

# DARK STAR

OLD BLOOD NOISE ENDEAVORS  
instruction manual





The continued pull; the drift unabated; the controlled wash of gravity and the chaotic meander of its combined uncertainties. Dark Star is a reverb pedal. In fact, it is historically our most popular reverb pedal. People bonded with its warmth and aliasing, its long trails and the way it encouraged you to turn the mix fully up. Now, Dark Star expands on the promise of ambient reverb: it is a pitch shifting, bit crushing, filtered stereo reverb with just about every feature you could ask for. One massive voice with a wide suite of controls that likes to go anywhere in your signal chain; all that's left is for you to decide just how dark you must go.

## Controls

**Filter** adds either a low pass filter or high pass filter to the reverb signal. At noon, it gently filters highs similar to the original Dark Star response. Below noon, the low pass filter cutoff decreases until no signal is let through. Above noon, the high pass filter cutoff increases to cut lows and low mids.

**Pitch 1** adds a pitch shift to the Left channel. At noon, the pitch shift is bypassed for unity pitch. Near noon, it gives a slight detune up or down. Further away from center, it snaps in semitones down one octave or up one octave, with additional two octave settings at the extremes.

**Pitch 2** adds a pitch shift to the Right channel. At noon, the pitch shift is bypassed for unity pitch. Near noon, it gives a slight detune up or down. Further away from center, it snaps in semitones down one octave or up one octave, with additional two octave settings at the extremes. Note: in mono mode, if this pitch shift isn't bypassed by the knob being at noon, it is added in parallel to the Left signal's pitch shift, like the original Dark Star's Pitch mode.

**Crush** creates distortion in the reverb. At noon, signal is clean. Below noon, sample rate is turned down to add distortion and aliasing, like Crush mode in the original Dark Star. Above noon, the reverb is passed through a soft clipping overdrive with increasing gain as it's turned.

**Lag** sets the predelay time of the reverb, allowing the trail to start well after the note is played.

**Decay** sets the decay time of the reverb, from very short to nearly infinite.

**Multiply** adds feedback to the whole system, increasing the intensity of every effect and allowing for self-oscillation in some settings.

**Spread** sets the stereo spread/left-right blend of the reverb signals. All the way up, signals are as expected, with left reverb on left side and right reverb on right. In the center, both signals are sent to both outputs equally. All the way down, signals are fully reversed, with left reverb on the right out and vice versa.

**Volume** sets the overall volume.

**Mix** sets the wet/dry mix, from 100% dry to 100% wet, with roughly unity blend in the center. Dark Star is analog dry through, meaning the dry signal is never digitized and has zero latency.



## Footswitches

The **Aux** footswitch has three primary functions. It can be tapped to latch, or held for momentary action.

**Hold** creates nearly infinite sustain of the reverb trail when engaged, maxing out Decay beyond the knob setting and stopping any new input from getting in. When disengaged, Decay returns to the previous setting. Filter closes the low pass filter when engaged, and returns to the previous setting when disengaged.

**Pitch** sets both pitch shifts to +1 octave when engaged, and returns to the previous setting when disengaged.

To set the Aux function, hold the Aux footswitch and move the knob related to the setting (Decay, Filter, or Pitch 1). When the switch is let go, if a knob was moved, the setting will be saved. This setting is saved per-preset. The Aux footswitch can also be used to cycle through the on-board presets. To engage this mode, tap the Preset switch while holding Aux. To return to the previously assigned setting, tap Preset again while holding Aux.

The **Bypass** footswitch turns the pedal on and off. Tap to latch, hold for momentary action.

The **Expression** Jack can be used to externally control any combination of knobs on Dark Star, using a TRS expression device. To assign the Expression control, simply turn a knob or knobs while holding the Bypass footswitch. The knob position when you press the footswitch will be the expression heel position, and the knob position when you let go will be the expression toe position. If a knob wasn't moved, expression will not affect it. Expression settings are saved per-preset.

**Presets** are accessible via the Preset switch. Press the switch to cycle through stored presets. The LEDs will indicate whether you are on Preset 1 (top LED), Preset 2 (middle), Preset 3 (bottom), or live mode (no LED is lit). To save a preset, hold the Preset switch for five seconds until the preset LED starts blinking. Cycle through the presets using the switch to choose which slot to save your preset to. If you do not want to save, cycle to live mode (no LED lit). Once you've made your selection, hold the Preset switch for five seconds again until the LED stops blinking.

The Routing of Dark Star can be Mono, Stereo, or Mono-In-Stereo-Out. To choose routing, hold down the Bypass switch and press the Preset switch to cycle through options. The preset LEDs will blink indicating the current setting: Mono (top LED), Mono In Stereo Out (middle LED), or Stereo (bottom LED).

Additionally, Dark Star can be true bypass or have trails. To set this, hold down the Preset switch for five seconds while assigning stereo/mono routing. A faster blinking LED indicates trails are on, a slower blink indicates trails are off. The routing and trails settings will save globally.

To Factory Reset your Dark Star, hold Bypass and Aux for 10 seconds until all LEDs begin blinking. At this point, you can cancel the reset by pressing Bypass. To confirm the reset, press Aux. All LEDs will light, then count upward as all settings and presets are returned to default, then light once more, then return to normal operation. This will delete all user settings and set all presets to their factory state.

Dark S0tar requires 350mA 9V DC center negative power.





## MIDI Functions

The MIDI In and Out jacks are 3.5mm TRS Type A connections. MIDI In receives messages for Dark Star to process. MIDI Out sends those messages back out, acting like a MIDI Thru.

By default, Dark Star is on Channel 1. The Channel can be changed via CC (see below).

To save and load presets, use MIDI PC messages. To load a preset, send the PC value of the preset. To save a preset, hold the Preset switch for five seconds until the preset LED begins blinking, send the PC value where you want to save the preset, then hold the Preset switch for five seconds again to save to that location. Alternatively, use the preset save CC in the table below to initiate saving, then send the PC value where you want to save the preset, then use the preset save CC again.

All of Dark Star's controls and additional settings can be assigned via MIDI CC messages. See the below table for more.

FUNCTION	CC#	VALUES
Volume	7	0-127
Mix	14	0-127
Decay	15	0-127
Pitch 1	16	0-127
Pitch 2	17	0-127
Lag	18	0-127
Crush	19	0-127
Filter	20	0-127
Feedback	21	0-127
Spread	22	0-127
Expression	11	0-127
Bypass Switch	23	OFF: 0-63 ON: 64-127
Aux Switch	24	OFF: 0-63 ON: 64-127
Preset Saving Switch	25	Start Save: 0-63 Confirm Save: 64-127
Aux Setting	80	Filter: 0-42 Hold: 43-85 Pitch: 86-127
Trails Setting	81	OFF: 0-63 ON: 64-127
Stereo Setting	82	Mono: 0-42 Mono In Stereo Out: 43-85 Stereo: 86-127
MIDI Channel	102	1-16

