# SPACE RACE
## reverberation

Mankind has long known of the amazing properties of reverberant spaces. From the brilliant reflections of the largest concert halls to the splashy depths of your own shower, every space has its own characteristic sound. The Space Race is our humble homage to the sounds of "elsewhere," and features six ingenious ways to add some space to your place.

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

USB Mini-B
MIDI or firmware update

DC 9V
80mA, center negative

MultiJack
Expression, Footswitch, or MIDI

Output
Stereo output on ring

Select Button
Hold to access ALT knobs

Input
Instrument or line level

Foot Switch
Tap to bypass, hold for next preset

## CONTROLS

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

**Reverb:** Adjusts the size and decay of the reverb effect.

**Space:** Controls the pre-delay in most of the reverb modes. Check the description of each Effect Mode for details on how the Space control works in that mode.

**(Clock):** Requires firmware v1.04a or higher. Adjusts the audio sample rate of the digital signal processor. Turn this fully clockwise for better-than-CD-quality output, or counter-clockwise for digital murk.

**Mix:** Controls the amount of effected signal. Turn fully clockwise to "kill" the dry signal.

**(Volume):** Hold the select button and turn this knob to set the Volume of both wet and dry signals

**Tweak:** Controls a different parameter in each mode. Visit the Effect Modes section below for more details.

## EFFECT MODES

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

**MOD:** Modulated chamber reverb. The Tweak knob controls the speed and depth of the pitch modulation.

**SHIM:** Reverb with a pitch-shift component. The Tweak knob controls the pitch shift interval, either an octave down or an octave up.

**LOFI:** Dirty and filtered reverberation, like the echo you might get out of a broken karaoke machine. Reverb and Space control the decay and pre-delay, respectively, while Tweak controls the amount of dirt and grit present in the reverb signal.

**PLATE:** Bright and present reverb based on both a mechanical plate design and the early electronic plate reverb algorithms. Tweak adjusts the high-frequency damping of the reverb signal.
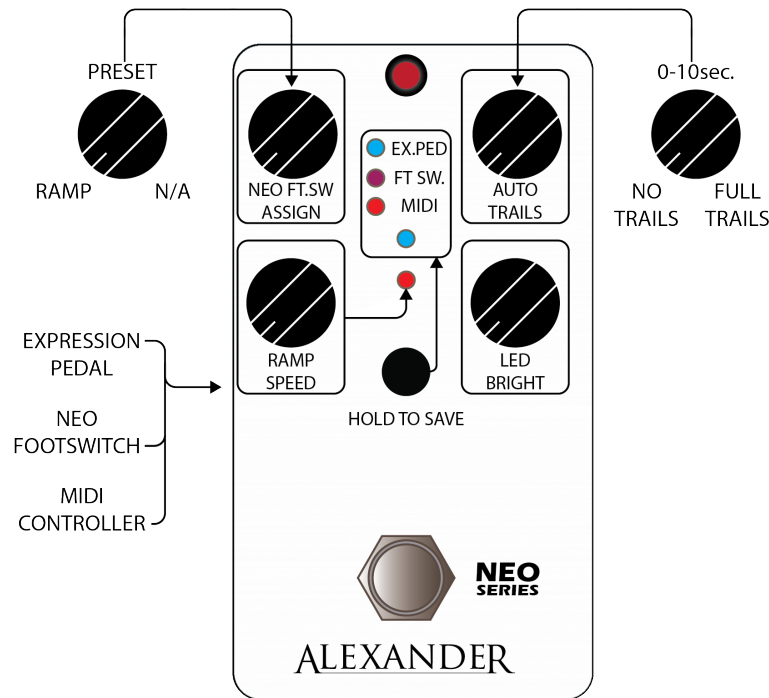
**SPRING:** You know what this one is. Drippy and wet, this spring reverb simulation is great for both subtle and not-so-subtle effects. Reverb adjusts the size of the reverb tank, Space controls the "dwell" or input signal level, and Tweak controls the tone of the reverb signal.

**ANALOG:** Electronic reverb based on an obscure bucket-brigade echo circuit. This mode lacks all of the smoothing and diffusion of more modern reverb types, so you can hear each individual echo in the reverb tail. Reverb controls the delay time, Space controls the repeats of the echo, and Tweak adds an adjustable modulation effect.

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## 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.

PRESET                      0-10sec.

RAMP    N/A

● EX.PED
● FT. SW.
● MIDI

NEO FT.SW. ASSIGN

AUTO TRAILS

NO TRAILS    FULL TRAILS

EXPRESSION PEDAL

NEO FOOTSWITCH

MIDI CONTROLLER

RAMP SPEED

LED BRIGHT

HOLD TO SAVE

NEO SERIES

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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 upper right knob to adjust the AutoTrails duration. Counter-clockwise = no trails, increasing to ~10 second trails.

Turn the lower left knob to adjust the Ramp Speed. The lower program LED will change to show the ramp speed.

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. Both the dry signal and the bypass signal are buffered and 100% analog. The pedal features our exclusive AutoTrails feature that allows the wet signal to continue after the pedal is bypassed, with a timer that smoothly turns the wet volume down over time to eliminate noise.

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.

## EXPRESSION AND RAMP MORPH

The Neo Series feature a comprehensive expression control setup. Connect an expression pedal to the Neo pedal MultiJack (red) and sweep its treadle until the heel is down. Turn the knobs to your desired setting. Now sweep the expression pedal until its toe is down, and turn the Neo pedal's knobs to a new setting. You should now be able to sweep the expression pedal and hear the change in the Neo pedal! Please note that the Neo pedal's physical knobs won't move when you sweep the expression pedal but the pedal settings will change internally. The main LED will fade in and out to indicate the expression pedal position.

If you set up the EXP port on the Neo pedal for use with a foot switch, you can use it in the same way as the expression pedal. Tap the foot switch to make the Neo pedal Ramp down, then tap again to Ramp up. You can adjust the knob positions at these two settings and the Neo pedal will ramp between them at the speed you selected in setup. Neat!

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 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 = n/a |
| CC 51 = Reverb | CC 55 = n/a |
| CC 52 = Space | CC 56 = Clock (v1.04a or higher) |
| 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.

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