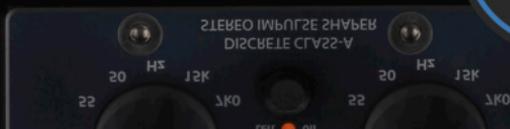


elysia



nvelope 500





Welcome to the world of impulse shaping!

The nvelope 500 is capable of making subtle or drastic changes to a sound by providing control over its attack and sustain characteristics. This is very useful for reshaping individual tones, and is a wonderful tool in any mixing situation as well.

The nvelope 500 operates independently of the specific level of a signal, and (unlike with compressors) you do not have to spend a lot of time trying to balance a set of complex controls to quickly get the results you seek.

With its unique Dual Band mode, the nvelope 500 gives you enhanced control over processing, and can easily handle complex program material. Its dynamics sections can also be bypassed, allowing it to function as a flexible high/low shelf EQ.

We're sure you'll be happy to know the nvelope 500 offers true dual mono or linked stereo operation whether you are using it in Full Range, Dual Band or EQ mode.

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Compatibility

The nvelope 500 module requires installation into an API 500 series compatible rack frame (not included). It needs the power supply and the audio connectors provided by this frame, and cannot be used for its intended purpose by itself.

The current consumption is 200 milliamperes (100 mA per slot) at +/- 16 volts DC. This is actually more than some other 500 series modules consume as a result of the discrete class-A design of the nvelope 500's audio path.

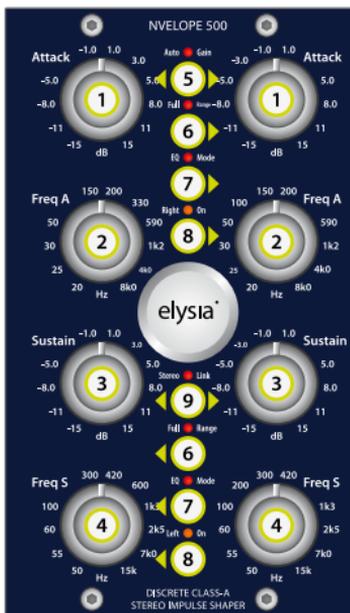
Most API 500 compatible racks meet this requirement without problems, but there might be a limit on how many units can be installed in a single rack. In case of doubt, please check with the manufacturer of your specific rack.

Installation

Just follow these easy steps to install the nvelope 500 module:

1. Switch your API 500 series compatible rack off and disconnect the power cable from mains.
2. Insert the module into two free slots of your rack. Make sure both PCB connectors match with the rack connectors.
3. Gently push the module in place – do not use any excessive force!
4. Tighten the front panel with four screws provided by your rack manufacturer.
5. Connect your XLR audio cables (see page 6 for more info) and power up your rack.

That should do it. Have lots of fun with your nvelope 500!



Controls

1 Attack

- *Full Range & Dual Band Mode:*
Raises or reduces the attack of a signal
- *EQ Mode:*
Boosts or cuts the high frequency range

2 Frequency Attack (Freq A)

- *Full Range Mode:*
Changes the response behavior for attack processing
- *Dual Band Mode:*
Sets the start frequency for attack processing
- *EQ Mode:*
Sets the frequency of the high shelf filter

3 Sustain

- *Full Range & Dual Band Mode:*
Raises or reduces the sustain of a signal
- *EQ Mode:*
Boosts or cuts the low frequency range

4 Frequency Sustain (Freq S)

- *Full Range Mode:*
No function in this mode
- *Dual Band Mode:*
Sets the end frequency for sustain processing
- *EQ Mode:*
Sets the frequency of the low shelf filter

5 Auto Gain

Reduces level peaks in Full Range mode

6 Full Range

Switches from Dual Band to Full Range operation

7 EQ Mode

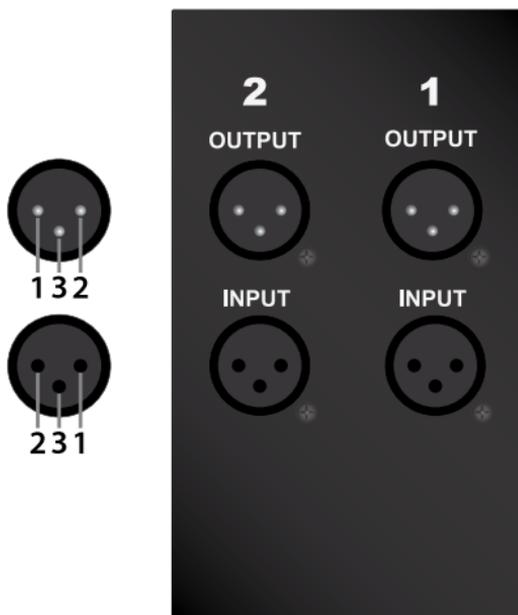
Switches from envelope processing to EQ function

