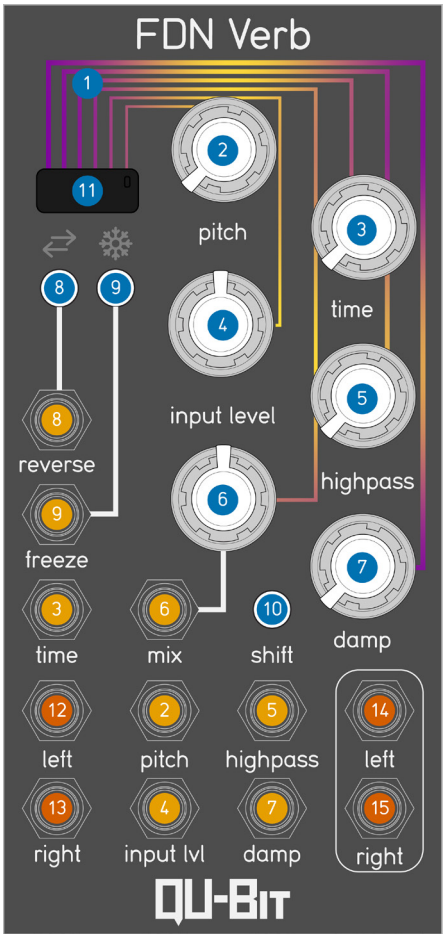
FDN Verb

Feedback Delay Network Reverb Algorithm

Front Panel / Initial Knob Position



Knobs/ Buttons/USB

CV/Gate Inputs

Audio IO

[Grab the FDN overlay here!]

What's An FDN Reverb?

FDN (Feedback Delay Network) Reverberation is a technique that, as many other digital reverb algorithms, uses delay lines to artificially add a sense of space to a sound.

What makes an FDN reverb unique is that each of the delay lines (in the case of "FDN Verb" there are 8), are processed through a feedback matrix. In other words, the outputs from one delay line get scaled, and sent back to the inputs of the other delay lines.

This, with a combination of internal filtering, and modulation common to other reverb algorithms quickly creates the dense reflective sounds that make up a good sounding reverb.

1 LED UI

- Indicates that Aurora is on the FDN firmware by flashing purple and gold LEDs.

2 Pitch

- Adds pitch modulation to the reverberated signal. No pitch modulation is present when the knob is fully CCW. Max modulation is present when knob is fully CW.
- Pitch CV input. Range: -5V to 5V

3 Time

- Changes the decay length of the FDN reverb. When the knob is fully CCW the reverb tail is extremely short, and brings a comb filter timbre to the signal. When the knob is fully CW, the decay is near infinite, causing feedback.
- Time CV input. Range: -5V to 5V

4 Input Level

- Adjusts the input level going into the reverb. When the knob is fully CCW, the signal is 25%. When the knob is fully CW, the signal is at 150% the dry level.
- Input Level CV input. Range: -5V to 5V

5 Highpass

- Highpass filters the reverberated signal. When the knob is fully CCW, no filtering is present. When the knob is fully CW, maximum filtering occurs.
- Highpass CV input. Range: -5V to 5V

6 Mix

- Morphs between the dry and wet signal.
- Mix CV input. Range: -5V to 5V

7 Damp

- Dampens the reverberated signal. When the knob is fully CCW, no dampening is present. When the knob is fully CW, maximum dampening is present.
- Damp CV input. Range: -5V to 5V

8 Reverse

- Plays the incoming audio backwards when activated.
- Reverse gate input. Threshold: 0.4V

9 Freeze

- Locks the inputted audio, and holds it until deactivated.
- Freeze gate input. Threshold: 0.4V

10 Shift

- Provides access to the secondary shift functions. Functions are accessed when holding shift down, and inaccessible when shift is released.

Shift+Reverse: DSP Order

- Toggles between two DSP orders.

Default DSP Order: Reverb is at the end of the effects chain.


Adjusted DSP Order: Reverse is at the end of the effects chain.

Shift+Freeze: Input Level Range

- Toggles between varying input level ranges.


Default Input Range: 25% to 150% of the dry input signal level.


Adjusted Input Range: 0% to 150% of the dry input signal level.

11 USB

- Used to flash FDN firmware onto Aurora. See the readme_howtoflash.pdf file in the FDN firmware folder for further instructions on how to flash Aurora.

12 Audio Input Left

- Audio input for the left channel. Normals to both channels when no cable is present in Audio Input Right.
  Range: 10Vpp (AC-Coupled)

13 Audio Input Right

- Audio input for the right channel.
  Range: 10Vpp (AC-Coupled)

