-DARK SUN-
DIGITAL DELAY + REVERB
USER'S GUIDE

SeymourDuncan®

DARK SUN
DIGITAL DELAY + REVERB

Congratulations and thank you for making the Seymour Duncan Dark Sun Digital Delay + Reverb a part of your tone quest. Dark Sun combines a digital delay and hall reverb, extensive tone-shaping controls, Dynamic Expression, and deep signal routing options to create an echo machine unlike any other.

Make sure to visit **SeymourDuncan.com** for the most up to date info, firmware and sound samples.

HOW IT WORKS

1 **Delay Mode Selector:** 8-way switch to select between delay modes.

- **Quarter Note**
  Standard digital delay sound, tap sets delay time in quarter notes.

- **Dotted-Eighth**
  Standard digital delay sound, tap sets delay time in dotted eighth notes.

- **Eighth Note**
  Standard digital delay sound, tap sets delay time in eighth notes.

- **Triplet**
  Standard digital delay sound, tap sets delay time in triplets.

- **Pattern**
  Standard digital delay sound, repeats occur at quarter notes and dotted eighths.

- **Reverse**
  Reverse delay, tap sets delay time in quarter notes.

- **Ping Pong**
  Delay bounces back and forth between left and right channels, delay time is set in quarter notes.

- **Reverse Ping Pong**
  Reverse delay that bounces back and forth between left and right channels, delay time is set in quarter notes.

2 **Preset Display:** Indicates the currently loaded preset. Will show the current value of parameters when adjusting the controls.

3 **Bank Button:** Press to cycle up through the 32 preset banks, hold to scroll down.

4 **Preset Button:** Press to cycle through the 4 presets (A/B/C/D) in the currently selected bank.
SAVE FUNCTION Press both Bank and Preset buttons together to enter SAVE mode.
Display will blink. Use Bank and Preset buttons to choose a save location then press both
buttons together again to save the current UI state to the selected preset location.

5 **R. Size Knob:** Sets the time it takes for the reverb to decay. Turning the R. SIZE knob clockwise will give you larger room size and much longer reverb time.

6 **R. Mix Knob:** Determines balance of wet/dry signal for the reverb. Fully clockwise: 100% wet. Fully counter-clockwise: 100% dry.

7 **Routing Knob:** Selects one of four signal routing options for the two effects:

- **Delay > Verb**
  The effects occur in series, with the delay placed before the reverb.

- **Verb > Delay**
  The effects occur in series, with the reverb placed before the delay.

- **L:D—R:R (Left: Delay - Right: Reverb)**
  The effects occur in parallel, with the delay assigned to the left channel and the reverb assigned to right channel.

- **L:R—R:D (Left: Reverb - Right: Delay)**
  The effects occur in parallel, with the reverb assigned to the left channel and the delay assigned to right channel.

8 **Threshold Knob:** Knob to control the sensitivity of the Dynamic Expression feature. The LED will illuminate brighter when there is more of the effect blended in, and dim when there is less.

9 **TWEAK Select Buttons:** selects which parameter will be adjusted with the TWEAK knob.

- **LPF (Low Pass Filter)**
  The TWEAK knob will roll off high frequencies on the wet signal, creating a warmer effect.

- **HPF (High Pass Filter)**
  The TWEAK knob will roll off low frequencies, cleaning up the effect and allowing higher mix levels without overpowering your playing.

- **SAT (Saturation)**
  the TWEAK knob will control the level of gain applied to the wet signal, allowing for a pleasant lo-fi saturation to be added.

- **DEPTH**
  The TWEAK knob will control the depth of the modulation effect applied to the wet signal.

- **RATE**
  The TWEAK knob will control the rate of the modulation effect applied to the wet signal.

- **BLEND**
  The TWEAK knob will control how much modulation is applied to the delay and reverb; set at noon, modulation will be applied equally to both delay and reverb. Setting BLEND further counter-clockwise will result in more modulation being applied to delay and less to reverb. Setting BLEND further clockwise will result in more modulation being applied to reverb and less to delay.

