Radical Delay DX

PILOT'S GUIDE
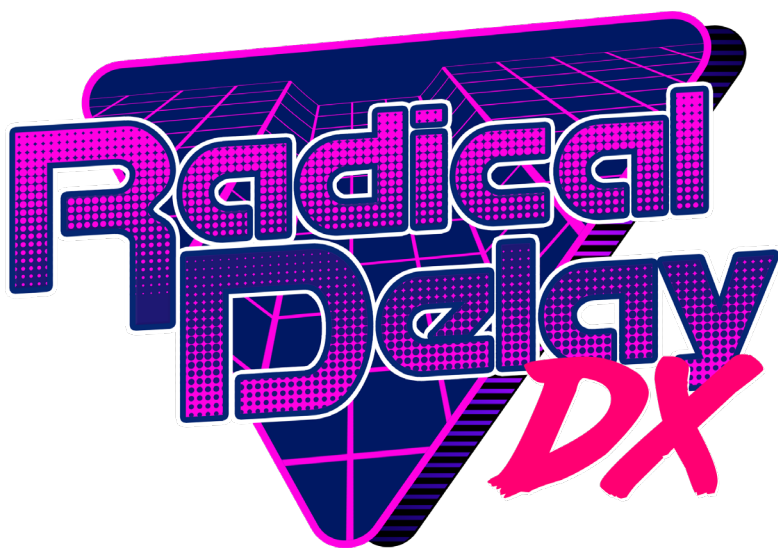
ALEXANDER

GREAT TONES. DOING GOOD.

This Pedal Needs No Introduction

Well, maybe it does.

We released the first Radical Delay way back in 2015 as an homage to the tones and aesthetic of the 1980s. We were shooting for video games, neon nights, and maybe a hint of ALF.

It's now 2019, and according to conventional wisdom we should be dealing with replicants in the streets and competing in futuristic running-based game shows.

Since that stuff hasn't quite happened yet, we thought it might be time to update the Radical Delay to our Neo Series platform and give it a bit of a makeover at the same time.

Inside you'll find the same great delay and special effects that made the earlier Radical Delay pedals so fun, plus a few new twists. Outside, we've added some teal and chrome, and intensified the laser grid for your enjoyment.

We hope you love this pedal as much as we do. There's a lot to discover inside, so let's get going!

Getting Started

If you've used a guitar pedal before, please feel free to skip this part of the manual.

Connect a 9V power supply, center negative, 100mA minimum to the 9V input on the top of the pedal.

Connect your instrument to the jack on the right side of the pedal.

Connect your amp to the lower jack on the left side of the pedal.

Connect your expression pedal, Neo Footswitch, or MIDI Controller to the **MultiJack** on the upper left side of the pedal (OPTIONAL.)

Have fun!

Basic Operation

While the Radical Delay DX does have a lot of powerful and fun features, it's really just a guitar pedal. Plug it in and turn the knobs to discover cool sounds, that's pretty much all you need to know to get started.

We'll cover some of the basic (and not so basic) functions of the pedal throughout this section. Advanced functionality like the pedal configuration and the various MIDI settings are at the back of the manual.

Finally, if the Pilot's Guide doesn't answer your questions, visit our website:

alexanderpedals.com

Hit up the Support page for firmware updates, FAQ's, and a contact link.

Effect Modes

The Radical Delay DX has six Effect Modes, selected by tapping the small Select button in the center of the pedal.

Tap the Select button to move to the next Effect Mode.

The two small LEDs light to show the current mode.

> **MOD**: Modulated digital delay. The TWEAK knob controls modulation amount, and the ALT knob controls modulation speed. The modulation can get pretty crazy, so be warned.

> **BEND**: Delay with pitch shift. TWEAK selects the shift interval, ALT routes the shift either after the delay or in the feedback loop. Pitch shifts are quantized to musical intervals: -12, -7, -2, -1, detune, +1, +2, +3, +4, +5, +6, +7, +12 semitones.

> **DUAL**: Dual tap delay line. Time knob and tap tempo control the first delay output. TWEAK sets the delay time and ALT controls the feedback of the second delay tap.

> **REV**: YALED ESREVER. TWEAK warps the main delay from forward to reverse, with "tape stop" and glitch sounds in the middle. ALT fades between a second forward delay and the reverse effect.

> **ARP**: Arpeggiated delay. TWEAK sets the arpeggiator speed, ALT selects one of eight patterns.

> **DYNA**: Dynamic Delay. The delay time responds to your pick attack, allowing subtle bends or wild bird noises and video game pew pews. TWEAK controls the amount of bend and bend direction, ALT controls the attack sensitivity.

