE



Setting the FREQ in the VCF is critical. Adjust the depth of the growl effect by using the MOD knob in the VCF.

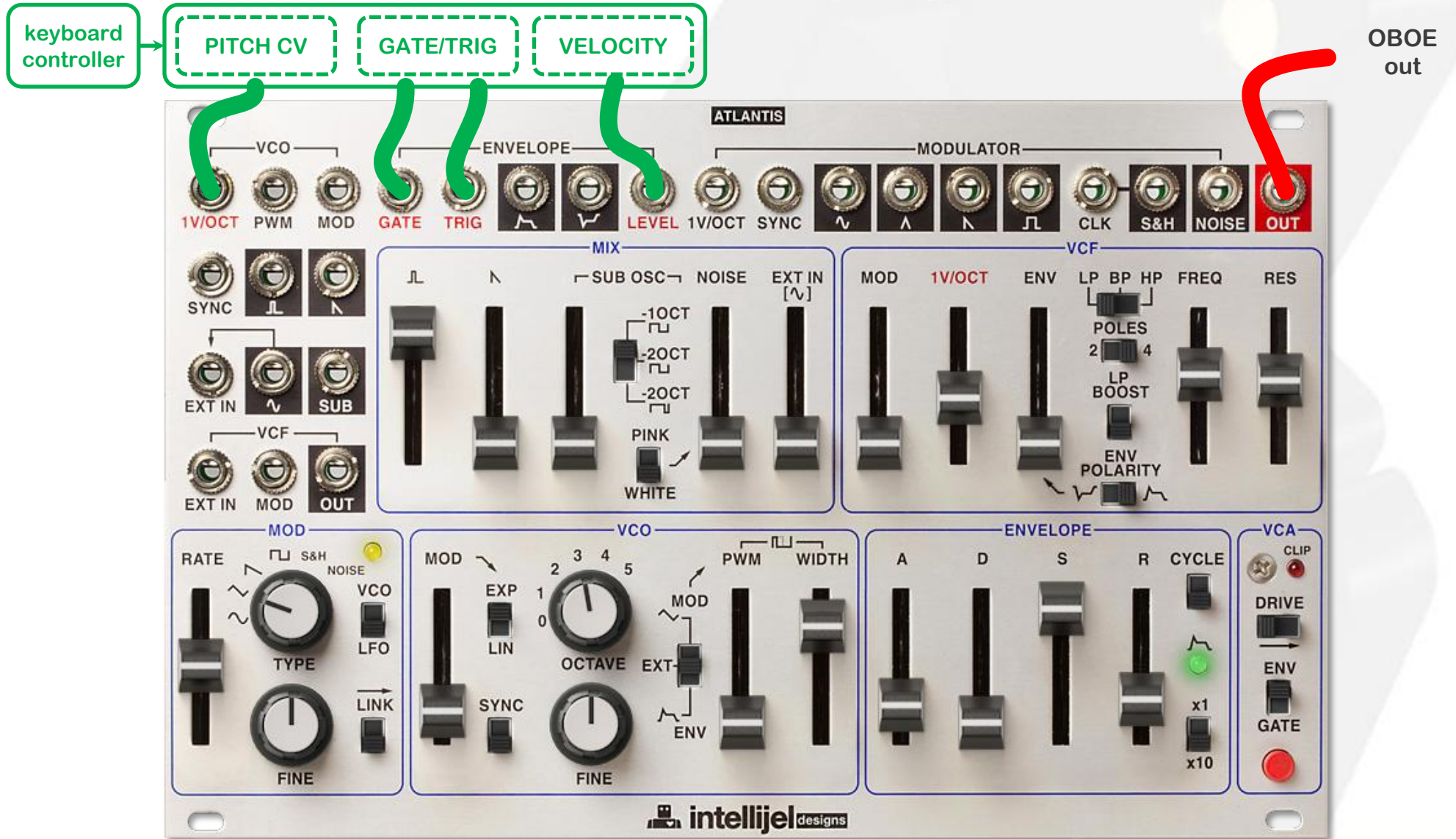


## 02 - CLARINET



The impression of the sound can be varied by adjusting the FREQ knob in the VCF. Adjust the depth of the vibrato effect with the MOD knob in the VCO.

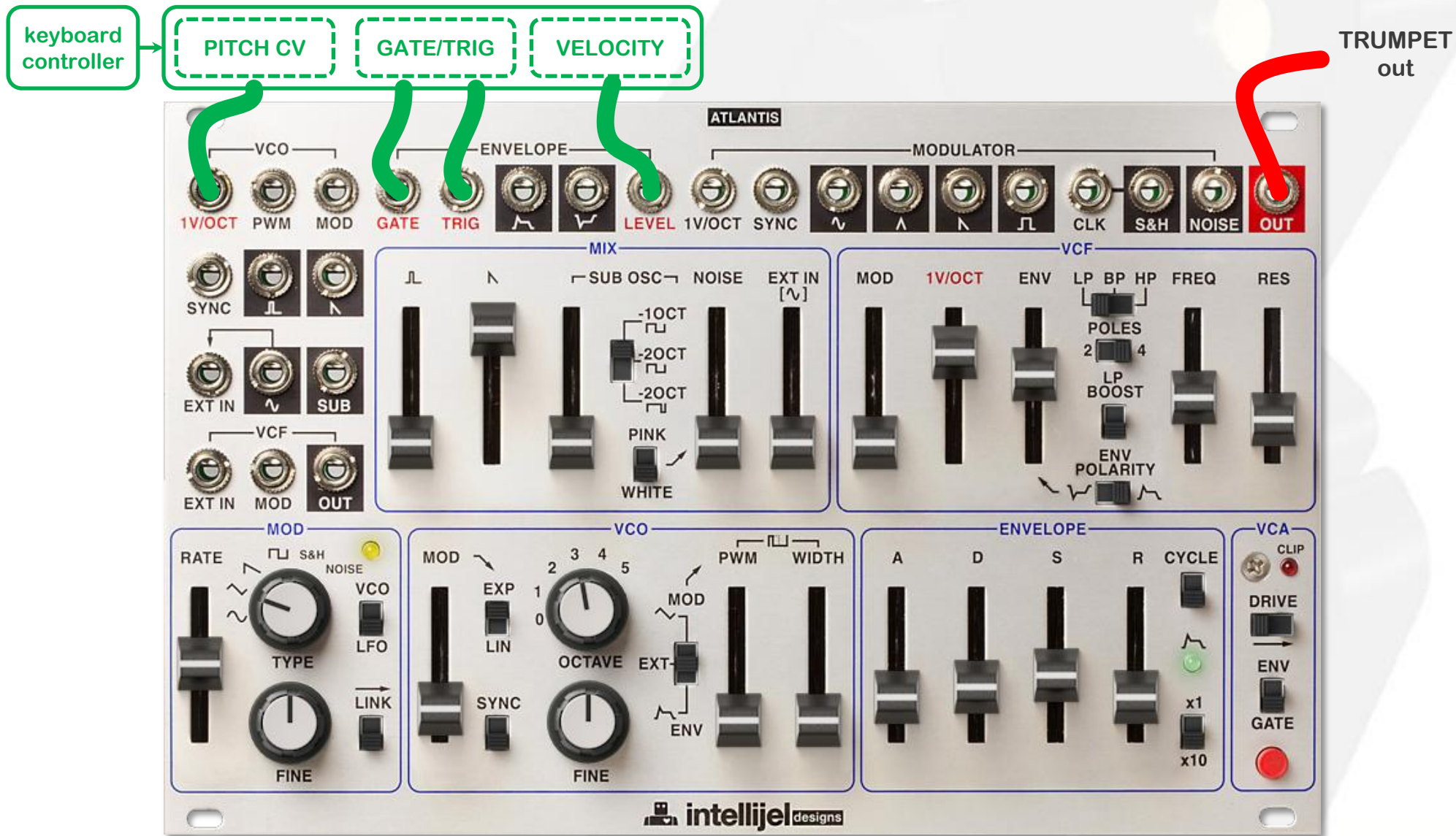
# 03 - OBOE



Setting the FREQ and the RES knobs in the VCF and the PULSE WIDTH knob in the VCO is particularly important.

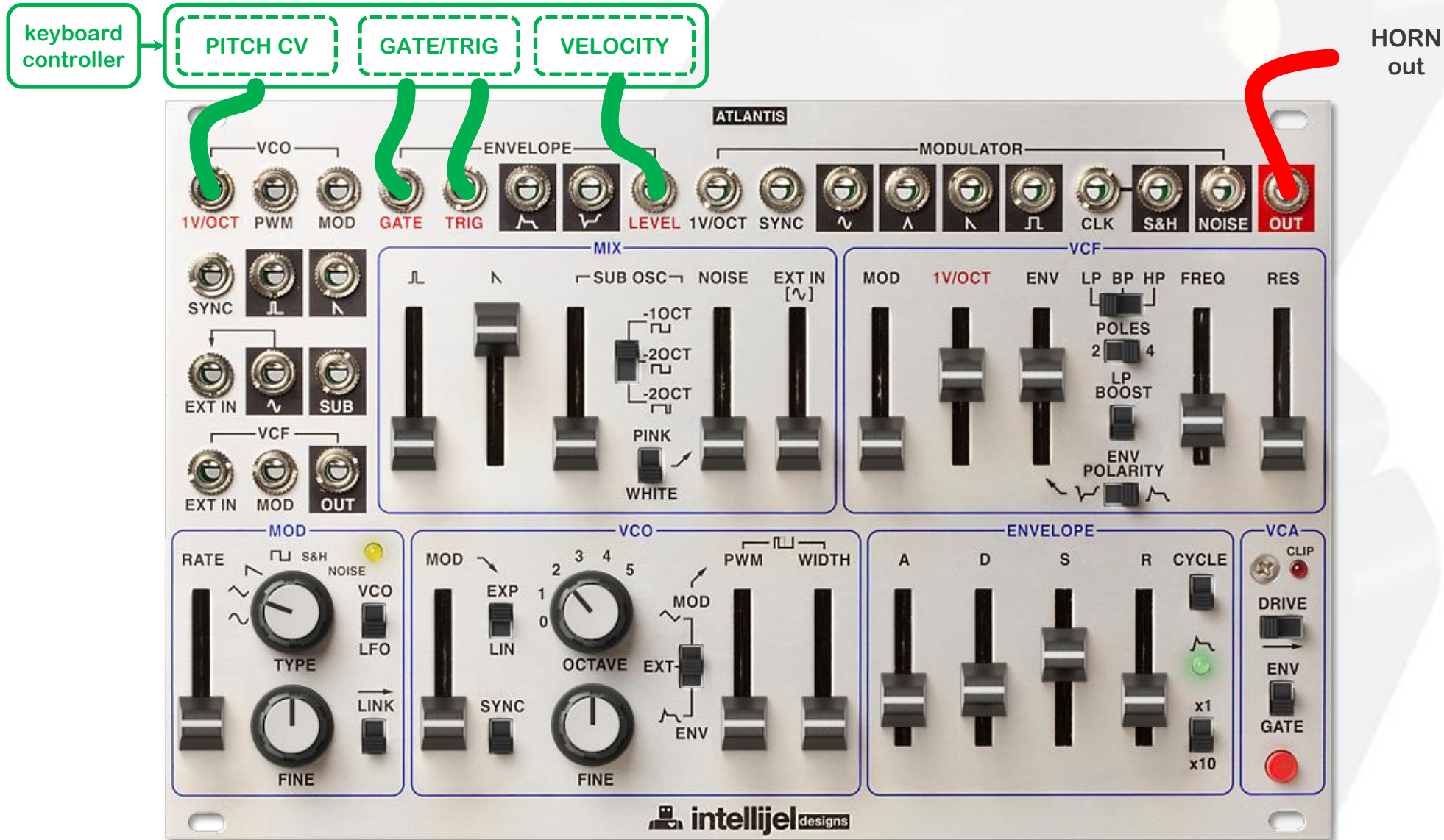


# 04 - TRUMPET



There will be a delicate change of the tone color by slightly adjusting the ENV knob in the VCF. Also, you can obtain the Trumpet sound you prefer by controlling the ENV and the FREQ in the VCF.

# 05 - HORN



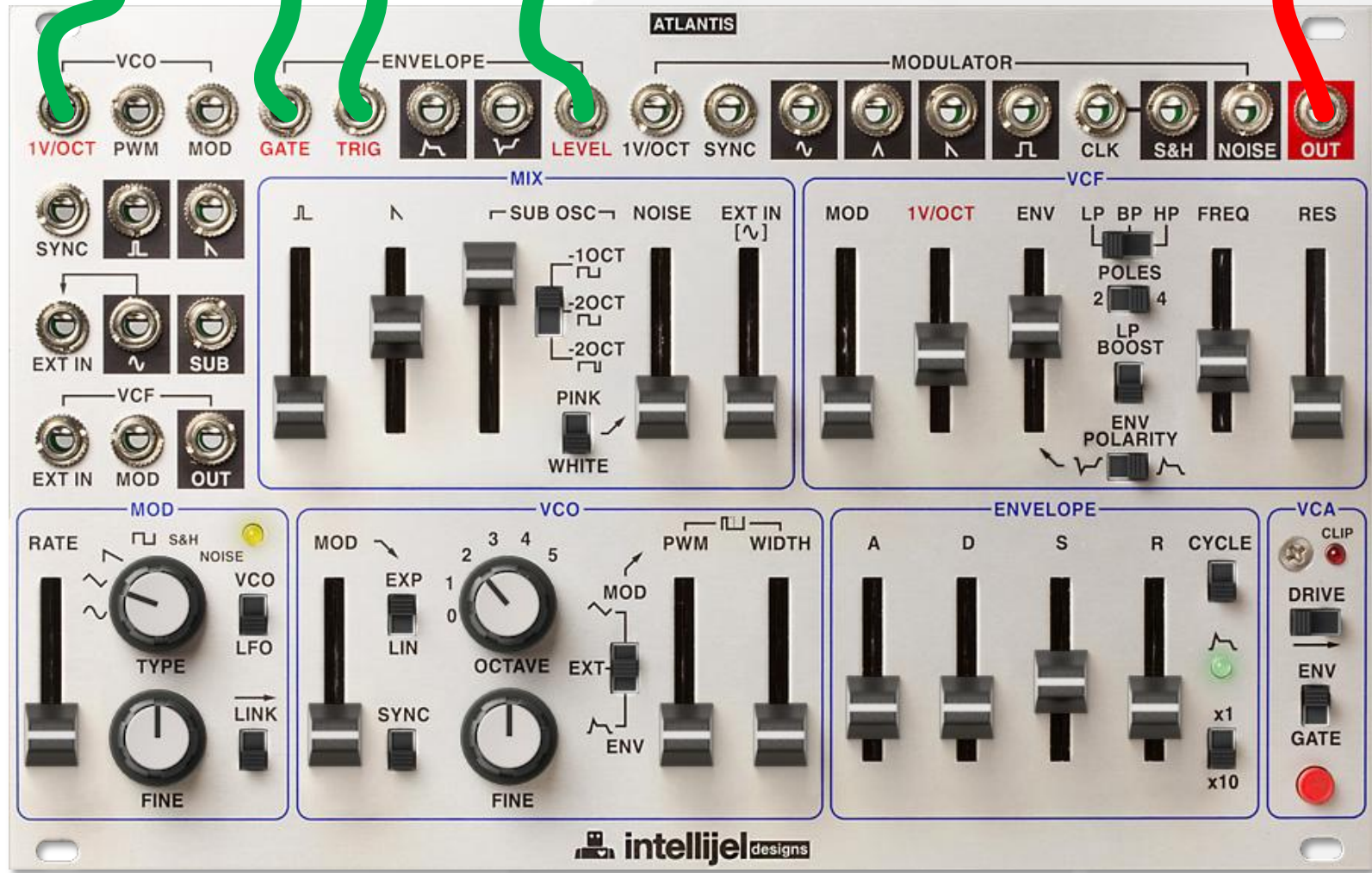
There will be a delicate change of the tone color by slightly adjusting the ENV knob in the VCF. Also, you can obtain the Trumpet sound you prefer by controlling the ENV and the FREQ in the VCF.