10 **TWEAK Knob:** Controls the selected Tweak parameter.

11 **Time:** Sets the delay time, from 50mS to 5 seconds. You can toggle between milliseconds and BPM (beats per minute). Firmware up to v1.00.001: set delay time on Dark Sun by holding the Trails button while powering ON the pedal. If you wish to switch back, simply repeat the process. Firmware v1.01.034 and later: see Setting Options chart.

12 **Feedback:** Controls the amount of regeneration for the delay, from a single repeat at the lowest setting to infinite repeats at the highest.

13 **D. Mix:** Sets the mix level of the delay effect, Fully clockwise: 100% wet. Fully counter-clockwise: 100% dry.

14 **Trails Button:** When set to ON the effect will continue to decay naturally when bypassed. (No new repeats will be generated). In this mode Dark Sun uses a buffered bypass. When set to OFF, the effect will cut off as soon as the effect is bypassed. In this mode Dark Sun is true-bypass.

PARAMETER VALUES You can find out the current value for any knob using the Trails button. Press and hold down the Trails button, then turn the control you wish to read. The display will show the current setting of that control, without changing it. The rotary controls will show a value of 1-8 for Delay Mode and 1-4 for Routing.

15 **Bypass Footswitch:** Turns the effect on and off. LED will light when effect is engaged.

16 **Tap/Preset Footswitch:** Defaults to TAP mode, tap the footswitch to set the tempo of the delay. LED will blink in time with current tempo. To change to PRESET mode press and hold the footswitch until the LED becomes solid, then tap the footswitch to scroll through the four presets in the current bank. After 2 seconds with no input the mode will revert to TAP.

SAMPLE SETTINGS
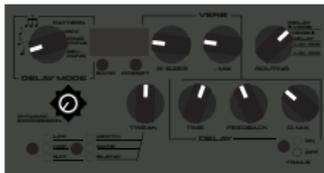
1A - GETTING STARTED

A simple quarter note delay line and basic reverb sound make this a good place to get to know Dark Sun.

LPF: 0 | HPF: 0 | Sat: 0 | Depth: 0 | Rate: 0 | Blend: D=R
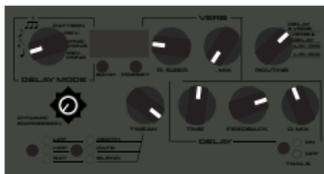
1B - EXTRA RECOLLECTION

This delay-only patch uses the Low Pass Filter, High Pass Filter, Saturation, and Modulation to emulate a beloved analog delay.

LPF: 94 | HPF: 26 | Sat: 40 | Depth: 28 | Rate: 28 | Blend: D99
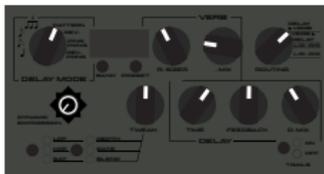
1C - PATTERNS

Repeats at the quarter note and dotted eighth combine with reverb, soft chorus, and a subtle roll-off of lows and highs to make this hypnotic, rhythmic patch.

LPF: 20 | HPF: 30 | Sat: 20 | Depth: 20 | Rate: 25 | Blend: D=R
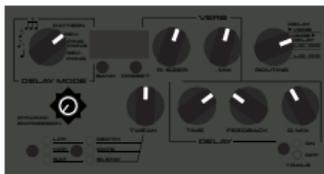
1D - REVERB SWELLS

Large reverb in front of a reverse delay creates a dreamy reverse verb, with rolled off highs, heavy saturation, and deep, slow modulation.