Please note that tapping the Select button doesn't change any of the pedal's knob settings, only the effect mode. If you'd like to have the knob settings change as well as the Effect Mode, then you'll need to save your settings as a Preset.

MultiJack

The upper left 1/4" jack on the Radical Delay DX is our astounding MultiJack. You can configure it to connect an expression pedal, our Neo Footswitch, or a MIDI controller.

It's set up to work with an expression pedal from the factory, but check out the **Configuring Your Pedal** section for details on how to use it with other peripherals.

Knob Functions

Each of the knobs on the Radical Delay DX has more than one function.

Turn the knob to adjust the main control, labeled in large text under the knob.

Hold the Select button and turn the knob to adjust the Alternate function, labeled in (parentheses) under the knob.

TIME: Adjusts the delay time. Available delay ranges from 0-1280ms in most modes at full audio quality, and over 5000ms at computer barf quality.

(ALT): Controls a different parameter in each delay mode.

REPEATS: Controls the delay feedback or repeats. The Radical Delay DX will self-oscillate or feed back forever if you want. Be careful with short delay times, the repeats get loud quickly!

(CLOCK): Here's the magic. This knob is tied directly to the clock oscillator for the delay engine. Turn it up for full bandwidth and highest processing speed, turn it down for longer delay times and lo-fi fun. There's a point where the internal clock circuit has a hard time working, and you'll hear this as white noise in the output signal. We put it there because it sounds cool, but if you'd prefer less noise just crank this knob up a little. The clock knob will also totally bork the Tap Tempo timing, so if you need accuracy keep this knob full up.

MIX: Controls the blend between the dry and delay signal. Equal mix is at approximately 3 o'clock, higher mix levels function as a "kill dry" with only wet signal.

(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 in each delay mode. See below for full details.

(RAMP RATE): Sets the speed at which the ramp generator morphs between settings.

Bypass and Option Footswitches

Both of the Radical Delay DX footswitches serve multiple functions, as you might expect.

BYPASS / (PRESET): Tap this footswitch to bypass or engage the effect.

HOLD this footswitch to advance to the next preset.

TAP / (OPTION): Tap this footswitch two or more times to set the tempo of the main delay effect. Please note that the tap tempo will be less accurate at lower Clock settings. If you need tight timing, crank that Clock full up!

HOLD this footswitch to activate the Option function.

If Option is configured for Tap Division, holding this footswitch will select the next tap division.

If Option is configured for Ramp, holding this footswitch will trigger the ramp generator and begin morphing to the other ramp setting.

BONUS: If Option is configured for Ramp, you may select the Tap Division by first holding Select and then holding this footswitch.

PRESETS

You know what we hate? Having to bend over at a gig to tweak pedals between songs. We also hate when we lose settings on a pedal because it got bumped on the way to a show!

So we did something about it. Every Neo Series pedal features a complete preset system that saves and recalls *every parameter* on the pedal with a single button press.

*   To load a preset, just hold down the Bypass / Preset footswitch. You'll see the main LED blink 1, 2, 3 or 4 times to show the current preset, and you'll hear the pedal move to the new settings.

*   To save a preset, just tweak the knobs the way you want, then hold down Select and Bypass / Preset. The pedal will save in the current preset slot, so be sure to advance to your desired location before saving.

You can also use the Neo Footswitch to load presets. Tap to move to the next preset, or hold to move to the previous one.

If you're using a MIDI controller, you can access up to 16 presets! The LED will still blink when a preset loads but it will show RED for presets 1-4, GREEN for 5-8, BLUE for 9-12, and WHITE for 13-16.

EXPRESSION AND RAMPING

The whole point of music is expression, right? So why not try an expression pedal with your Radical Delay DX? Or if you don't have room for it, you could use the Option footswitch or a Neo Footswitch to do some straight up Terminator 2 style "morphing" action!

The morphing effect controls all of the knobs on the pedal, including the Alternate knobs. The only things it *can't* control are the Tap Division, Effect Mode, and the Ramp Rate knob. Everything else is up for grabs, so go nuts!

Expression and Ramp functions work the same way - the only real difference is that Ramp moves automatically at a speed set by the Ramp Rate control, and Expression moves wherever you set the pedal.

*   To set the expression parameters, first set the expression pedal to the heel position. If you're using a Neo Footswitch or the Option footswitch, you can skip to the next step.
*   Move the Neo Pedal knobs to your desired settings.
*   Advance the expression pedal to the toe setting. If you're using a Neo Footswitch or the Option footswitch, tap or hold it to move to the other ramp position.
*   Move the Neo Pedal knobs again to your desired values.
*   Sweep the expression pedal back and forth to hear the cool new sounds!