# 06 - TUBA



TUBA out



Play with the TRANSPOSE switch DOWN. The setting of the attack is particularly important. Adjust the ENV in the VCF as well.

# 07 - VIOLIN

keyboard controller

PITCH CV GATE/TRIG VELOCITY

VIOLIN out



By adjusting the FREQ into the VCF, you can produce both soft and hard sounds. (Set the PORTAMENTO mode switch to AUTO and the PORTAMENTO time knob to around 3, and use the [SINE] LFO knob to produce a vibrato effect.) If you add the [PWM], the impression of the sound will slightly change.

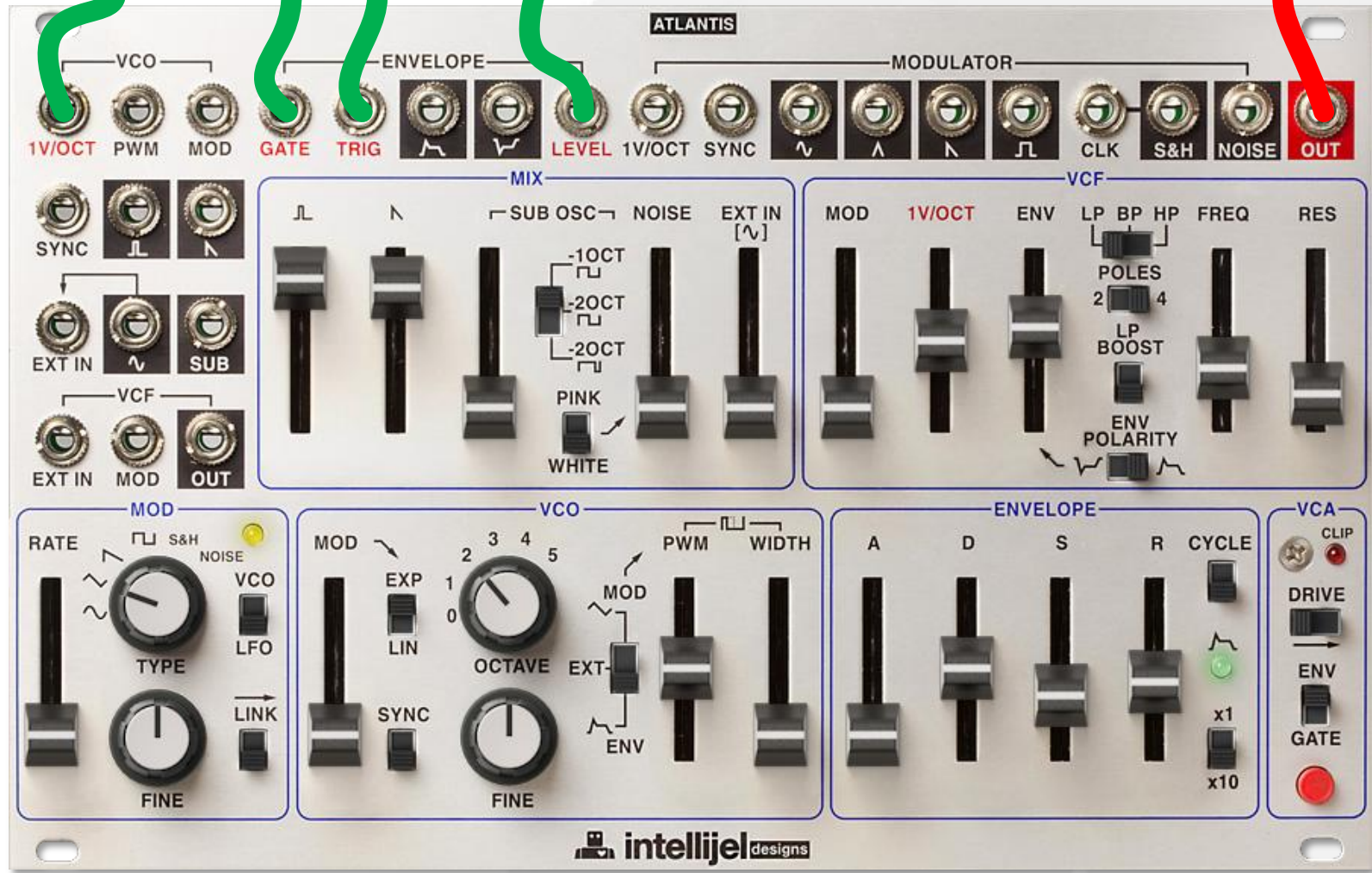


# 08 - ELECTRIC BASS GUITAR

keyboard controller

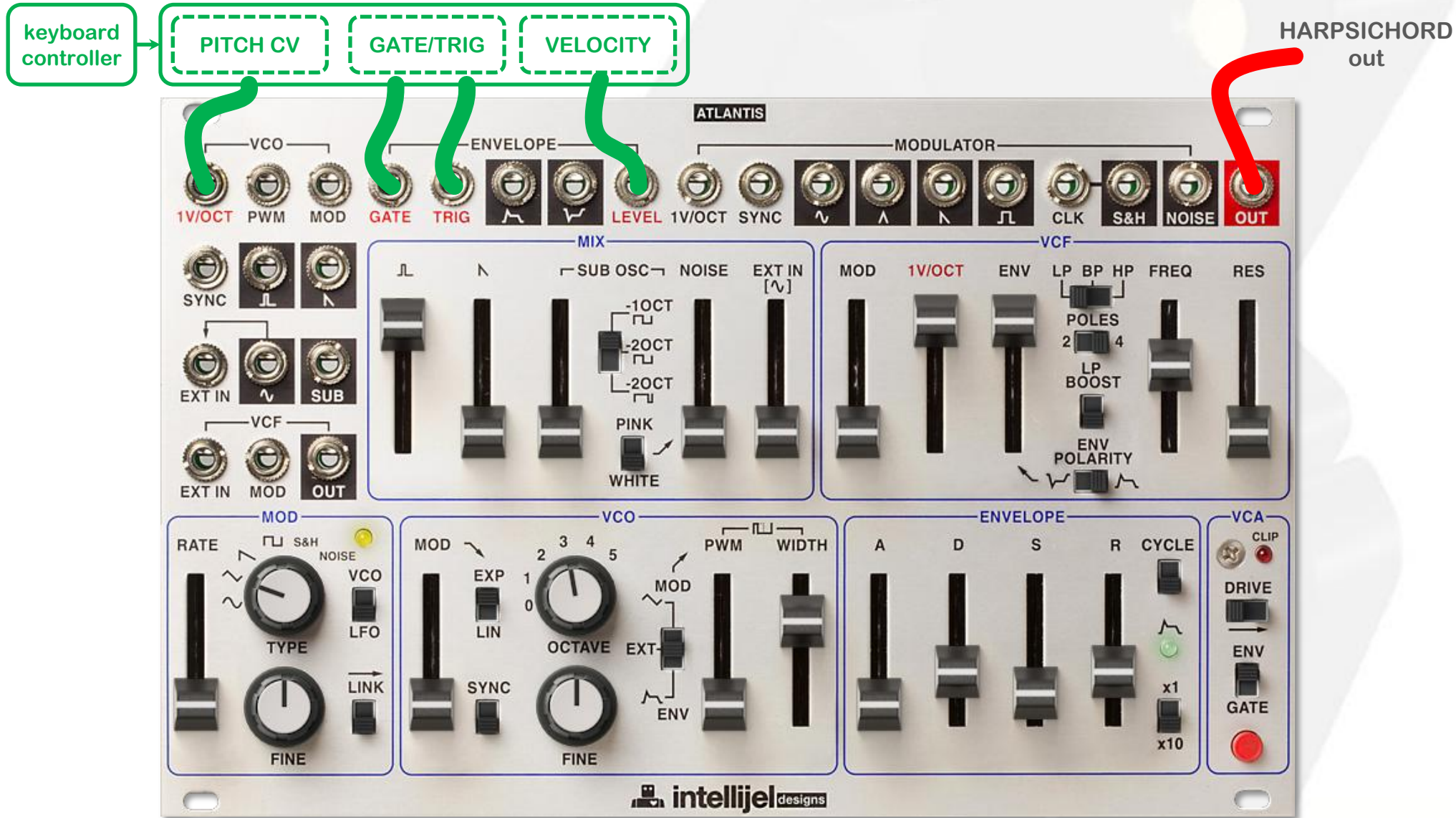
PITCH CV GATE/TRIG VELOCITY

ELECTRIC BASS GUITAR out



Play with the TRANSPOSE switch set to L. The impression of the sound varies depending how you set the FREQ and the ENV knobs in the VCF.

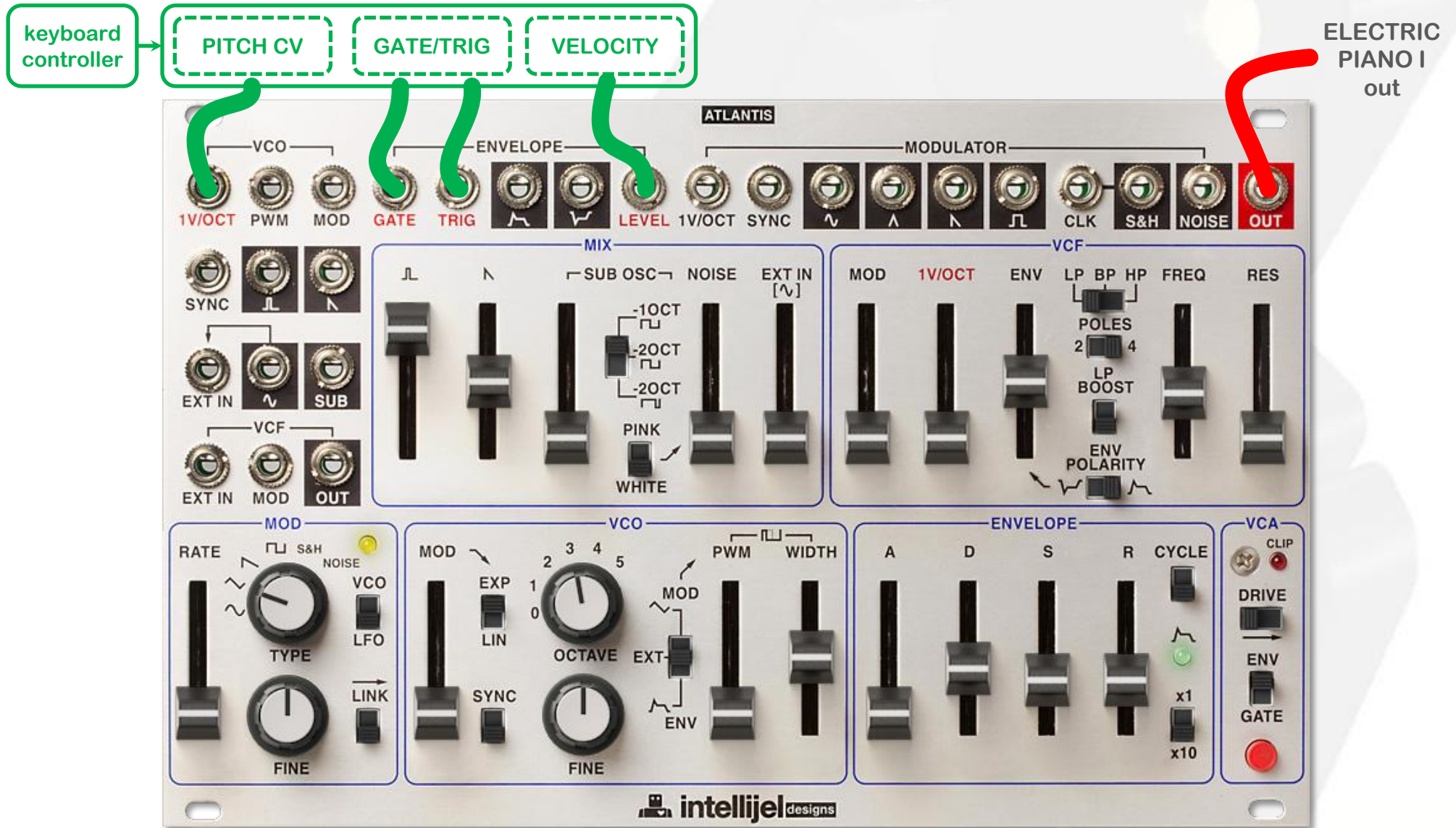
# 09 - HARPSICHORD



The tone color alters drastically depending how you set the PULSE WIDTH in the VCO. Please try the LFO and the ENV modes as well.



# 10 - ELECTRIC PIANO I



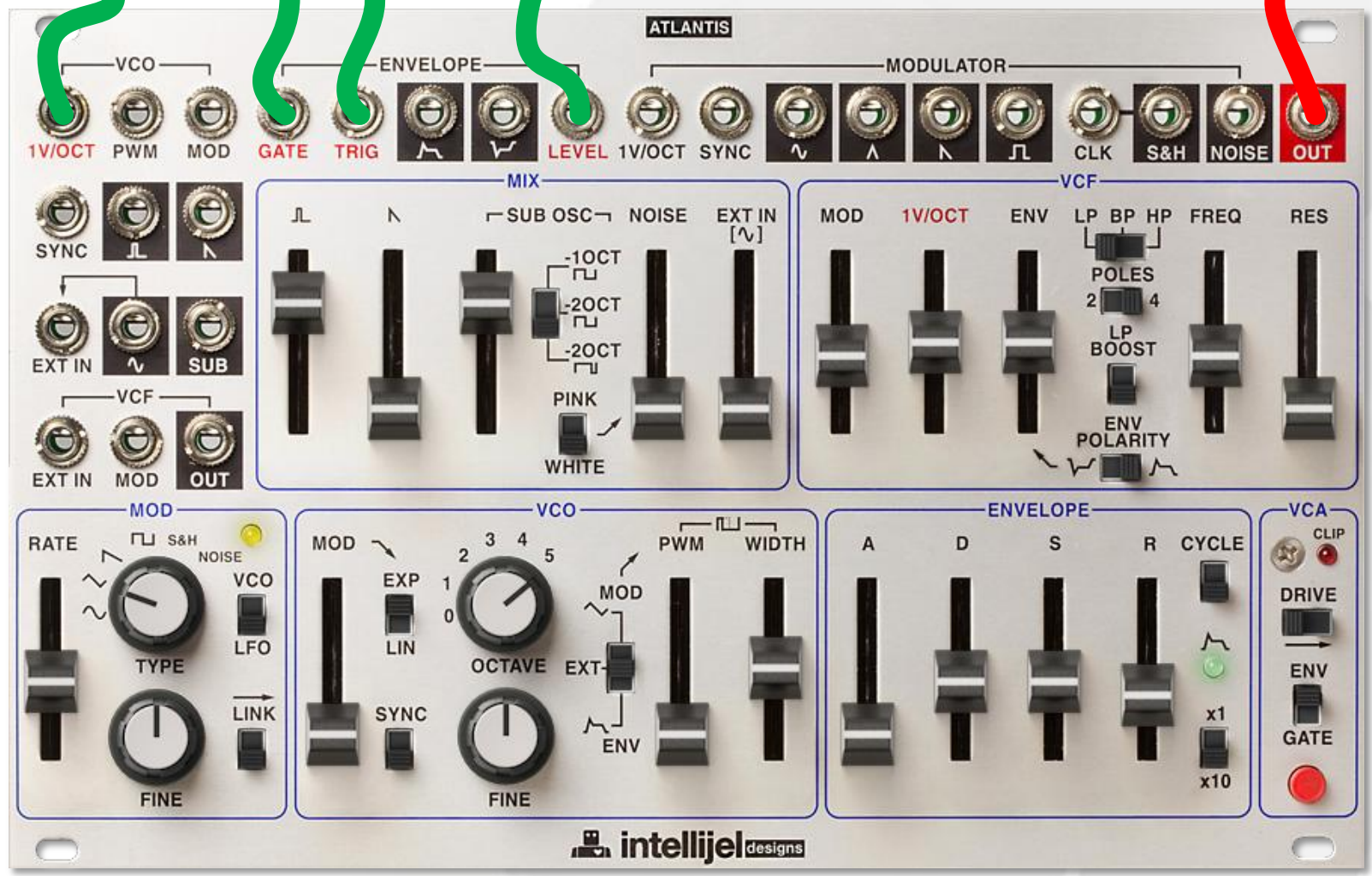
The tone color is determined by the setting of the FREQ and the ENV knobs in the VCF.