LPF: 50 | HPF: 20 | Sat: 60 | Depth: 40 | Rate: 8 | Blend: D=R

SAMPLE SETTINGS
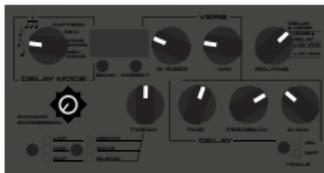
2A - BREVIFOLIA

Dotted Eighth Delay with heavy roll offs in highs and lows, high saturation, and deep, slow modulation. Dynamic Expression helps keep it under control.

LPF: 50 | HPF: 40 | Sat: 80 | Depth: 50 | Rate: 6 | Blend: D=R | Dyn. Exp: ON
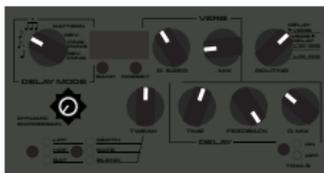
2B - INFINITE EIGHTS

Maxed feedback and eighth note delay with high saturation creates a textural wash of repeats, reigned in by low mix settings and Dynamic Expression.

LPF: 50 | HPF: 14 | Sat: 90 | Depth: 100 | Rate: 6 | Blend: D=R | Dyn. Exp: ON
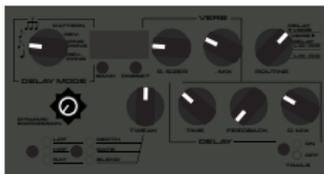
2C - SPRINGY

Short Reverb and Delay times combined with careful sculpting of the lows and highs creates this Spring Reverb simulation.

LPF: 50 | HPF: 25 | Sat: 50 | Depth: 0 | Rate: 0 | Blend: D=R

2D - VIBRATO TOO

Using an ultra-short delay time and fully wet mix allows you to apply the modulation section to your playing in real time, creating this pleasing vibrato tone.

LPF: 60 | HPF: 15 | Sat: 25 | Depth: 24 | Rate: 38 | Blend: D99

MIDI COMMAND CHART

CC#	Function	Value
0	Bank	0-31
3	Delay Time	0-127
9	Room Size/RT60	0-127
14	Delay Mix	0-127
15	Reverb Mix	0-127
17	Tweak Rate/LFO Freq	0-127
18	Tweak Depth	0-127
19	Delay Mode	0-7
20	Tweak Blend	0-127
22	Delay Feedback	0-127
23	Saturation	0-127
25	Dynamics Threshold	0-127
27	Routing	0-3
28	Tweak LPF	0-127
29	Tweak HPF	0-127
30	BPM MSD	0-127
31	Delay ms MSD	0-127
32	Preset	0-3
33	Patch Dec	~
34	Patch Inc	~
62	BPM LSD	0-127
63	Delay ms LSD	0-127
81	TAP footswitch	1-127
93	Remote Tap	any
97	Trailing Repeats	0-1
101	BPM/Tempo display mode	0-1
102	Bypass	0=Bypass, 1-127=Enable
103	DryKill	0=Off, 1=Bypass Mutes, 2=Bypass Dry

DARK SUN MIDI IMPLEMENTATION

Dark Sun presets are arranged in 32 banks of 4 presets each for a total of 128 presets. Access to these presets via MIDI is sequential, for example:

Program Change #	Bank	Preset
000		1A
001	1	1b
002		1C
003		1d

Program Change #	Bank	Preset
124		32A
125	32	32b
126		32C
127		32d

- BPM and mS delay messages are sent directly to the DDL, these values are not scaled or modified.
- BPM and mS values are represented as a 14 bit number with the MSByte and LSByte sent as separate messages.
- When a MSByte is received, the LSByte is set to 0 when a LSByte is received, it is added to the MSByte.