8 On (Left/Right)

Activates a channel or switches to hardware bypass

9 Stereo Link

Links both channels for processing stereo sources
(Left controllers and bottom switches become master for both channels)



Connectors

Audio outputs (+4 dBu)

Pin assignment balanced: 1 ground 2 hot (+) 3 ground

Pin assignment unbalanced: 1 ground 2 hot (+) 3 idle

Audio inputs (+4 dBu)

Pin assignment balanced: 1 ground 2 hot (+) 3 cold (-)

Pin assignment unbalanced: 1 ground 2 hot (+) 3 ground

Mono operation: Connect either one or both of the input and output pairs 1 and 2 for single or dual mono channel use.

Stereo operation: Connect both inputs and outputs 1 and 2 – the choice which channel is left and which is right is up to you.

The Magic



The nvelope 500 is a dynamics processor that can change the character of a sound by altering its impulse structure. It gives you direct control over the envelope of a signal by shaping its attack and sustain intensity.

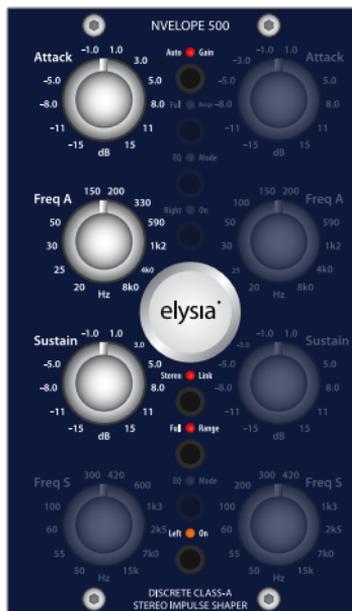
More specifically, a drum set (or individual drums) can be made to sound more aggressive and punchy by accenting the attack, or tones that are already overly aggressive can easily be tamed.

Other useful applications would be on picked or slapped bass, edgy guitar or any kind of piano recording. Generally speaking, the nvelope 500 works optimally on audio signals with a significant/percussive attack structure.

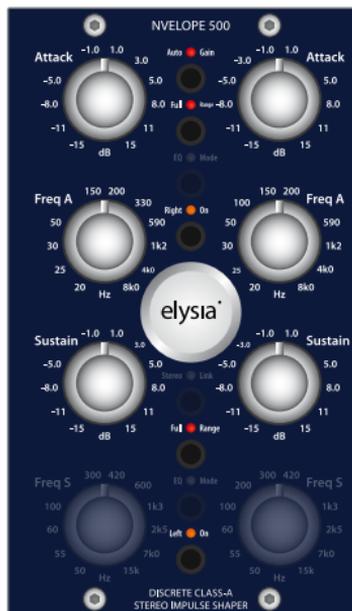
As a balance to the attack shaping, the sustain parameters offer control over room sound and space. An instrument or a reverb tail can sound tighter by reducing its sustain, or can gain more depth/make a signal sound longer by increasing it.

The nvelope 500 is a great tool for shaping individual signals, but it can be an indispensable resource in mixing situations as well, as it effortlessly helps you to bring a sound to the front with more attack and less sustain... or blends it gently into the background by reducing its attack and increasing its sustain.

A unique feature of the nvelope 500 is the enhanced tweakability offered in Dual Band mode. Individual frequency controls for attack and sustain yield excellent processing results without unwanted artifacts, even when utilized on complex material like a summing bus.