# 11 - ELECTRIC PIANO II

keyboard controller

PITCH CV GATE/TRIG VELOCITY

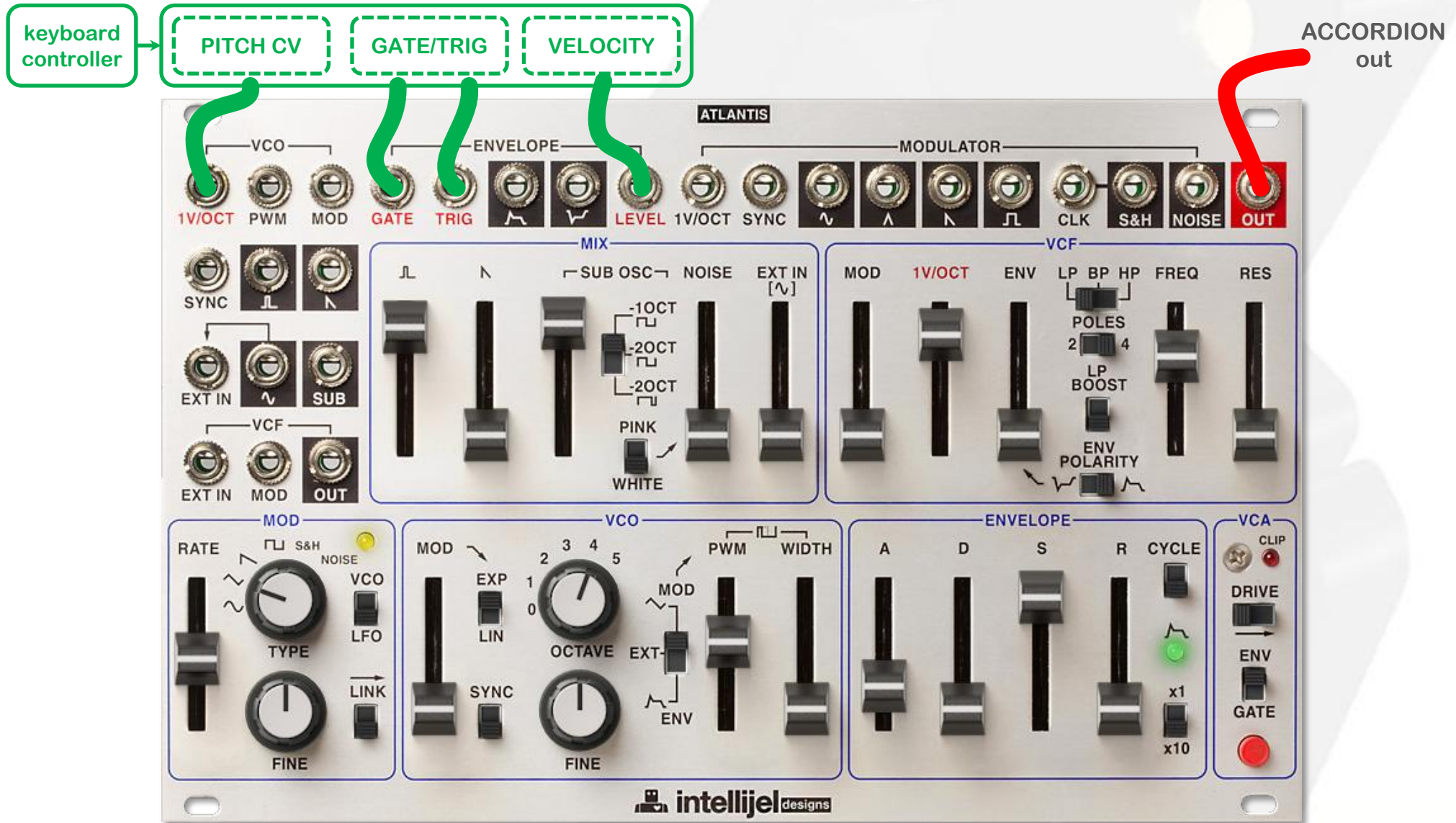
ELECTRIC PIANO II out



Adjust the depth of the growl by using the MOD in the VCF.

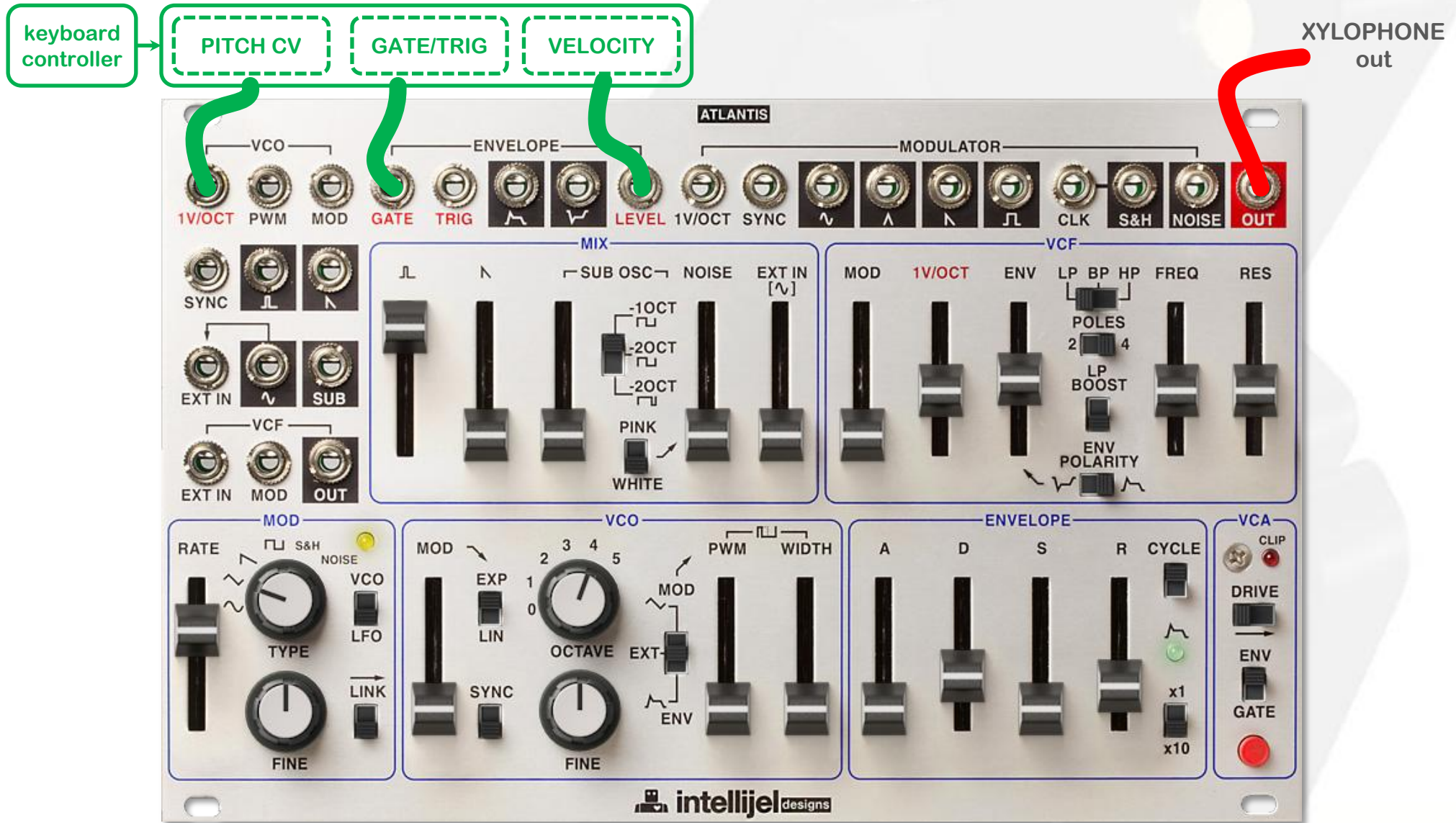


# 12 - ACCORDION



The tone color varies depending on the mixing portions of the SOURCE MIXER. Also, the setting of the FREQ in the VCF affects the tone color.

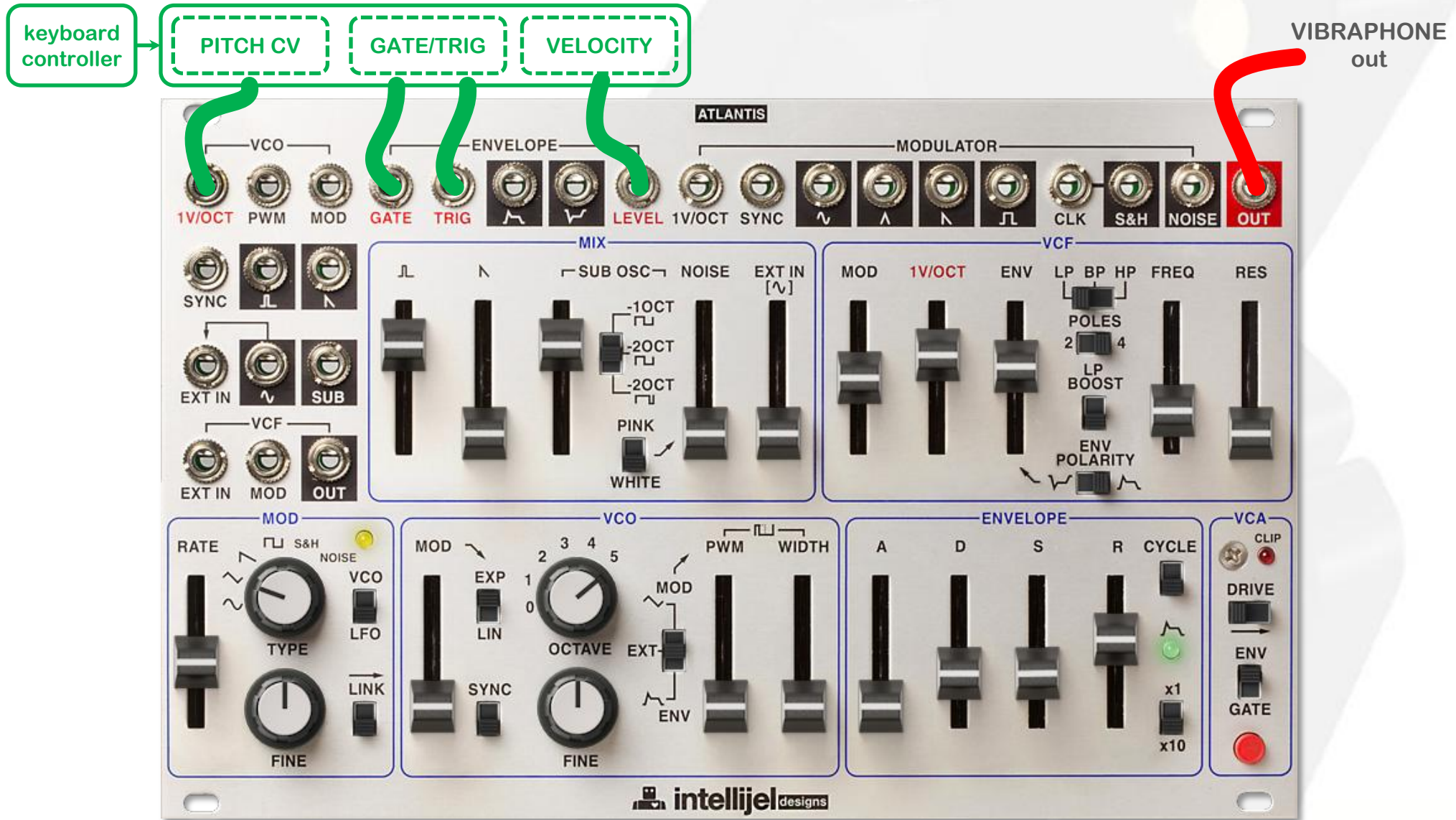
# 13 - XYLOPHONE



Setting the FREQ and the RES knobs in the VCF is important. (Pressing simultaneously 2 keys with the Arpeggio on might be interesting.)



# 14 - VIBRAPHONE



The tremolo effect is obtained by this setting of the MOD in the VCF.

# 15 - GLOCKENSPIEL

keyboard controller

PITCH CV GATE/TRIG VELOCITY

GLOCKENSPIEL out



Pay special attention to the setting of the FREQ and the RES knobs in the VCF. (This will sound most realistic within the highest octave of the keyboard.)



# 16 - CLAVES

keyboard controller

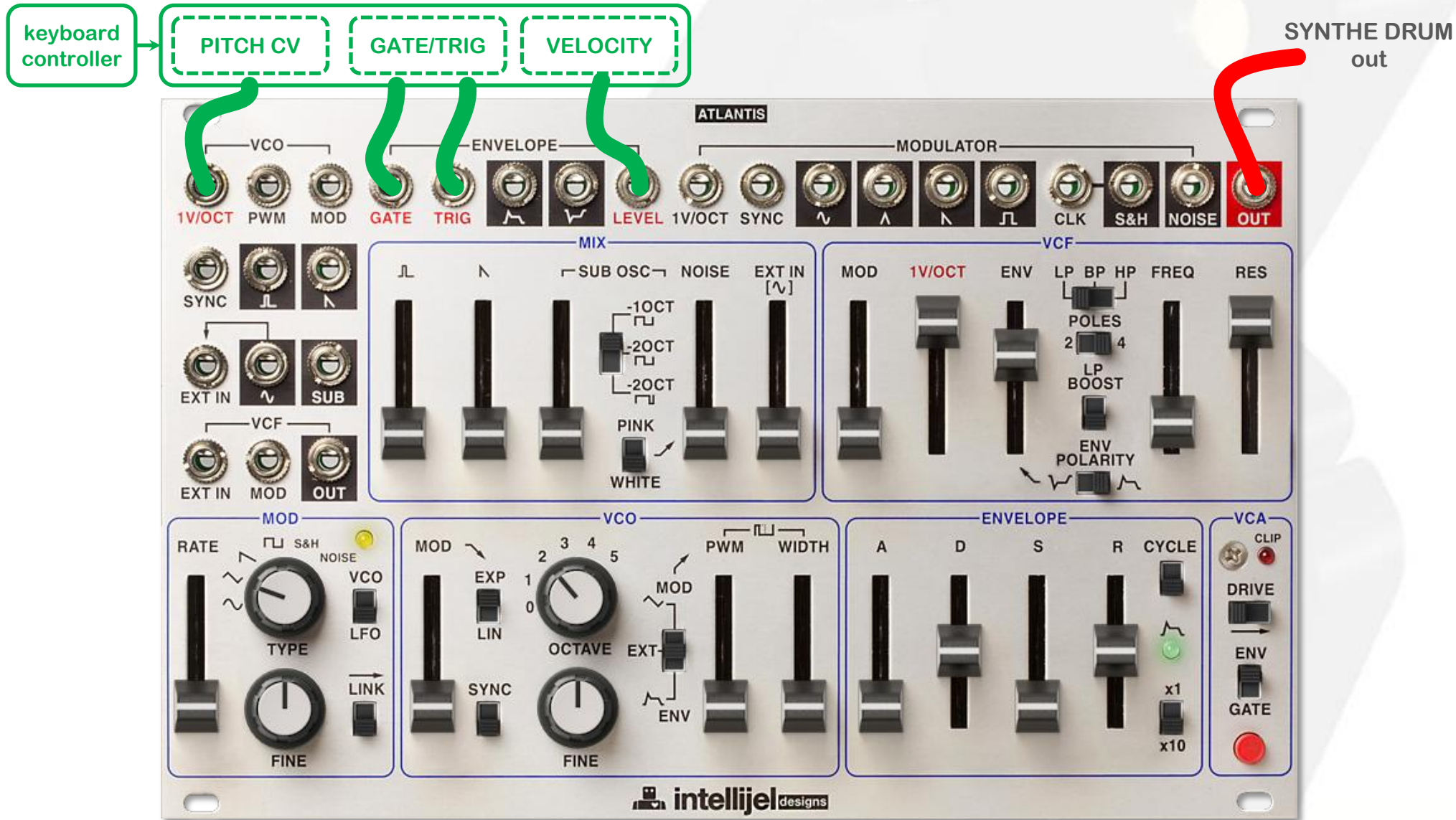
PITCH CV GATE/TRIG VELOCITY

CLAVES out



Pay attention to the setting of the FREQ in the VCF, and the Decay Time and the Release Time of the ENV.