SETTING OPTIONS

These settings can be accessed by holding both TAP and ENGAGE while powering on the unit, or via the Seymour Duncan Update Tool. The Threshold knob will turn purple and the Bypass and Tap LED will flash. The unit will return to normal operation automatically in 5 seconds or by pressing the Bypass switch. Press BANK button to change feature, and press PRESET button to change value

#	Name	Values	Description
0	Tempo Display	0, 1	0: BPM Display
			1: Time Display
1	Dry Kill Mode	0, 1, 2	0: Dry Kill OFF (normal operation)
			1: Bypass Mutes: When the pedal is engaged, the dry signal is muted and the wet signal follows the mix knob. When the pedal is bypassed, both the dry and wet signals are muted.
			2: Bypass Dry: When the pedal is engaged, the dry signal is muted and the wet signal follows the mix knob, When the pedal is bypassed, the dry signal follows the mix knob and the wet signal is muted.
2	MIDI Channel	1 - 16, FF	1 - 16: Selects the MIDI channel the pedal listens to.
			FF: MIDI Omni mode: The pedal listens to all midi channels.

Your new Dark Sun Digital Delay + Reverb is fully featured out of the box (requires external 9V to 18V regulated DC adapter, center pin negative, 300mA current rating - not included), but you can access more utility and options by downloading the Librarian software.

As with all digital pedals with presets you can customize and save, we recommend you backup your presets regularly, so they can be recalled in the event you need to reset the unit back to it's factory default settings. This can be done using the BACKUP button in the Update Tool.

MANUAL RESET TO FACTORY DEFAULT SETTINGS
If you have experienced a power interruption, or an unsuccessful firmware update that is causing your pedal to perform incorrectly, it can be reset to the factory default settings by performing a manual reset.

1. If you haven't already downloaded and installed the Update Tool from the Seymour Duncan website, go to https://www.seymourduncan.com, select the appropriate pedal and go to the Software Updates link to download and install the Update Tool. This will be needed to complete the reset process.
2. Make sure the unit is unplugged (Power OFF).

