

# Wavelength

## HIGH BANDWIDTH DIGITAL MODULATOR

**More.** That's the best way we can describe the sounds and features of the Wavelength. We took everything from our Waveland Multi-Modulator and blew it up larger than life, while keeping it the exact same size.

We've added some welcome improvements like more modulation engines and tap tempo, and some cool surprises like selectable waveforms. It's a true all-in-wonder for your modulation needs.

The sonic scientists at Alexander Pedals have been working overtime to cram the most pedal into the smallest box, and we now present the Neo Series! Each Neo Series pedal incorporates an advanced 32-bit microcontroller adding presets, expression, and MIDI capability.

**NEO  
SERIES**

## GETTING TO KNOW YOUR NEO



## CONTROLS

Controls in parentheses ( ) are accessed by holding down the Select button and turning the indicated knob.

**Rate:** Controls the rate from glacial to gee-whiz. Turn it all the way down to stop the modulation and enable manual control (requires firmware v1.06G or higher)

**(Tap Mult):** Sets the tap multiplier. Tap in a tempo and this will multiply it by 1, 2, 3, or 4 to create quarter, eighth, triplet, or sixteenth note speeds. If you try to tap faster than the Wavelength can go, it will just default to the maximum rate.

**Depth:** Controls the modulation depth, serves as the manual control if the Rate knob is at zero.

**(Ramp Speed):** Sets the time the pedal will take moving between the two ramp settings, from instant to approximately 10 seconds.

**Mix:** Controls the blend between the dry and modulated signal. Equal mix is at 12 o'clock.  
*Hint: Tremolo sounds deepest at full Mix settings, and phaser / vibe / flange sounds deepest with Mix near its midpoint.*

**(Level):** Controls the overall output level of the pedal, from -20dB to +10dB. Unity gain is near 1 o'clock.

**Tweak:** Adjusts a different parameter for each effect mode. Please consult the mode descriptions for more information.

**(Shape):** Sets the modulation waveform. The main LED will change to show the current wave shape while the center button is pressed. We've packed in the most common waveforms like Sine, Triangle, and Square, as well as some more interesting options such as Pulse, Rise, and Fall. There's even a random "sample and hold" waveform that's super fun with the Filter mode.

## EFFECT MODES

**Tap the Select Button to move to the next mode.**

**TRM Tremolo** - this effect cycles your volume up and down for a cool rhythmic texture. Twist the Tweak control to morph between standard tremolo and harmonic vibrato. Don't forget you can use the Level control to bump up your volume and make up for any drop you might get from the effect!

**CHO Chorus** - smooth and clear chorus tones live here. Use the Tweak control to adjust the overall delay time of the effect. Low settings yield flange-like tones and higher settings result in a double-tracking effect.

**PHA Phaser** - eight-stage phase goodness, chewy and thick. Crank the Tweak control to add regeneration, deepening the phase shift effect.

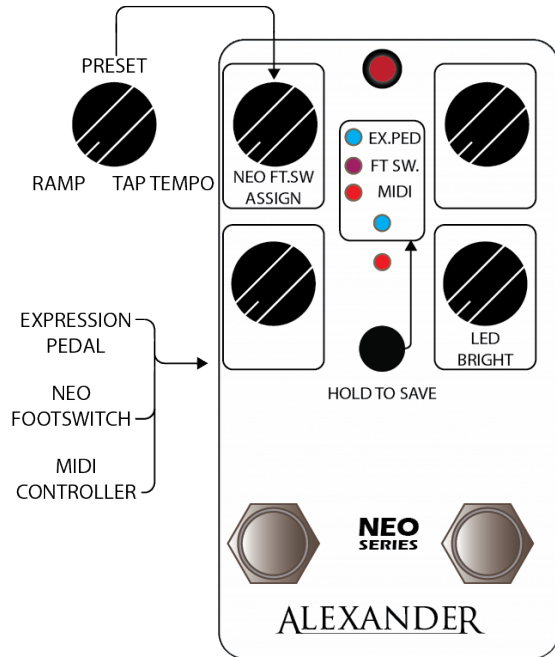
**FLG Flanger** - ranges from subtle comb filtering to insane jet whoosh. Use the Tweak control to adjust the feedback for a sharper flange.

**VIB Vibe** - photocell and lamp style vibe effect. The Tweak knob adjusts the balance and symmetry of the shift stages and the effect gets more pronounced as you increase the control.

**FLT Filter** - resonant low-pass filter effect. Tweak controls the resonance of the filter. Be careful, this can self-oscillate at higher settings! Sounds killer with the Random waveform, ship ahoy!

## CONFIGURING YOUR NEO PEDAL

Power on the pedal while holding the Select button to enter configuration mode. Release the button when the main LED turns violet.



Tap the Select button to choose the MultiJack function. The upper program LED will change colors to indicate the function. Blue = Expression Pedal, Violet = Foot Switch, Red = MIDI

Connect a MIDI controller to the EXP port and send a program change to set the Neo Pedal's MIDI channel.