Linked Full Range



Unlinked Full Range

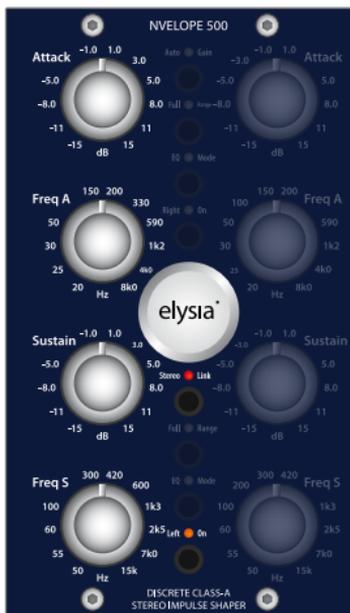
Full Range Mode



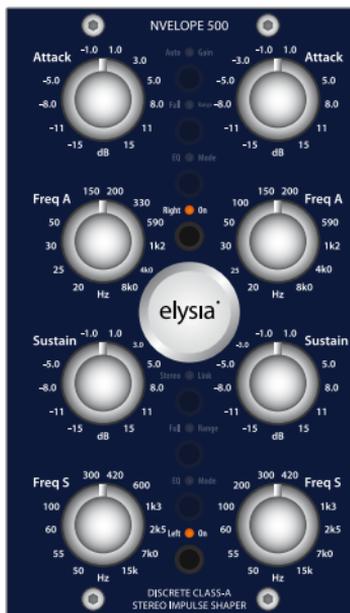
In Full Range mode, you can increase or reduce the attack and sustain intensity of a signal quickly and efficiently. Just turn the two controllers to the right for more accent, or to the left for more smoothing.

Like a compressor (and unlike in Dual Band mode), you can use the Freq A controller to reduce the influence of low frequencies on the attack processing, so higher frequency = less bass influence.

Should you notice clipping/distortion or big jumps in level caused by the attack processing, please engage the Auto Gain switch for automatic compensation.



Linked Dual Band



Unlinked Dual Band

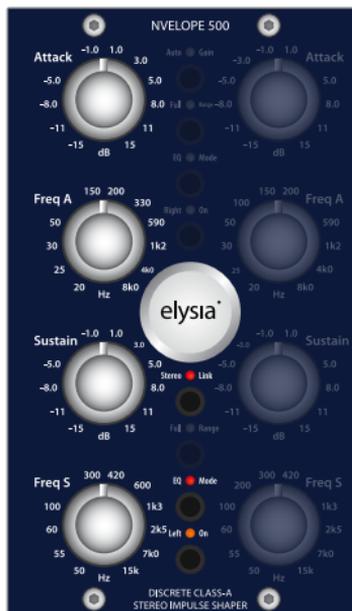
Dual Band Mode



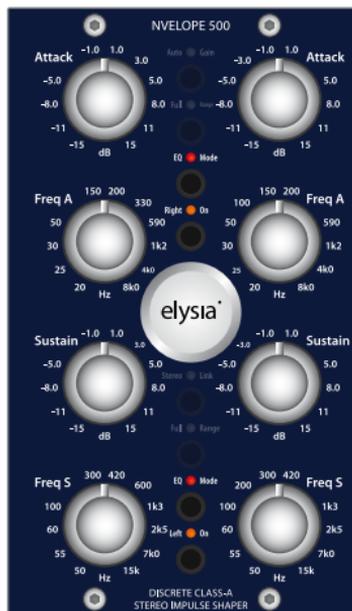
Dual Band mode functions basically the same as Full Range, but it gives you more tweakability by assigning the attack and sustain controls to individual frequency selectors.

The Freq A controller now sets the start frequency for attack processing, while the Freq S controller determines the end frequency for sustain processing. The function of the Attack and Sustain controllers remain the same as in Full Range mode.

Note: Auto Gain is not offered in this mode as it is typically not needed in dual band operation.



Linked EQ



Unlinked EQ

EQ Mode

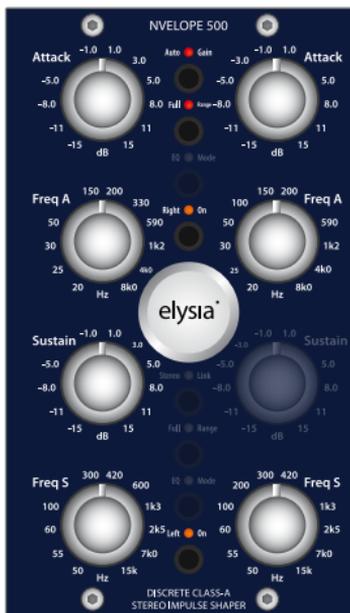


In EQ mode, the nvelope 500 becomes a two band equalizer with a high/low shelf characteristic, and even here the channel link for processing stereo material can be activated.