# 17 - SYNTH DRUM



Also, it might prove interesting to set the WAVEFORM in the MODULATOR to [TRIANGLE] or [SQUARE], the MOD in the VCF to around 5, and the RATE in the MODULATOR to high.

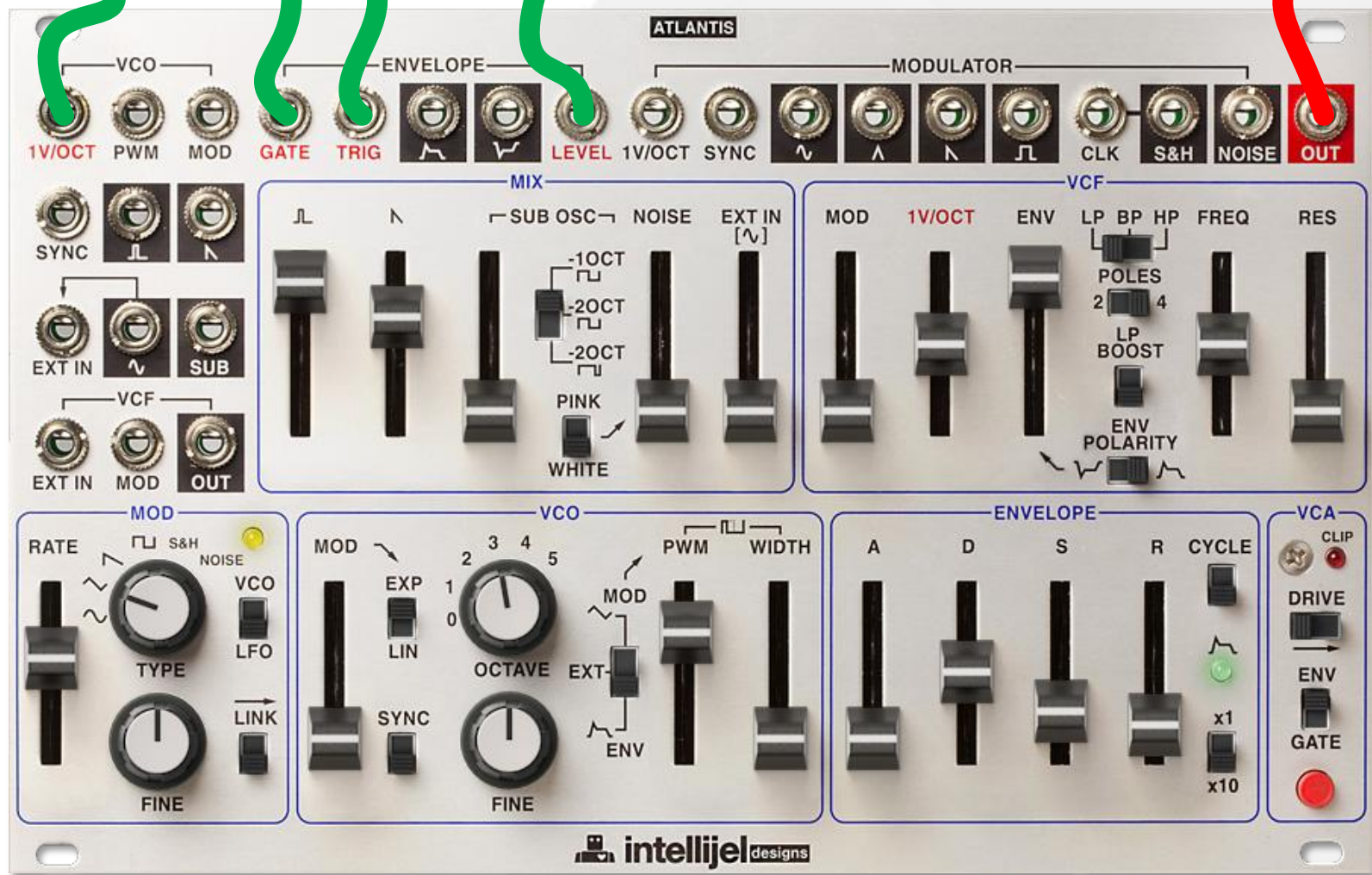


# 18 - FUZZ GUITAR

keyboard controller

PITCH CV GATE/TRIG VELOCITY

FUZZ GUITAR out



The impression of the sound varies depending how you set the [SAW] in the SOURCE MIXER.

# 19 - FUNKY



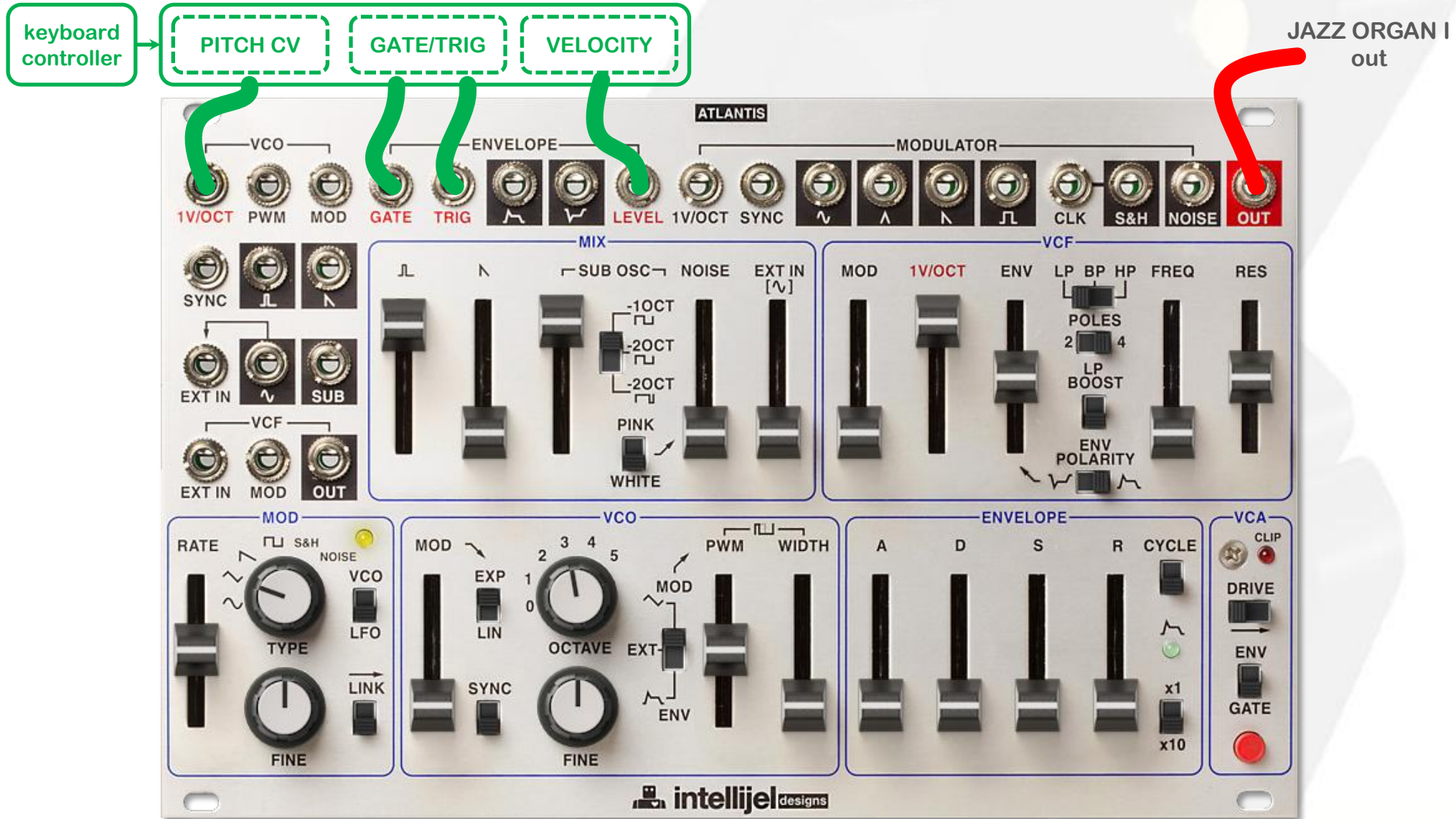
FUNKY out



The tone color widely alters by adjusting the FREQ and the ENV knobs in the VCF.

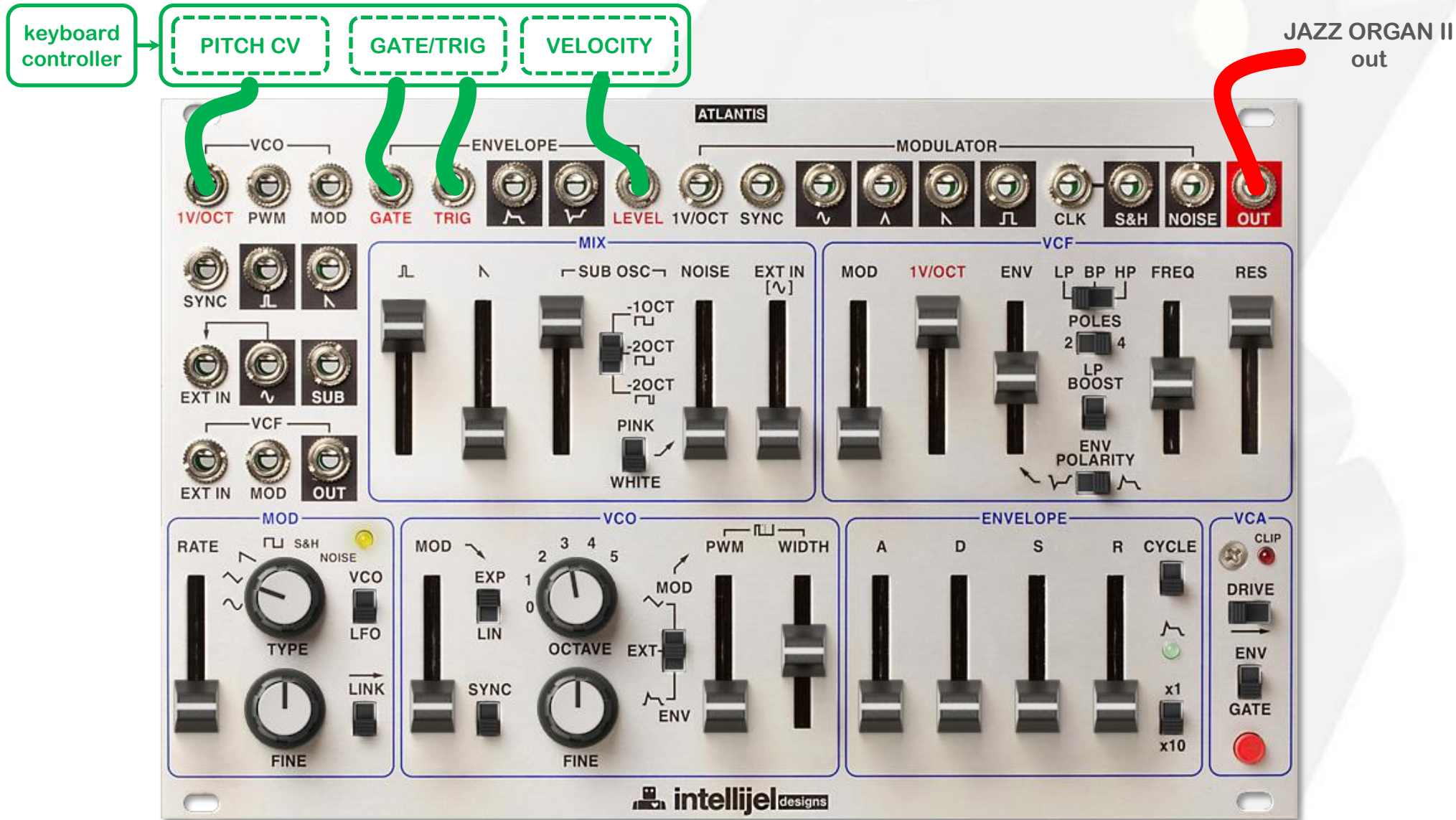


# 20 - JAZZ ORGAN I



To add a key click sound, control the VCF with the ADSR all set to zero. The level of the key click sound is adjusted with the ENV in the VCF.

# 21 - JAZZ ORGAN II



The self-oscillation of the VCF is the sound source as well as the VCO and the SUB Oscillator. The self-oscillation sound of the VCF should differ from the VCO's by an octave, a third or a fifth.