You should notice the main LED on the Neo Pedal change colours to reflect the expression pedal position.

Once you are satisfied with the pedal settings, you can save everything to a preset for instant recall later.
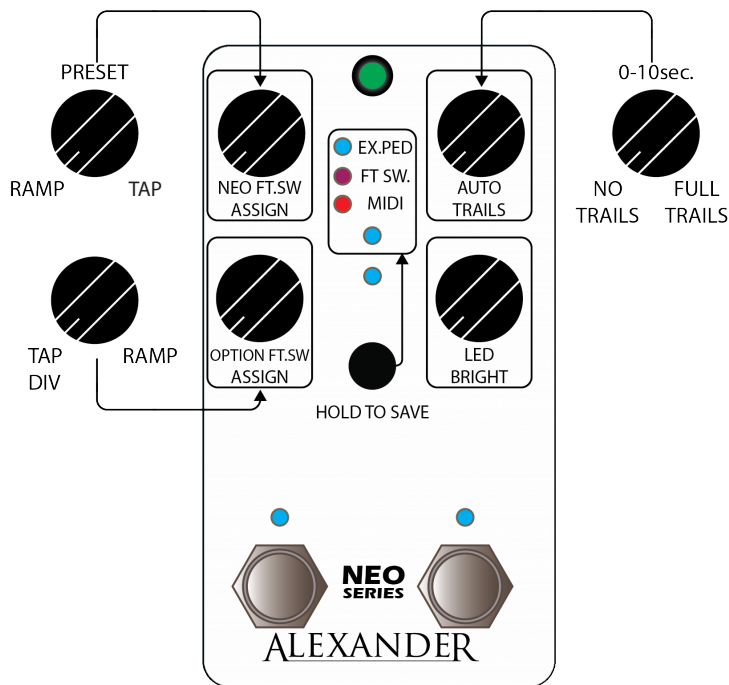
If you prefer to use MIDI commands to control your pedal, both Expression and Ramp are accessible using MIDI continuous controller (CC) messages. Please consult the MIDI Control section for more details.

Configuring Your Pedal

Your Radical Delay DX has a few parameters that you can configure to make it work exactly the way you like.

To access the configuration mode, just hold down the Select button while powering on the pedal. Release the button when you see the main LED turn violet.

When you're done making your changes, hold Select to save and exit.

PRESET

RAMP   TAP

NEO FT.SW ASSIGN

EX.PED
FT SW.
MIDI

AUTO TRAILS

0-10sec.

NO TRAILS   FULL TRAILS

TAP DIV   RAMP

OPTION FT.SW ASSIGN

HOLD TO SAVE

LED BRIGHT

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MultiJack: Tap the Select button to assign the MultiJack function. The upper small LED will light to indicate the function.

BLUE = Expression Pedal, VIOLET = Neo Footswitch, RED = MIDI.

Neo Footswitch Assign: If you have set the MultiJack to use the Neo Footswitch, this knob sets the function of the connected footswitch.

Counter-clockwise = Ramp, Mid = Preset, Clockwise = Tap Tempo.

AutoTrails: This knob controls the duration of the trails, ranging from zero seconds (no trails) to ten seconds (very long trails.)

Counter-clockwise = no trails, Clockwise = very long trails.

Option Footswitch Assign: Sets the function of the Option footswitch HOLD.

Counter-clockwise = Tap Division, Clockwise = Ramp

LED Brightness: Sets the brightness of the main, tap, and bypass LEDs.

Counter-clockwise = dim, Clockwise = bright.

HOLD THE SELECT BUTTON TO SAVE AND EXIT.

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.

To use USB MIDI, connect the USB mini-B port to your computer or mobile device. iOS devices will require the use of a Camera Connection Kit available from Apple to connect. Most Android devices will require a USB OTG or USB Host Adapter.

The following commands are accepted by the Neo pedal:

MIDI Program Change: Load Presets 0-15
        0-3 are the Red bank, also accessible by holding the Bypass / Preset footswitch
        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 = Ramp Rate
CC 51 = Time	CC 55 = ALT
CC 52 = Repeats	CC 56 = Clock
CC 53 = Mix	CC 57 = Level

MIDI Continuous Controller 59: Mode Select
        0:   MOD 3:   REV
        1:   BEND 4:   ARP
        2:   DUAL 5:   DYNA

MIDI Beat Clock
        The Radical Delay DX will sync to MIDI beat clock. Please be aware that the timing of the pedal will not be accurate if the clock rate knob is decreased from maximum. It's really awful, just trust us.

MIDI Channel Assignment:

- First, set up the MultiJack to accept MIDI communication as described on the previous page.
- Next, power the pedal off and back on, then enter Configuration mode again.
- 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.