Turn the upper left knob to select the Neo Footswitch configuration. Counter-clockwise = Ramp, Mid = Preset Advance, Clockwise = Tap Tempo.

Turn the lower right knob to set the main LED brightness.

Hold the Select button to save the configuration and exit.

## BYPASS AND PRESETS

Tap the foot switch to toggle the pedal between bypass and active. The bypass signal is buffered and 100% analog, while the dry signal in effect mode is digital to maintain the correct phase relationship with the wet signal.

Hold the bypass footswitch to move to the next preset. The Neo Series pedals have 16 presets, four of which are accessible on the pedal itself. The main LED will blink one, two, three, or four times to indicate the current preset.

Hold the select button down, then hold the footswitch down to save. The pedal will save the current settings to the active preset. The main LED will blink to indicate the preset has been saved.

If you choose to connect a Neo Footswitch or a standard footswitch to the MultiJack, you can configure it to change presets on the pedal. Tapping the footswitch will advance one preset, holding will move back one preset. If you connect a Neo Footswitch, its LED will show the current preset: Red = 1, Green = 2, Blue = 3, Violet = 4.

## TAP TEMPO

Tap the left footswitch a few times and the pedal will set its tempo to match your tapped rhythm. The lower left LED will light to show the waveform and indicate the tempo.

The modulation tempo will be stored in the preset you're using should you decide to save.

If you choose to connect a Neo Footswitch or a standard footswitch to the MultiJack, you can configure it to send tap tempo to the pedal. Tapping the footswitch will set the tempo. If you connect a Neo Footswitch, its LED will blink to show the tempo.

You can also use MIDI to control the tempo of the pedal. Send a MIDI CC93 with any value to tap the tempo for the pedal. You'll need to send at least two MIDI taps to set the tempo. You can also use MIDI Clock (sometimes called MIDI Beat Clock) to set the delay time and tempo.

## RAMP MORPH

The Wavelength features a very useful Ramp Morph function, which allows you to seamlessly crossfade between two different pedal settings on the fly. To activate the ramp, just hold down the left (tap) footswitch for a second. The ramp will activate and the Wavelength will move to the other setting, while the upper LED changes from red to blue or vice-versa.

You can set your own ramp parameters simply by turning the knobs on the pedal while in the base (blue) position, then toggling the ramp and turning the knobs while in the ramped (red) position. You can set the speed of the ramp by holding the center Select button and turning the Depth knob. When you get a setup you like, save your work by holding the Select button and the Bypass footswitch!

If you choose to connect a Neo Footswitch or a standard footswitch to the MultiJack, you can configure it to activate the Ramp function with a single tap, rather than with a hold.

## EXPRESSION PEDAL

If you prefer to use an expression pedal to control the ramp effect, just connect it to the MultiJack on the side of your Wavelength. Once connected, the expression pedal will crossfade between the two ramp settings as you move the pedal. The ramp speed control will have no effect on the expression pedal action.

If you prefer to use MIDI commands to control your pedal, both Expression and Ramp are accessible using MIDI continuous controller (CC) messages. Please consult the MIDI Control section for more details.

Please note that both the main AND alternate knob functions may be controlled by the expression or ramp controls!

## MIDI CONTROL

Connect a compatible MIDI controller to the Neo pedal to access its full feature set!

The Neo pedal can accept MIDI over USB from a computer or mobile device, or from a MIDI controller using a 1/4" cable. The Neo pedals are compatible with interface converters made by Disaster Area Designs and Empress.

The following commands are accepted by the Neo pedal:

### **MIDI Program Change: Load Presets 0-15**

0-3 are the four Red presets on the pedal itself.

4-7 are the Green bank

8-11 are the Blue bank

12-15 are the White bank

### **MIDI Continuous Controller 93: Tap Tempo**

### **MIDI Continuous Controller 97: Ramp**

Send any value to trigger the ramp

### **MIDI Continuous Controller 100: Expression Pedal**

Value 0 = Heel down, Value 127 = toe down

### **MIDI Continuous Controller 102: Bypass**

Value 0-63 = Bypass, Value 64-127 = Engage

### **MIDI Continuous Controller 50-57: Pedal Knobs**

Value 0 = CCW, Value 127 = CW

CC 50 = Tweak

CC 54 = Shape

CC 51 = Rate

CC 55 = n/a

CC 52 = Depth / Manual

CC 56 = Ramp Speed

CC 53 = Mix

CC 57 = Level

### **MIDI Continuous Controller 59: Mode Select**

Accepts values 0-5 to select modes 1-6.

### **MIDI Channel Assignment:**

Set the Neo pedal to Config mode by holding Select at boot, then send a MIDI program change on your desired MIDI channel to set the Neo pedal's MIDI channel. Hold the Select button to save the MIDI channel assignment.

# ALEXANDER

GREAT TONES. DOING GOOD.

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