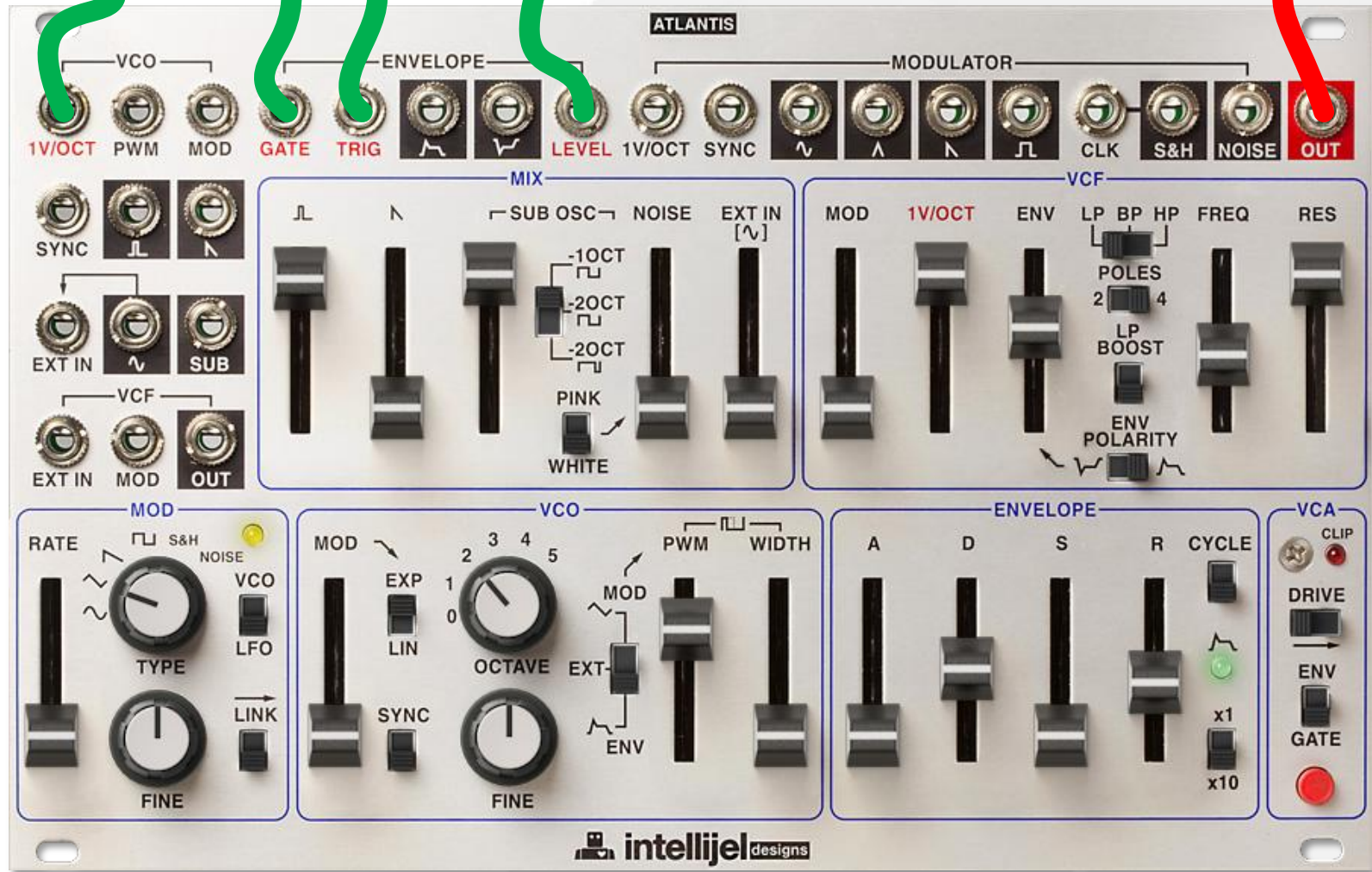


# 22 - EFFECT SOUND I

keyboard controller

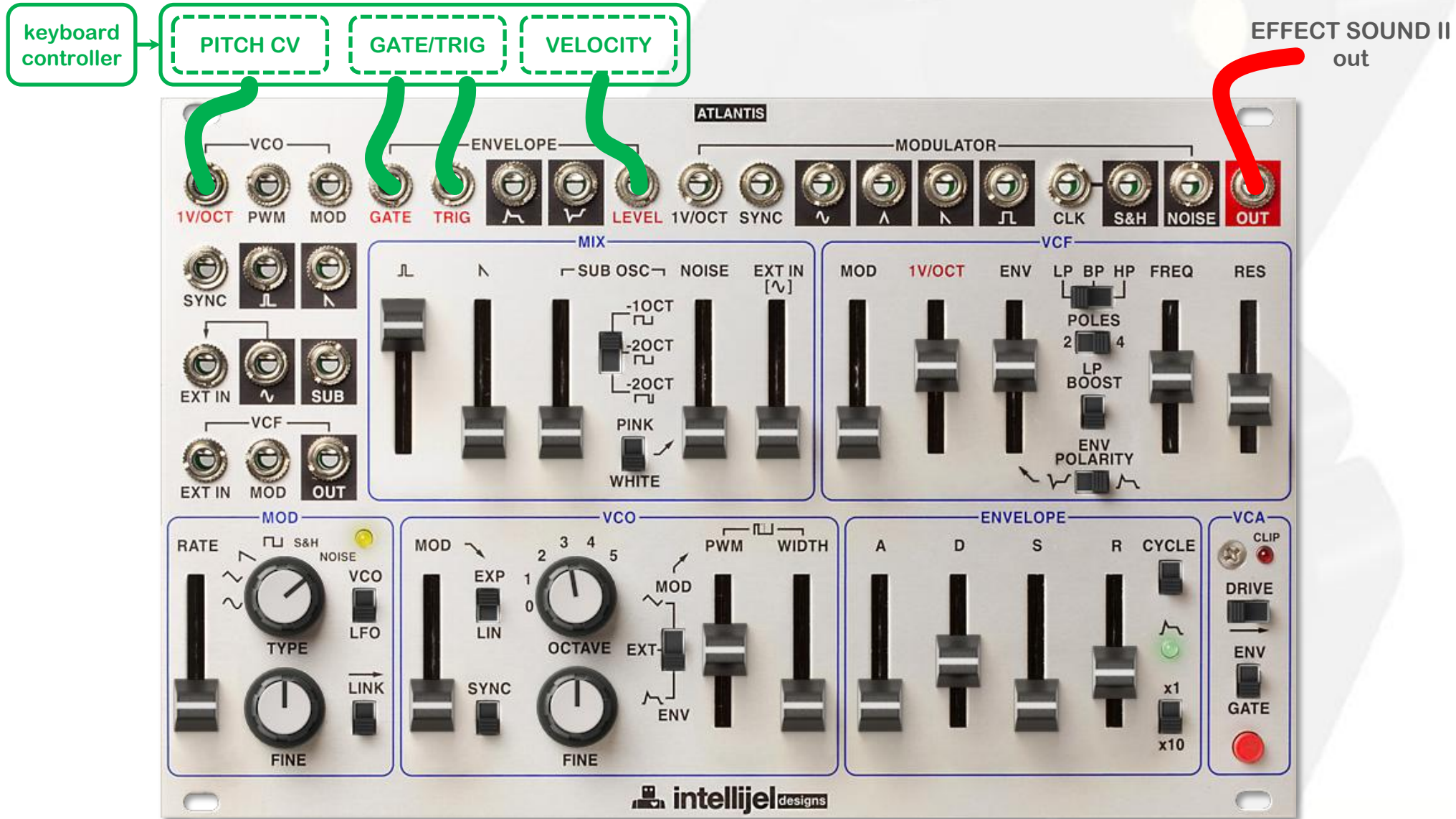
PITCH CV GATE/TRIG VELOCITY

EFFECT SOUND I out



Adjust the Decay time and the Release Time in the ENV.

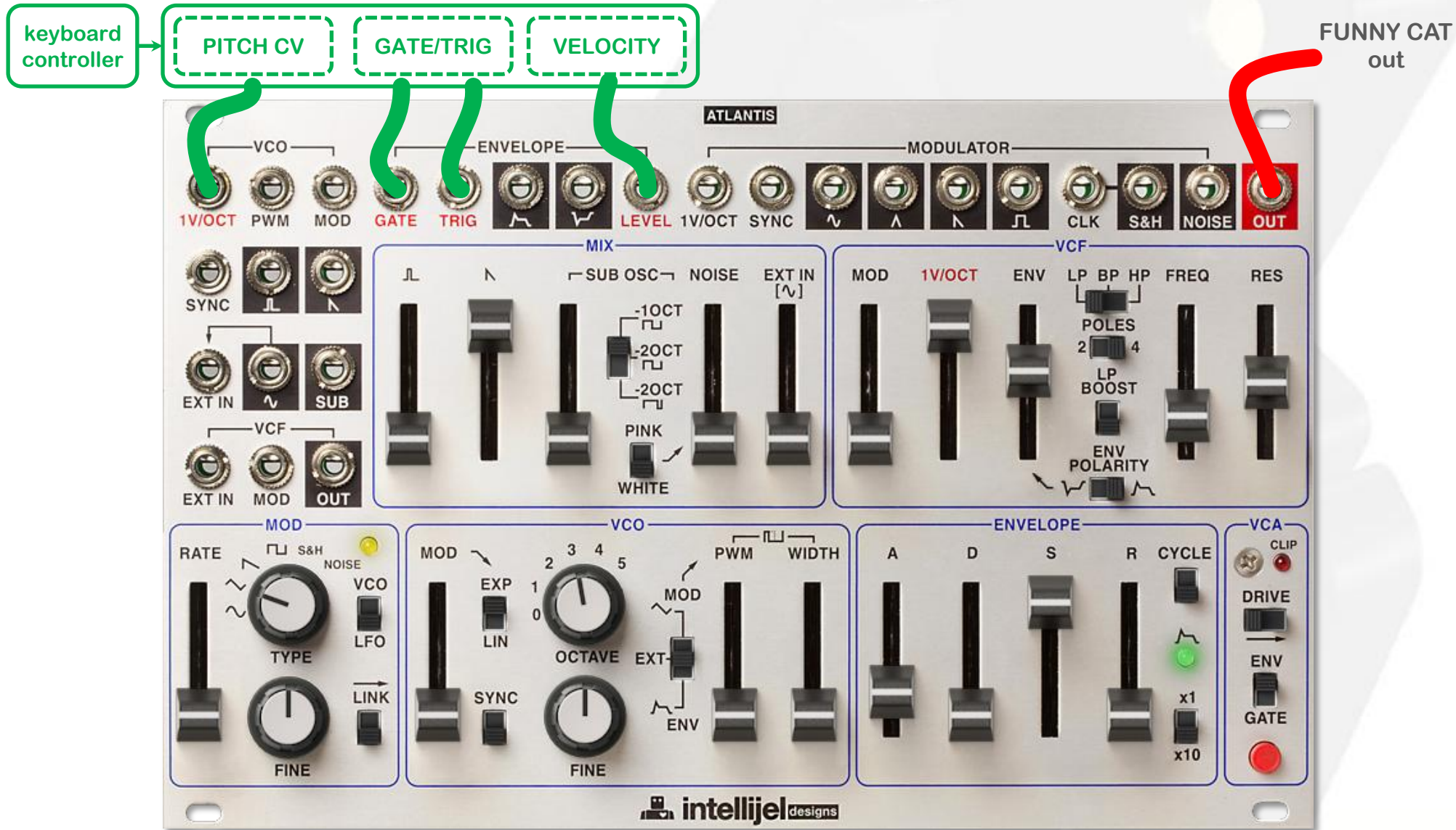
# 23 - EFFECT SOUND II



The VCO is modulated with the Noise. Adjust the MOD in the VCO.

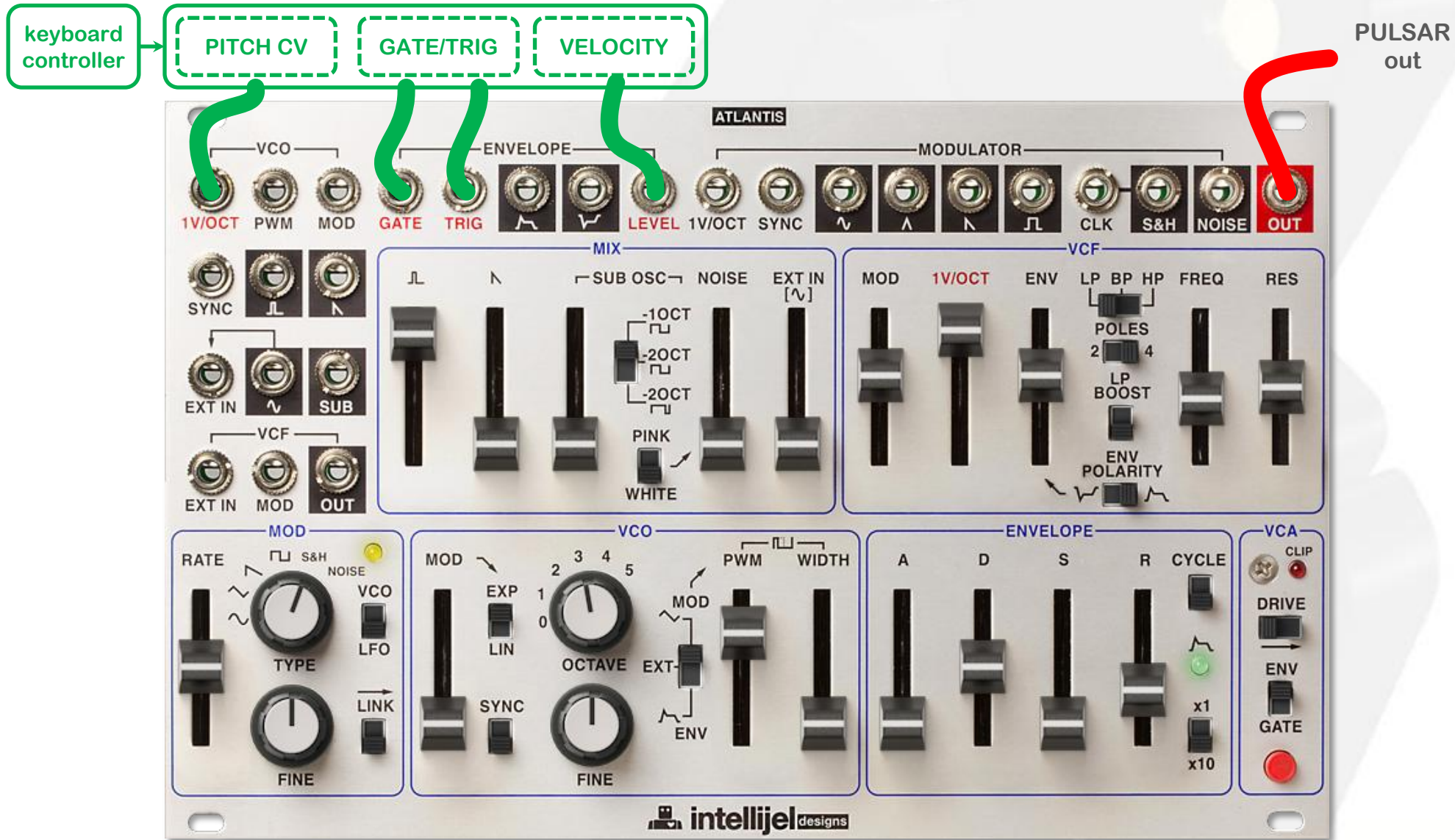


# 24 - FUNNY CAT



It is most desirable to play in a non-legato manner. Set the Decay Time in the ENV to 3 and the Sustain Level to 2, and the impression of the sound will change.

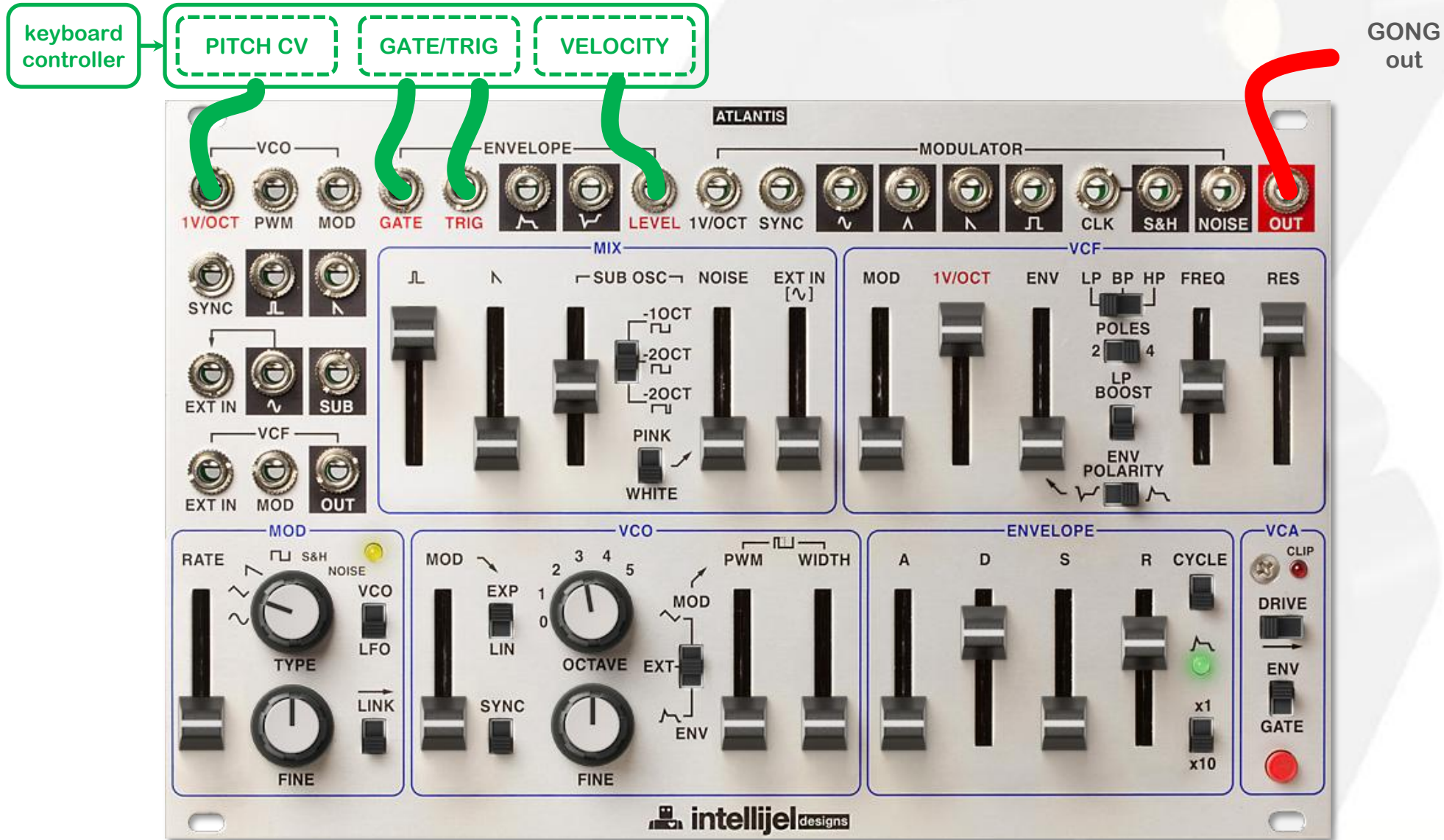
# 25 - PULSAR



The tone color varies drastically depending on the position of the FREQ in the VCF.