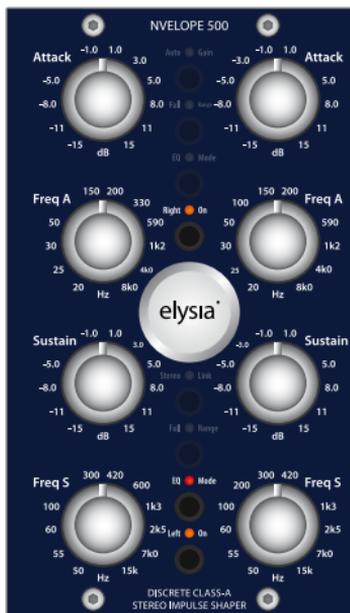
Freq A now sets the frequency of the high shelf filter, while Attack determines the amount of cut (turn left) or boost (turn right) in this band.

Similarly, Freq S sets the frequency of the low shelf filter and Sustain determines the amount of cut or boost.

Note: Auto Gain and Full Range have no influence on the EQ.



Dual Band (L) & Full Range (R)



EQ (L) & Dual Band (R)

Mixed Mode



When the nvelope 500 is not in Stereo Link mode, the two individual channels can be used as different processors simultaneously.

For example, you can shape one signal in Dual Band mode in channel L and a completely different signal in Full Range mode in channel R.

Or, you can connect the output of channel L to the input of channel R, and then process the frequency response with the EQ first, followed by some nice Dual Band impulse shaping...

As you can imagine, there are lots of possible combinations!



Technical Details

Frequency response:	<10 Hz - 400 kHz (-3.0 dB)
THD+N @ 0 dBu, 20 Hz - 22 kHz:	0.006 %
THD+N @ +10 dBu, 20 Hz - 22 kHz:	0.01 %
Noise floor, 20 Hz - 20 kHz (Full Range, EQ):	-90.0 dBu
Noise floor, 20 Hz - 20 kHz (Dual Band): (A-weighted)	-87.0 dBu
Dynamic range, 20 Hz - 22 kHz:	112 dB
Maximum input level:	+21 dBu
Maximum output level:	+21 dBu
Input impedance:	10 kOhm
Output impedance:	68 Ohm

CE Conformity

CE elysia GmbH, Am Panneschopp 18, 41334 Nettetal, Germany, declares with sole responsibility that this product complies with the following norms and directives:

- 2006/95/EG Low Voltage Directive (formerly 73/23/EWG or 93/68/EWG)
- 89/336/EWG EMC (Electromagnetic Compatibility) Directive
- DIN EN 55103-1 EMC of audio equipment - Emission
- DIN EN 55103-2 EMC of audio equipment - Immunity

This declaration becomes invalid by any unapproved modification of the device.

Nettetal, 01.04.2012 - Ruben Tilgner & Dominik Kläßen

Precautions



CAUTION: Electricity

- Make sure to operate your API 500 series compatible rack at the specific mains voltage of your country.
- Replace rack frame fuse with the same type and value only.
- Your rack frame must be connected to ground.
- Do not use a damaged power cord.
- Never place containers with liquid on the rack.
- Do not expose this device to rain or moisture.
- Do not use this device near water.
- Refer service to qualified service staff only.



CAUTION: Temperature

- Surfaces of the device may become hot during operation.
- Do not install this device near any heat source such as radiators, stoves or other heat sources.



CAUTION: Connecting & Mounting

- Never connect to the output of a power amplifier.
- Do not apply extensive force when installing this device.
- Use the device according to this manual only.



CAUTION: Humidity

- If this device is moved from a cold place to a warm room, condensation can occur inside the device. To avoid damaging the unit please allow it to reach room temperature before switching it on.



Warranty Info

The nvelope 500 is covered by a limited warranty for a period of 2 years against defects in parts and labor from the date of purchase. Natural wear is not covered by this warranty. Repairs or replacements will not extend the warranty period.

The warranty is given to the original purchaser only and is not transferable. elysia will only give warranty on products purchased through authorized elysia dealers. The warranty will only be valid in the country of the original purchase unless otherwise pre-authorized by elysia.

All warranties become void when the product has been damaged by misuse, accident, neglect, modification, tampering or unauthorized alteration by anyone other than elysia authorized service personnel.

The warrantor assumes no liability for property damage or any other incidental or consequential damage whatsoever which may result from failure of this product. Any and all warranties of merchantability and fitness implied by law are limited to the duration of the expressed warranty.

elysia will not pay for express or overnight freight service or pay for shipments to locations outside Germany. All damages caused by transport are not covered by this warranty.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. Some of the above limitations may not apply to you.

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This product is manufactured according to the 2002/95/EC directive. The purpose of this directive of the European Union is the Restriction of Hazardous Substances (RoHS) in electronic equipment in order to protect health and nature. Dispose separately!

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