3. Use a bent paper clip to access the micro switch located in the small hole above the MIDI IN jack.
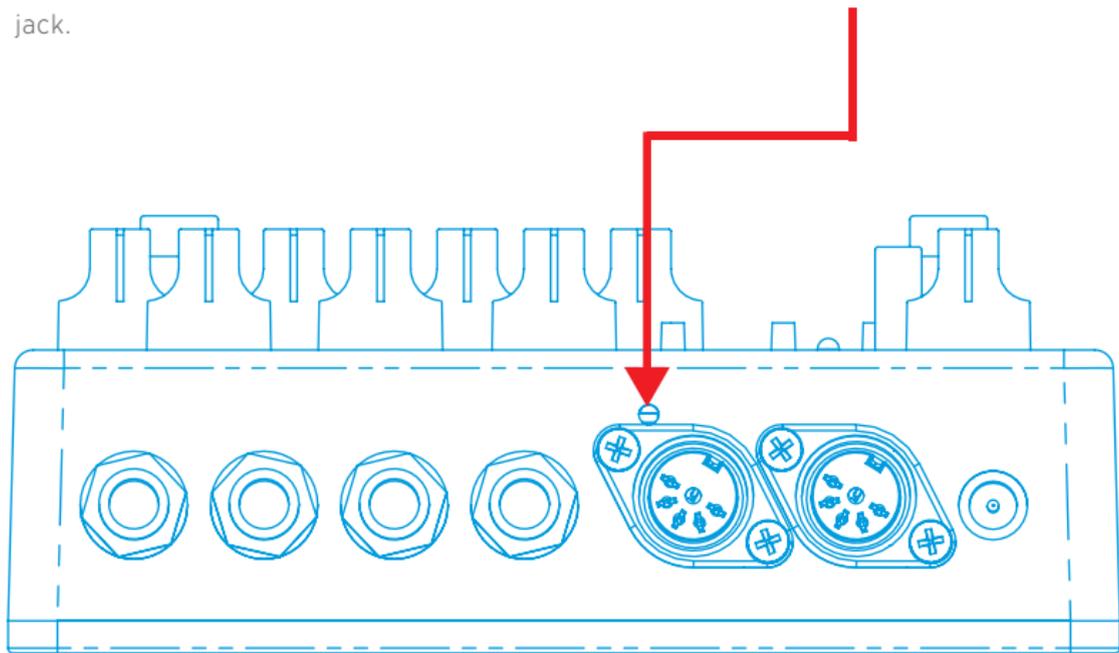
4. Press and hold the switch in while plugging in the power to the unit (Power ON). Release the switch.
5. Launch the Update Tool and connect the USB jack on the pedal to a USB port on your computer.
6. The Update Tool will go into << RECOVERY MODE >>.
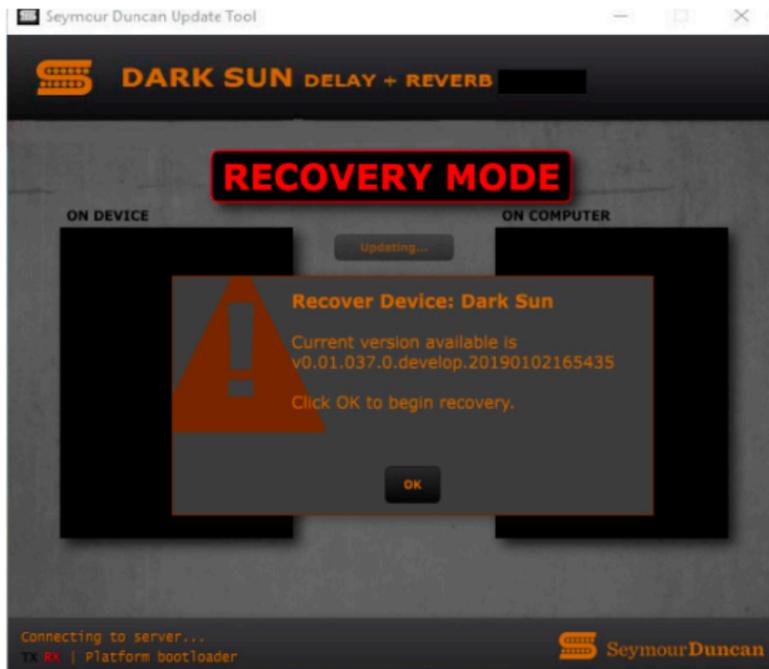
7. Follow the instructions on the Update Tool to reprogram your pedal.
8. After successfully reprogramming your pedal, you can restore any presets you have saved on your computer using the RESTORE button.
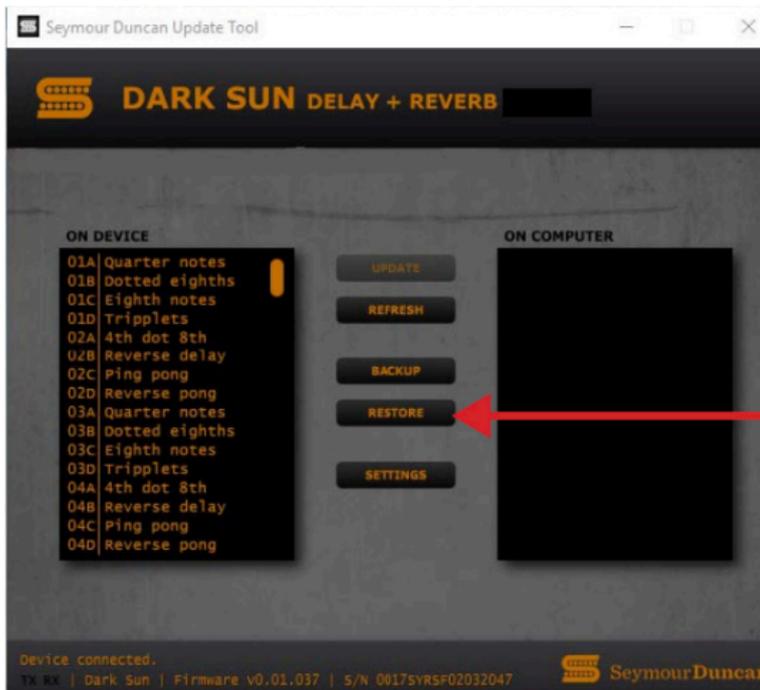
FIRMWARE UPDATE