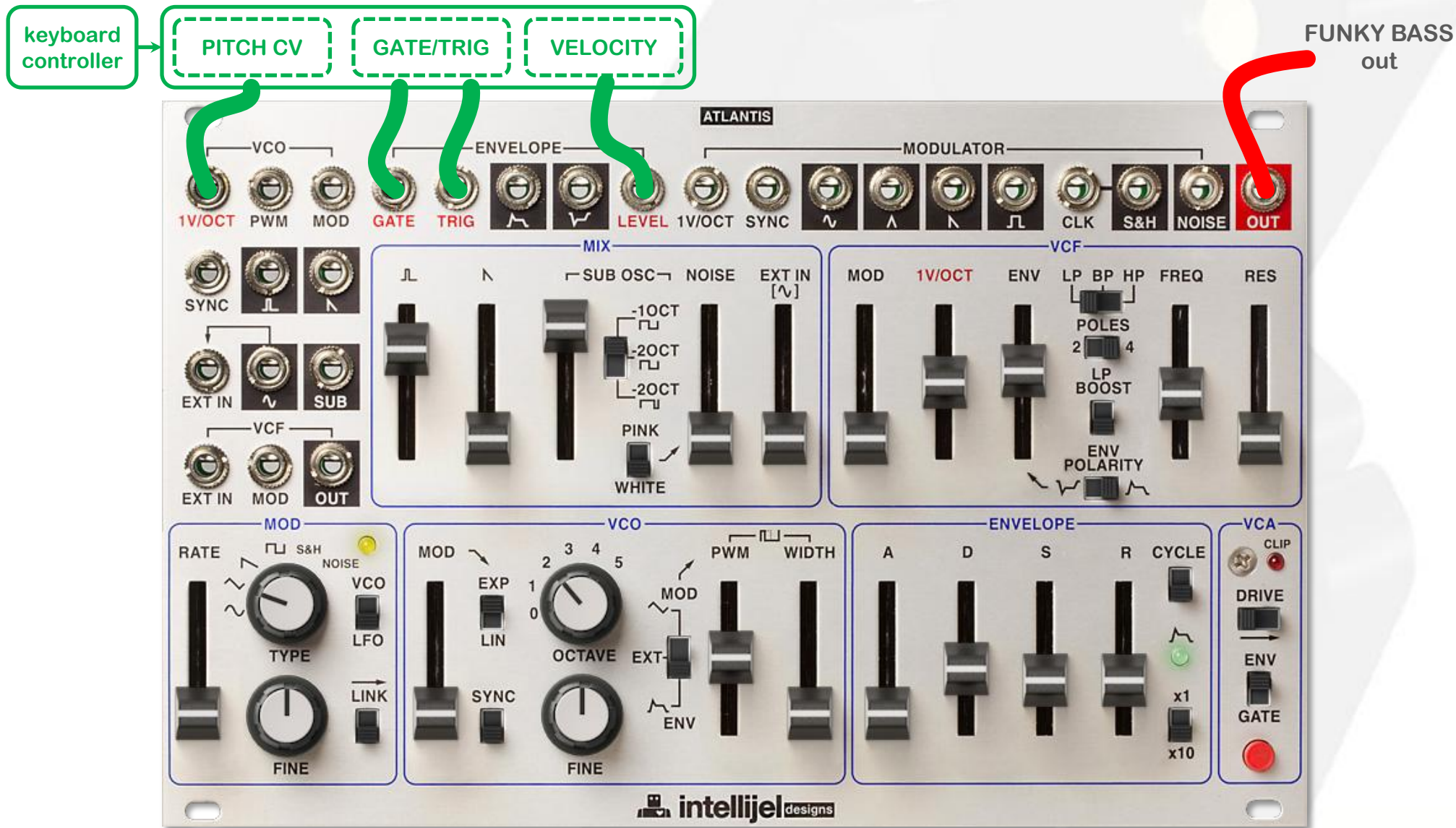
# 26 - GONG



GONG out

The tone color varies drastically depending on the position of the FREQ in the VCF.

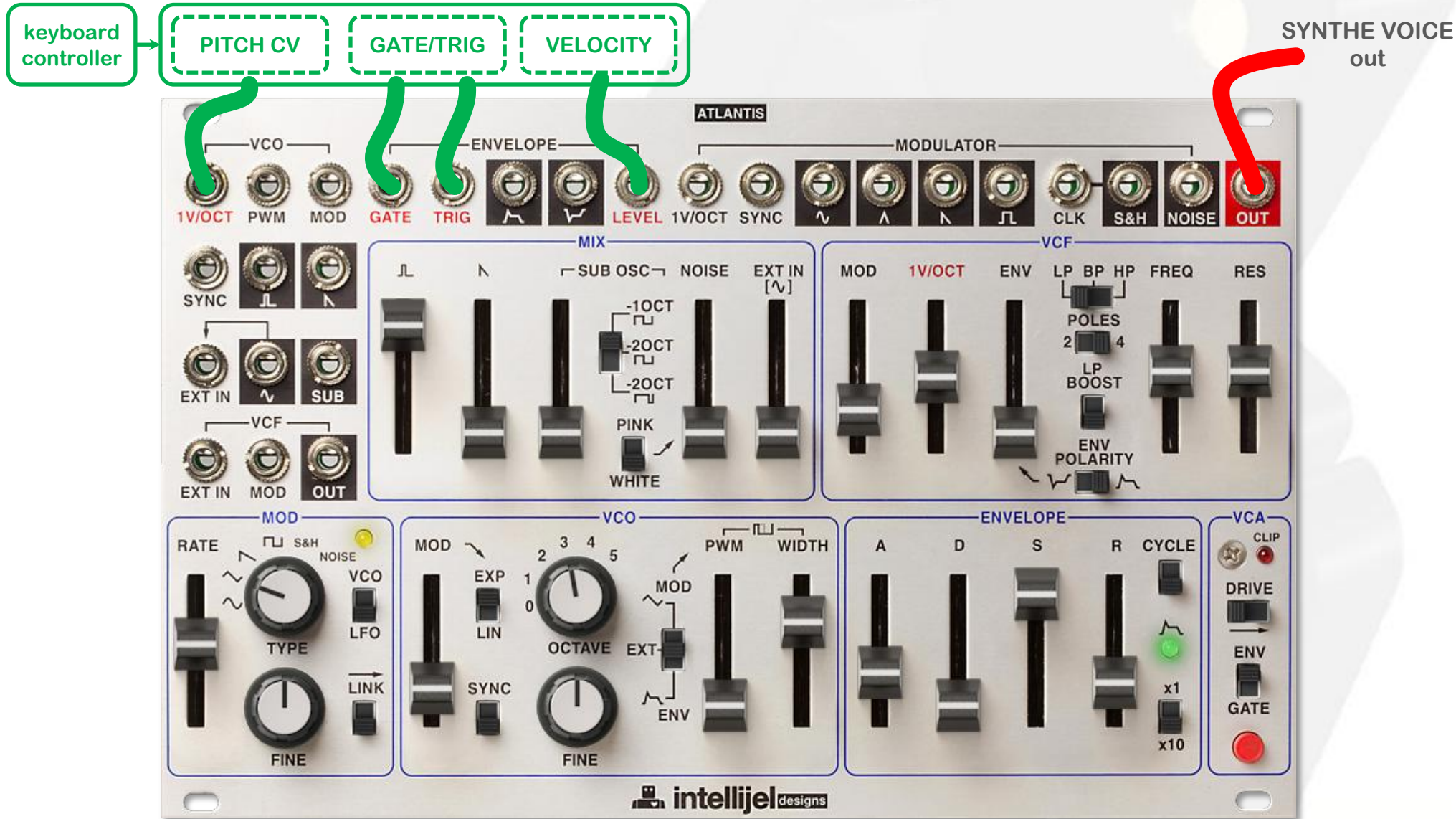
# 27 - FUNKY BASS



The tone color changes drastically depending how you set the FREQ, RES end ENV in the VCF.



# 28 - SYNTH VOICE

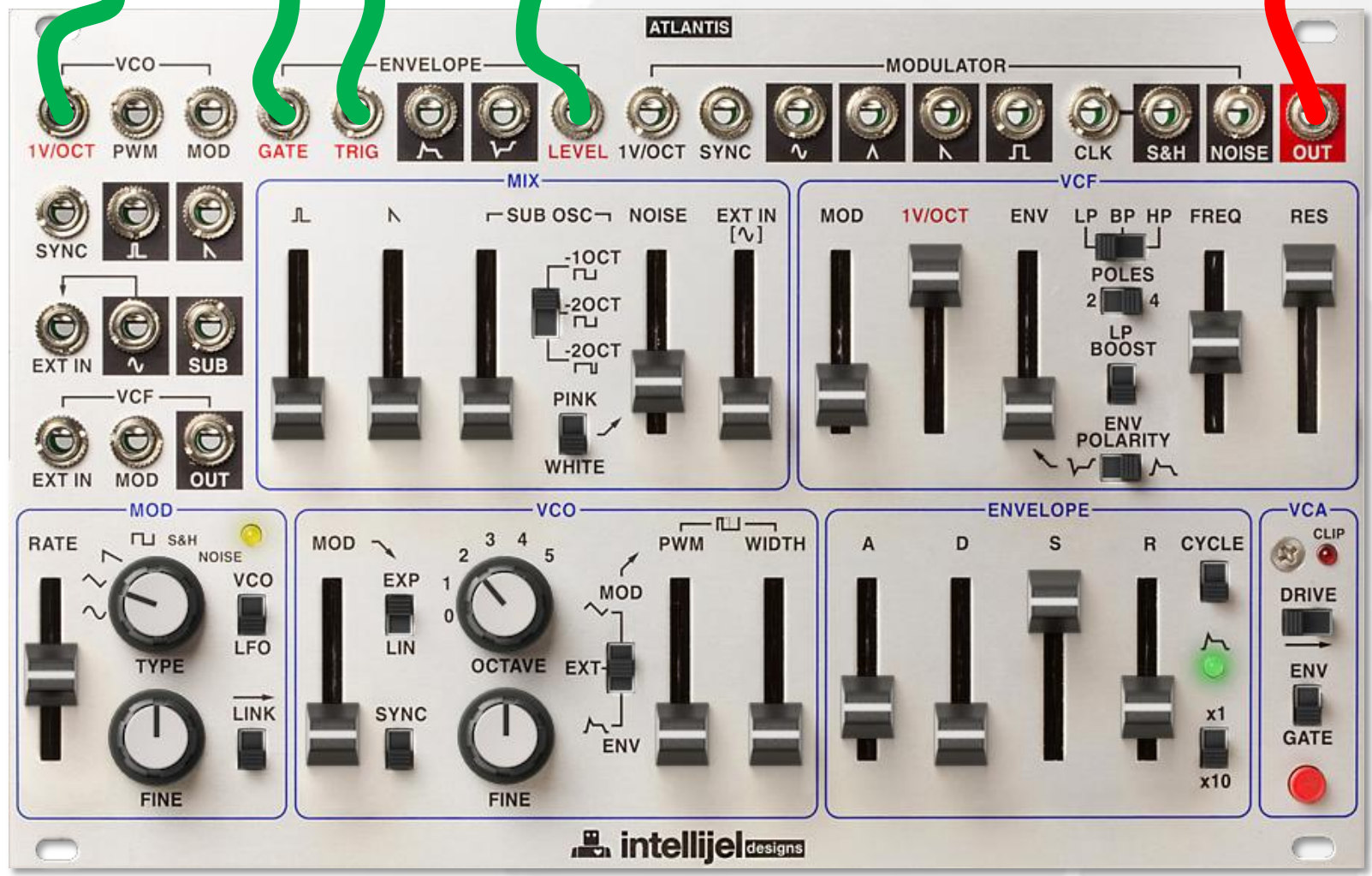


Adjust the FREQ in the VCF as you like. Also, it might prove interesting to add a slight portamento effect.

# 29 - WHISTLE



WHISTLE out



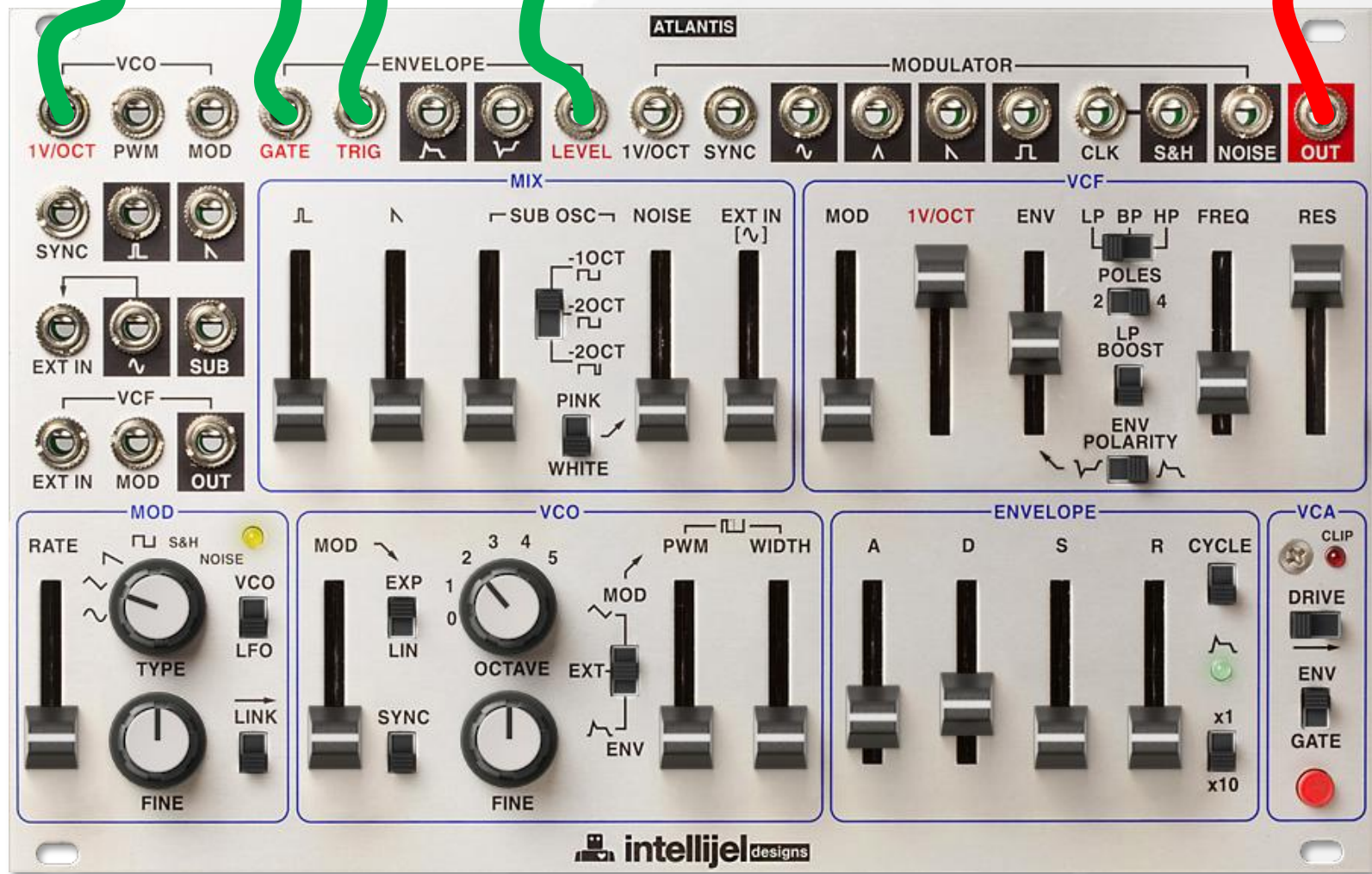
It may be interesting to add a vibrato effect by using the [SINE] LFO MOD knob (in the Controllers section). Also, a slight portamento effect may work effectively.



# 30 - BARKING



BARKING out



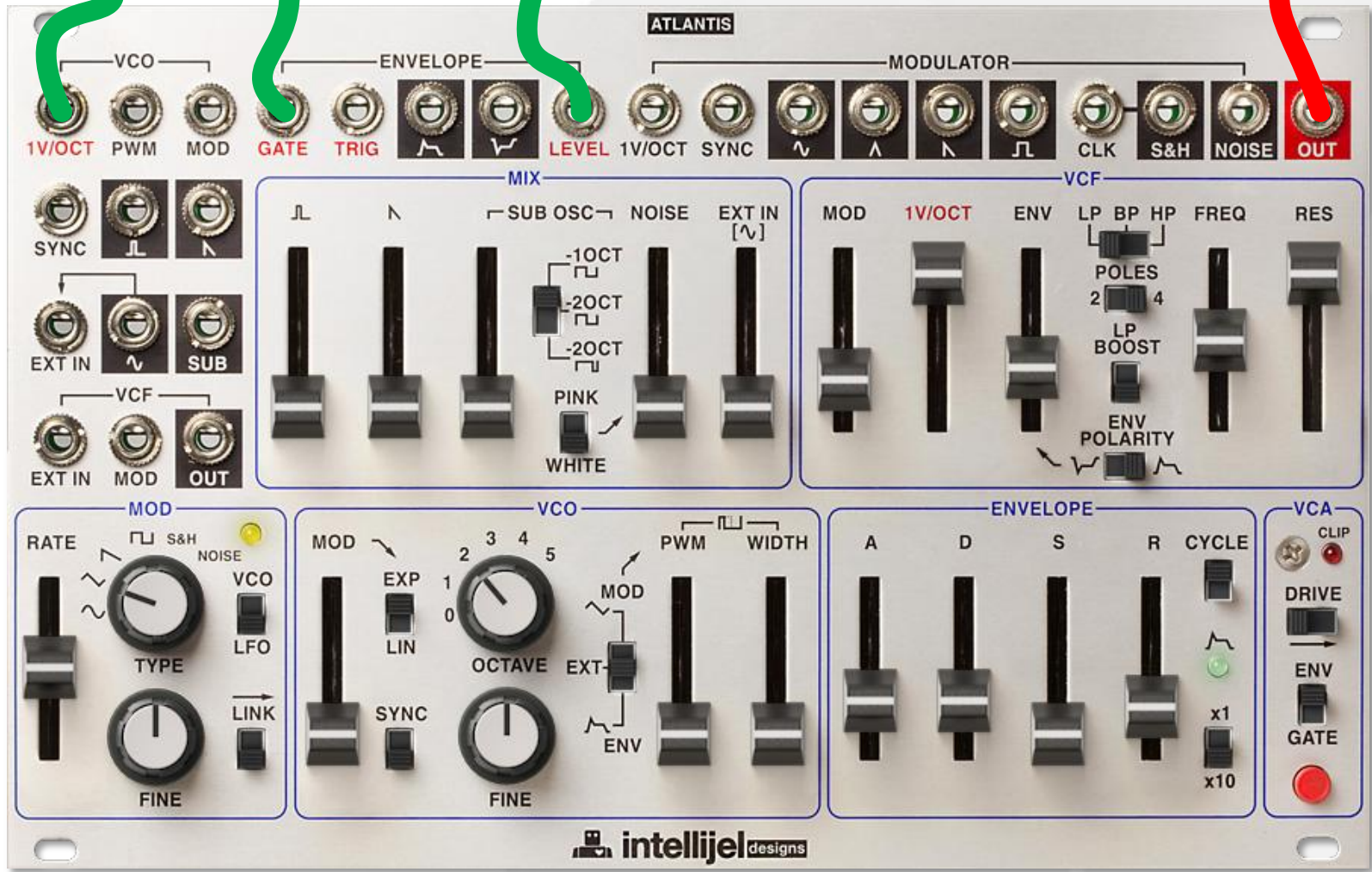
If setting the Sustain Level in the ENV to around 7, you can obtain a howling sound.

# 31 - CHIRPING

keyboard controller

PITCH CV GATE/TRIG VELOCITY

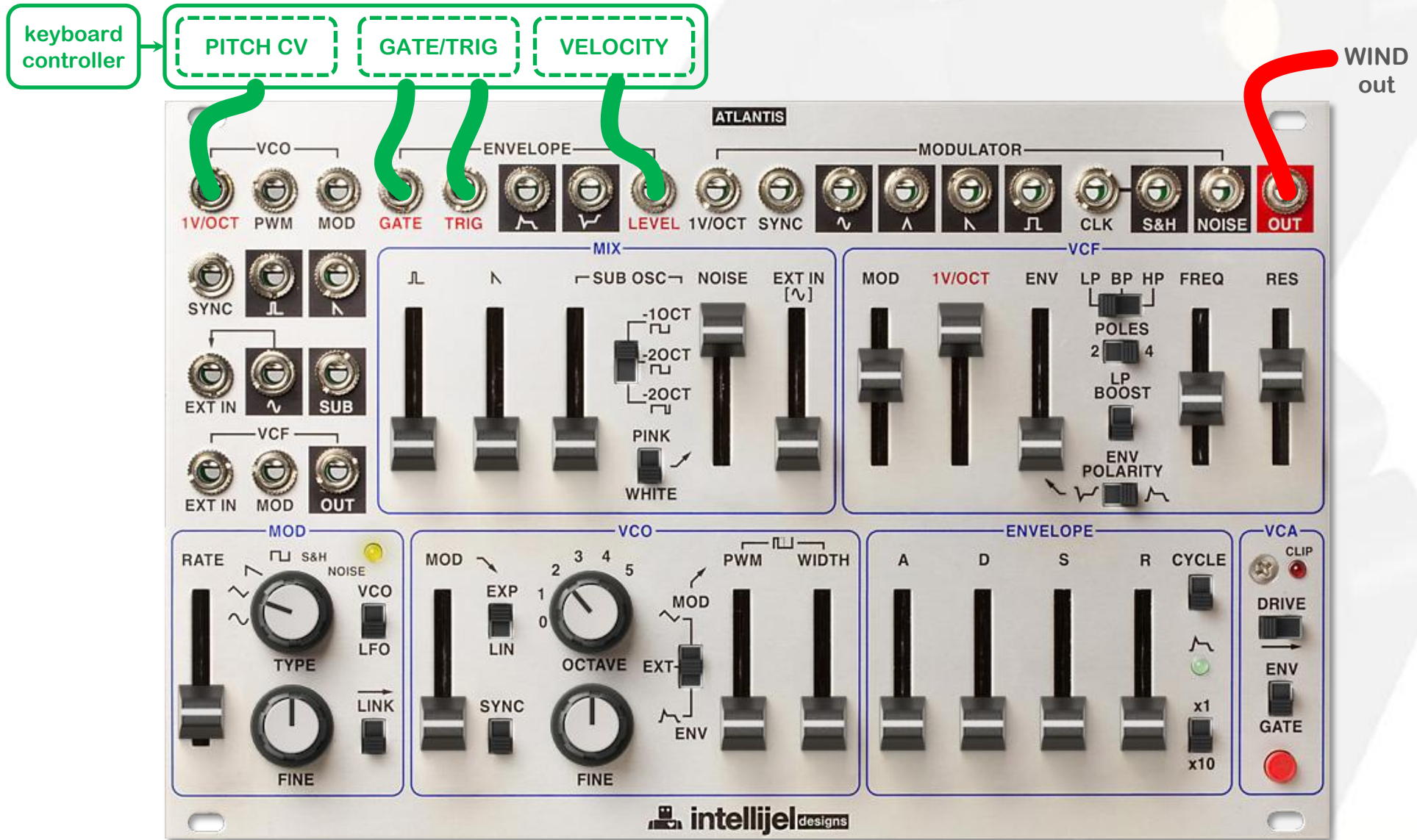
CHIRPING out



It makes the sound more realistic to slowly move the RATE slider in the MODULATOR up and down.

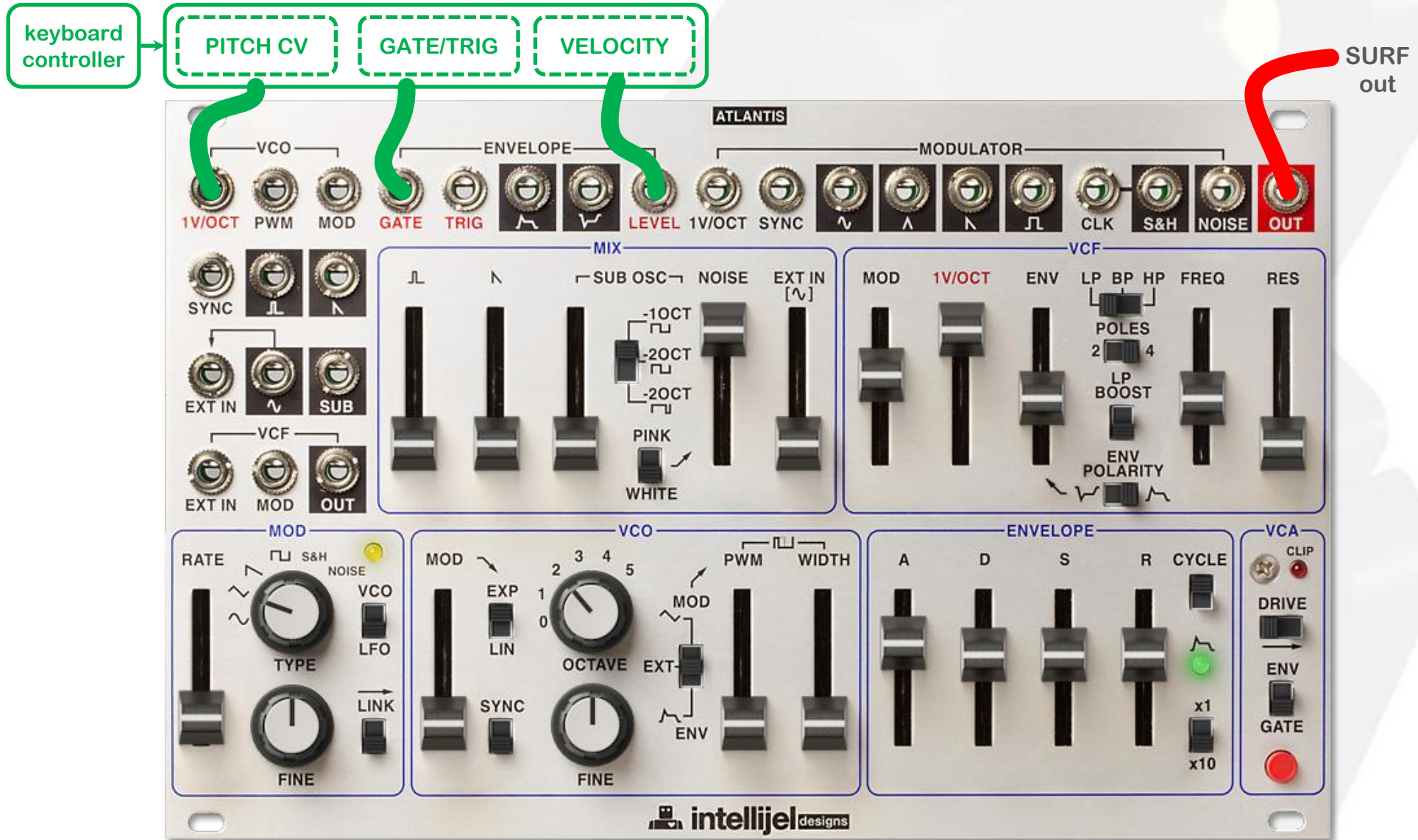


# 32 - WIND



(Turn the HOLD button on.) The impression of the sound varies depending on the position of the RES in the VCF.

# 33 - SURF



(Turn the HOLD button on and) adjust the MOD end the ENV knobs in the VCF.



# 34 - STEAM LOCOMOTIVE

keyboard controller

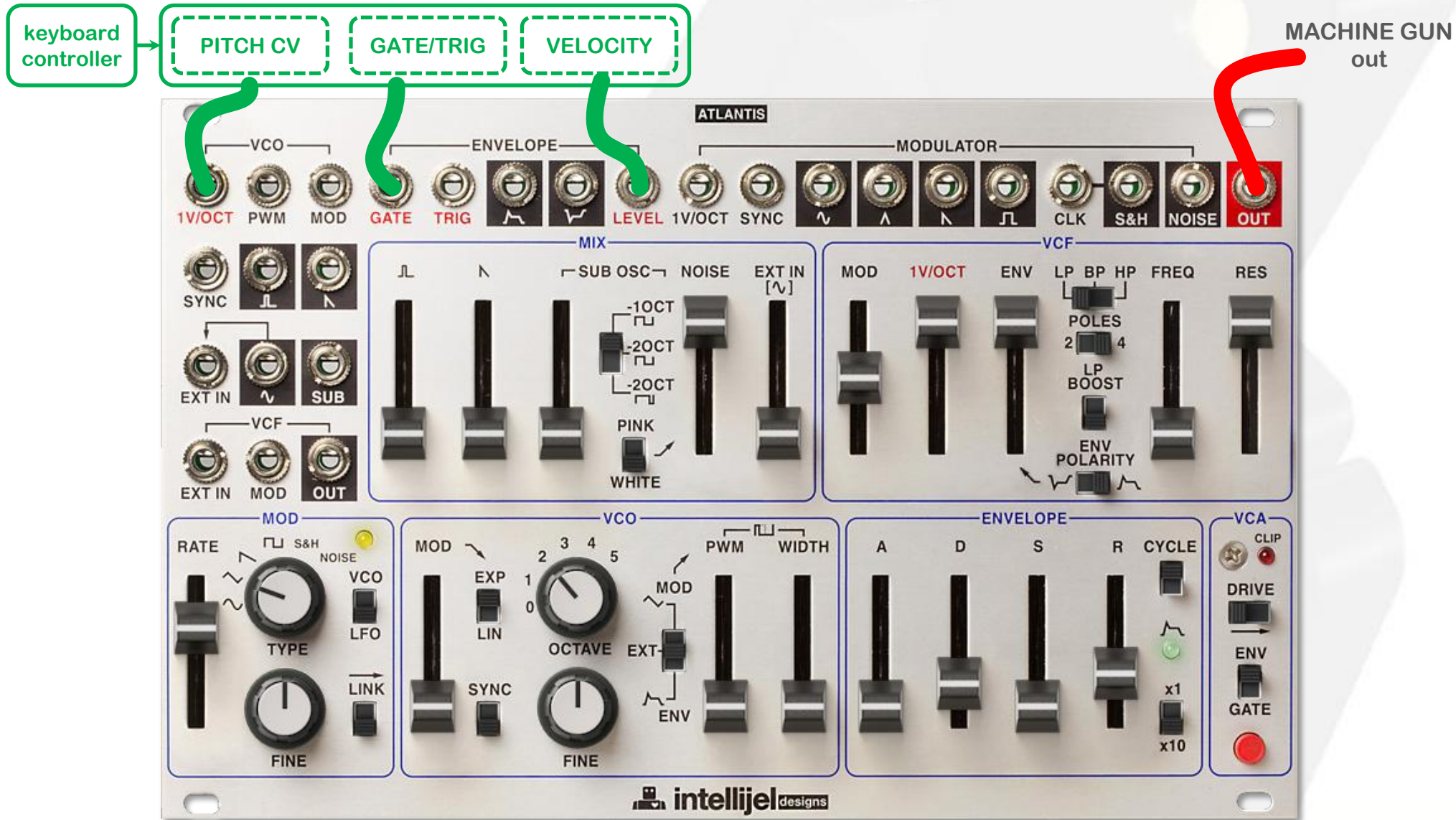
PITCH CV GATE/TRIG VELOCITY

STEAM LOCOMOTIVE out



(Turn the HOLD button on.) The impression of the sound differs depending how you set the FREQ and the ENV in the VCF, and which key you are pressing.