1. Go to the Seymour Duncan website - https://www.seymourduncan.com/ and the device you want to update.
2. Select Software Updates link.
3. After completing the information on this page, select SUBMIT FOR DOWNLOAD at the bottom of the page.
4. Select the appropriate download platform (Windows or Mac).
5. Follow the installation instructions to install the Update Tool on your computer. The file will be saved to the desktop (Windows) or applications folder (Mac).
6. Launch the Update Tool. It will start scanning for devices.
7. Power on your pedal and connect the USB jack on the pedal to your computer USB port.
8. The Update Tool will locate your pedal and change its display accordingly, showing the currently installed firmware version and S/N of the pedal. The current firmware version will be displayed in the lower left corner of the Update Tool.
9. If the UPDATE button is lit, there is a newer version of the firmware available for your pedal. If it is not lit, your unit has the latest firmware installed already.
10. Press the UPDATE button and follow the instructions to install the new firmware.
11. The new firmware version will be displayed in the lower left corner of the update tool.

FCC COMPLIANCE

This Device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference including interference that may cause undesired operation.

DARK SUN
DIGITAL DELAY + REVERB

TECH SPECS:

Input Impedance: 1M Ohm
Output Impedance: 100 Ohms
Gain: Unity
Noise: <-105dBV
Frequency Response: 20 Hz to 20 KHz +/-0.5dB
Power: External 9V to 18V regulated DC adapter (center pin negative) with 300mA current rating
Current Consumption: 150mA
Dimensions: 5.60" x 5.13" x 2.15"
Weight: 1.35 lbs.

COMMITMENT TO QUALITY AND COMMUNITY

Seymour Duncan takes pride in designing and crafting our products to create the most amazing sound possible. Our Made in the USA label designates that the products are designed in Santa Barbara, California and manufactured in the USA with quality parts sourced in the United States and around the world.

With everything we create, our passion and obsession for amazing sound is reflected in its quality and reliability.

DISPOSAL GUIDELINES

In the unlikely event that you ever need to dispose of this product, it must be disposed of properly by handing it over to a designated collection point for the recycling of waste electronic equipment. Please contact your local household waste disposal service or the shop where you purchased this product for those locations. Thanks for helping us conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

LIMITED WARRANTY

Seymour Duncan offers the original purchaser a one-year limited warranty on both labor and materials, from the day this product is purchased. We will repair or replace this product, at our option, if it fails due to faulty workmanship or materials during this period. Defective products can be returned to your USA dealer, international distributor, or sent direct to our factory postage prepaid along with dated proof of purchase (e.g., original store receipt) and RMA number. Call or e-mail our factory for an RMA number, which **must be written on the outside of the box**. We reserve the right to refuse boxes without an RMA written on the outside. As you might expect, this warranty does not apply if you've modified the unit or treated it unkindly, and we can assume no liability for any incidental or consequential damages which may result from the use of this product. Any warranties implied in fact or by law are limited to the duration of this express limited warranty.

WHAT WE STAND FOR

We stand for great tone:
It s the heart. The soul. The essence. The core of the sound.

We stand for musicians. Because soul matters. Spirit matters. Music matters.

We stand for quality. We re an American original. An industry leader. And we re always innovating.

We stand by our work. Our passion. Our history. It s in everything we build. In everything we touch.

We stand for great tone. Music. Power. Heart. Soul. Tone. It s who we are. It s what we do.

We are Seymour Duncan.

HAND BUILT
SANTA BARBARA, CALIFORNIA

A COLLABORATION WITH
MARK HOLCOMB

DARK SUN

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