# 35 - MACHINE GUN



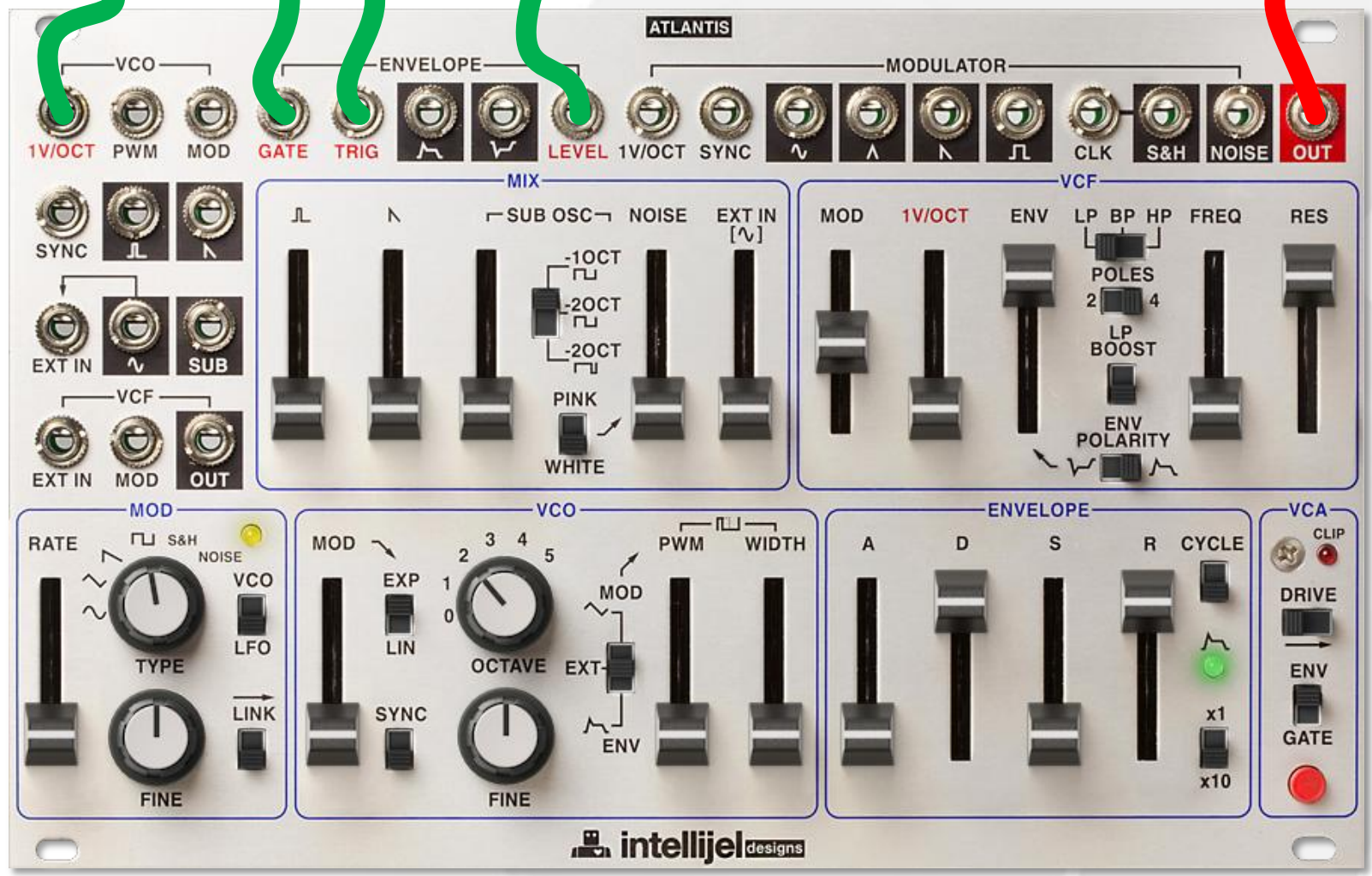
Setting the FREQ and the RES knobs in the VCF is a delicate task. Please adjust them while actually listening to the sound.



# 36 - SPACE SOUND I



SPACE SOUND I  
out



It may be interesting to set the Attack Time in the ENV to 10.

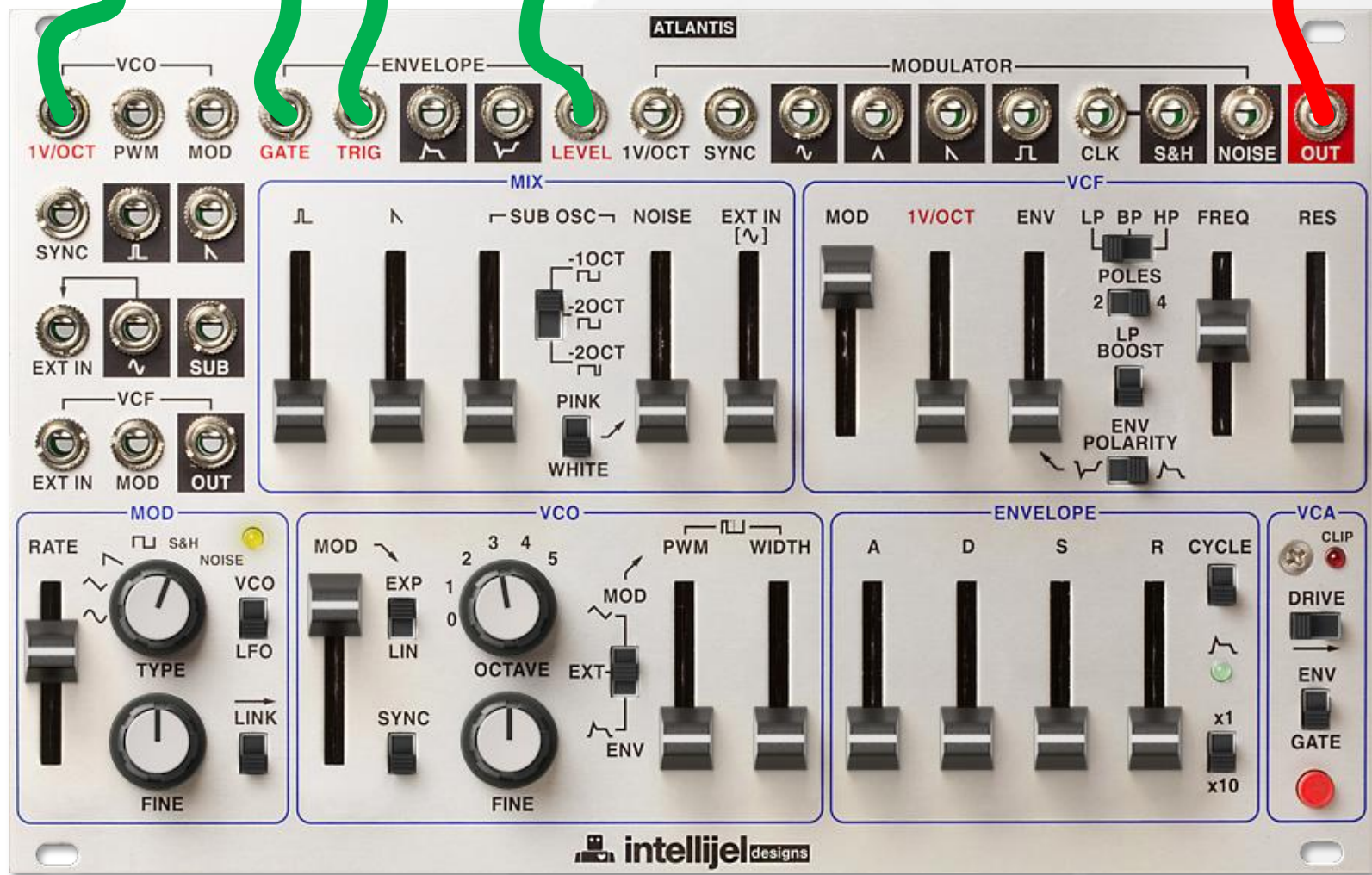


# 37 - SPACE SOUND II

keyboard controller

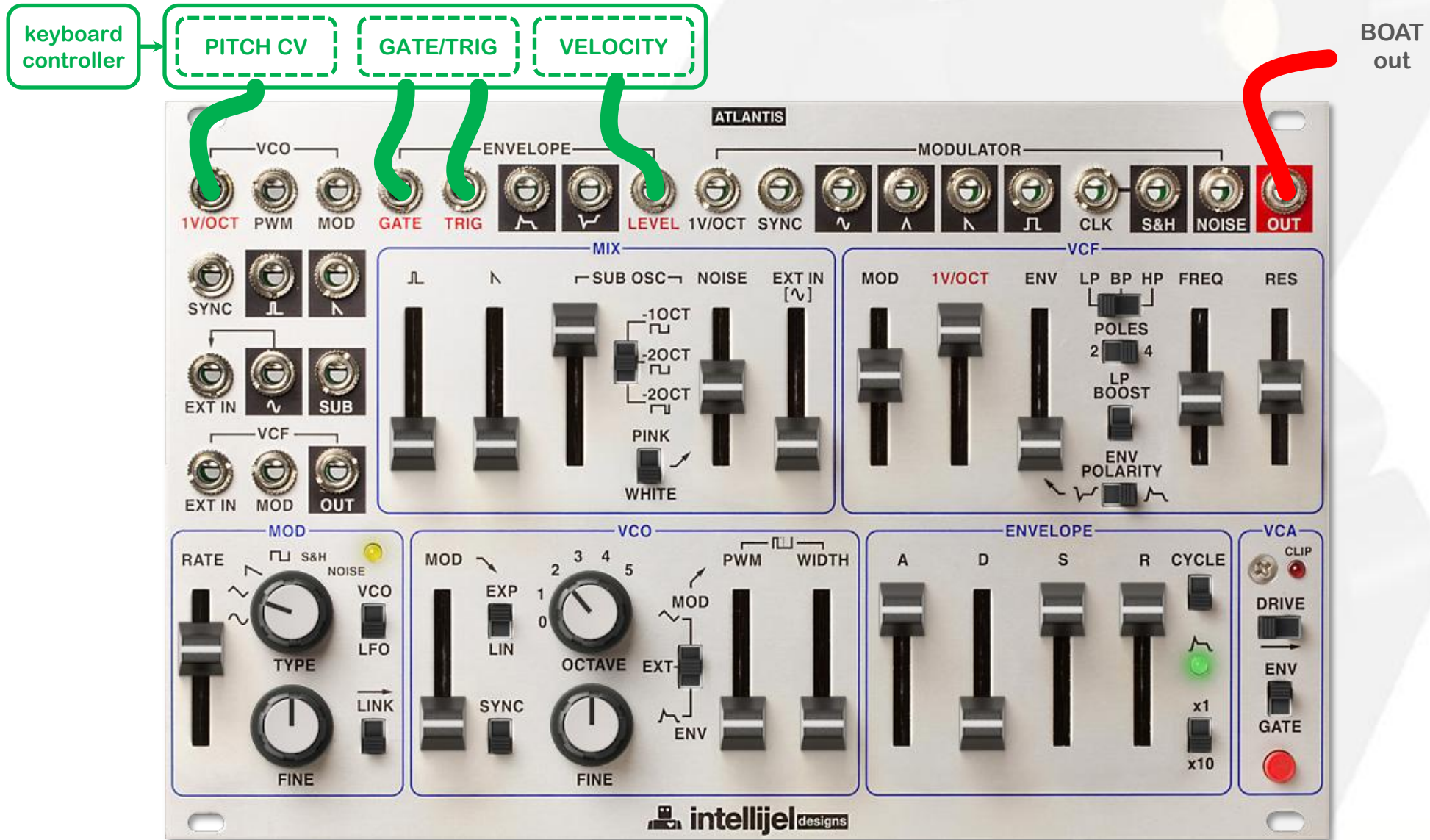
PITCH CV    GATE/TRIG    VELOCITY

SPACE SOUND II out



(Turn the HOLD button on.) If you turn up the [PWM] in the SOURCE MIXER, the impression of the sound will slightly differ.

# 38 - BOAT



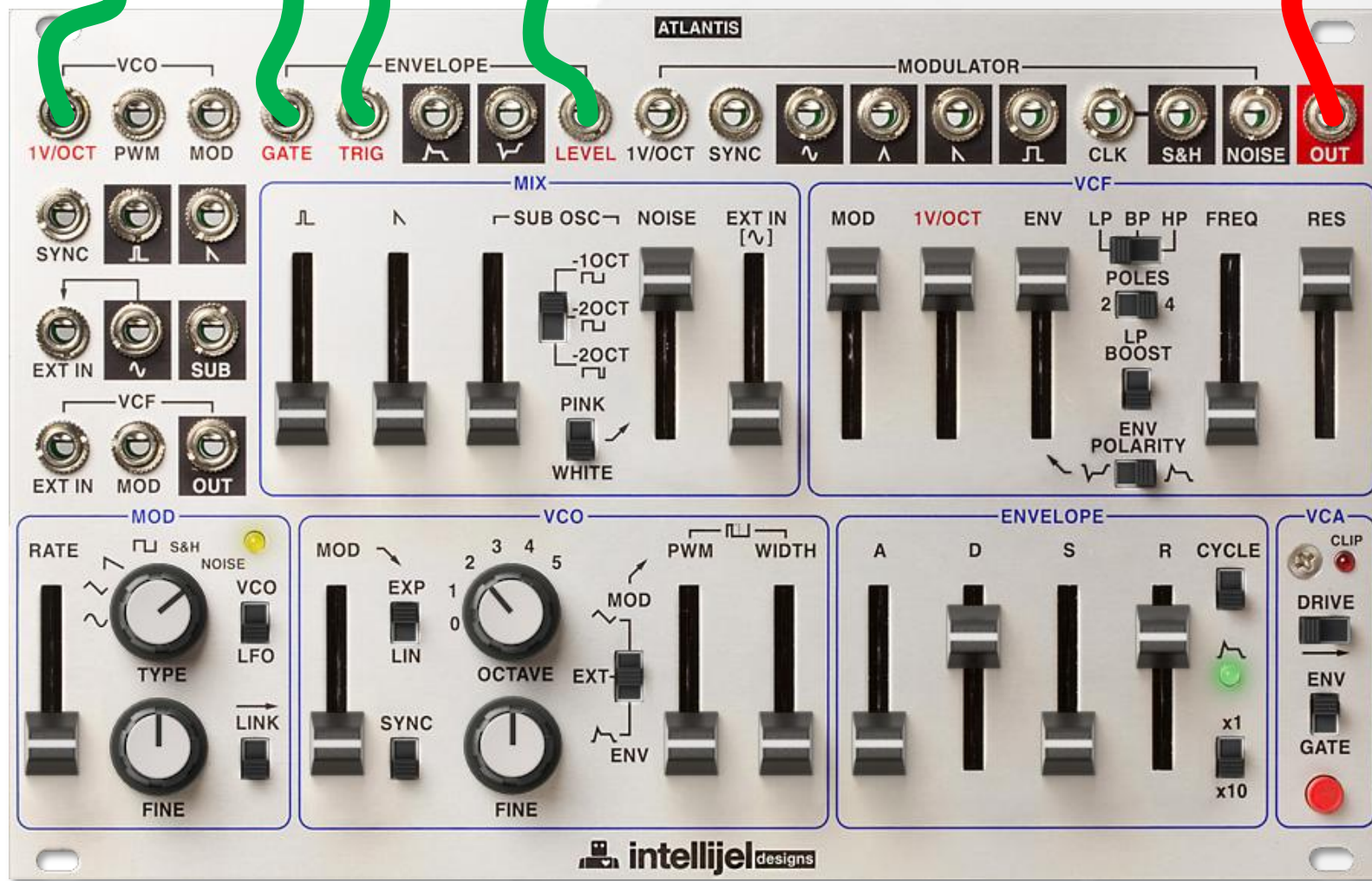
By pressing the lowest key, you can obtain the most realistic engine sound of a boat. Adjust each knob in the VCF.



# 39 - THUNDER



THUNDER  
out





# 40 - RANDOM NOTES

keyboard controller

PITCH CV GATE/TRIG VELOCITY

RANDOM NOTES out