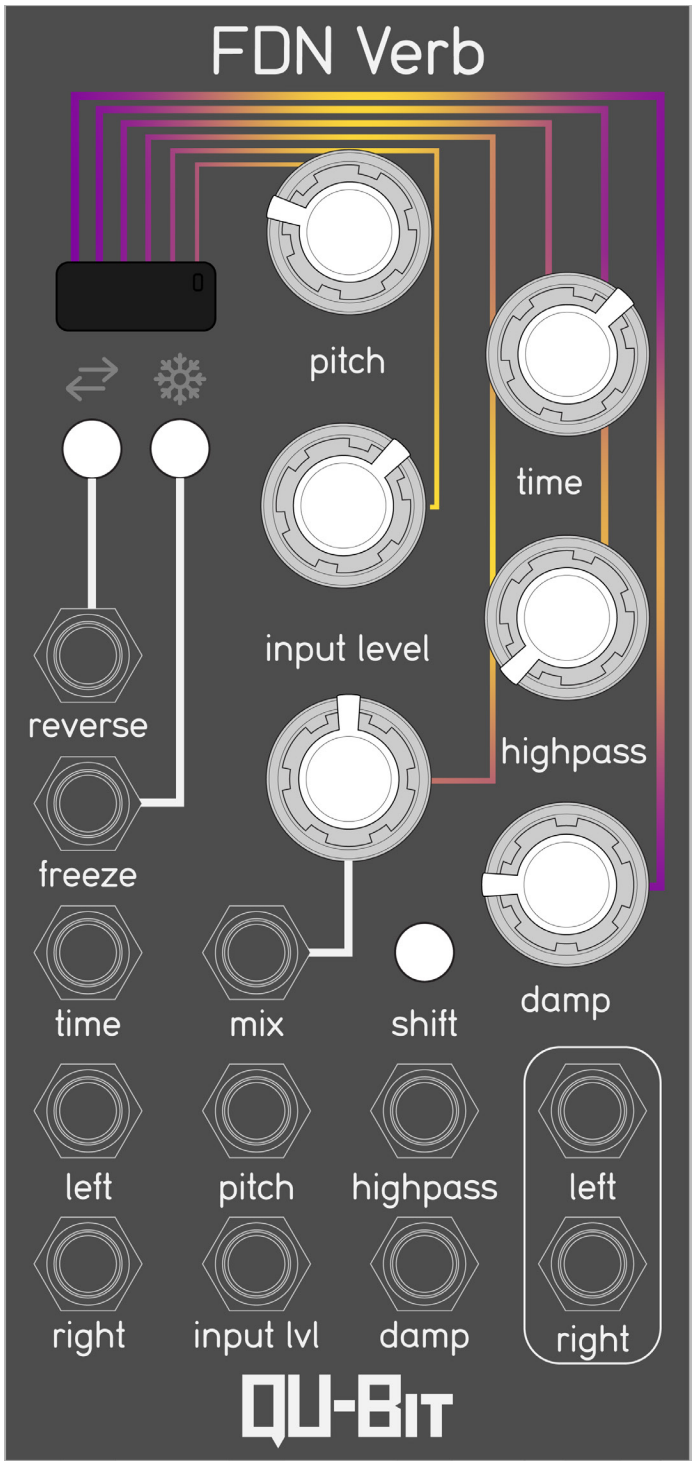
14 Audio Output Left

- Audio output for the left channel.
  Range: 10Vpp

15 Audio Output Left

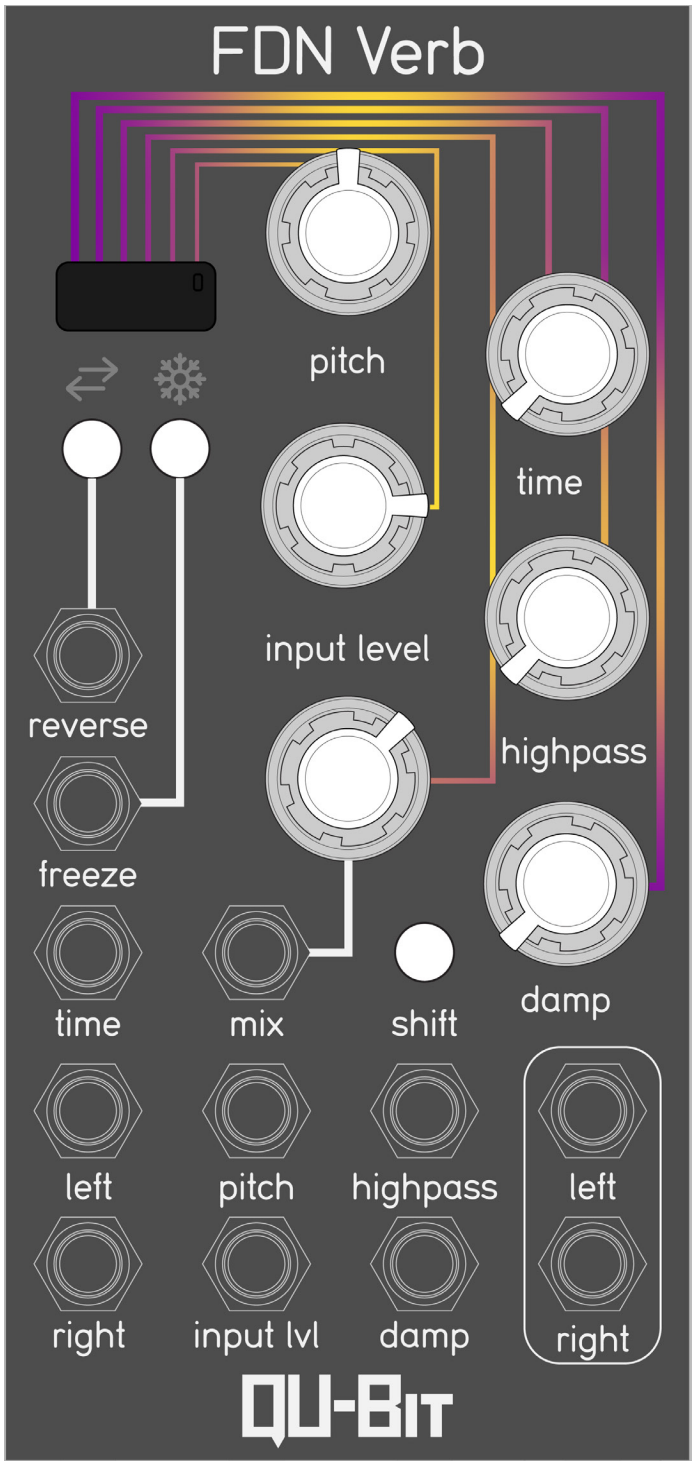
- Audio output for the right channel.
  Range: 10Vpp

Patch: Natural Hall



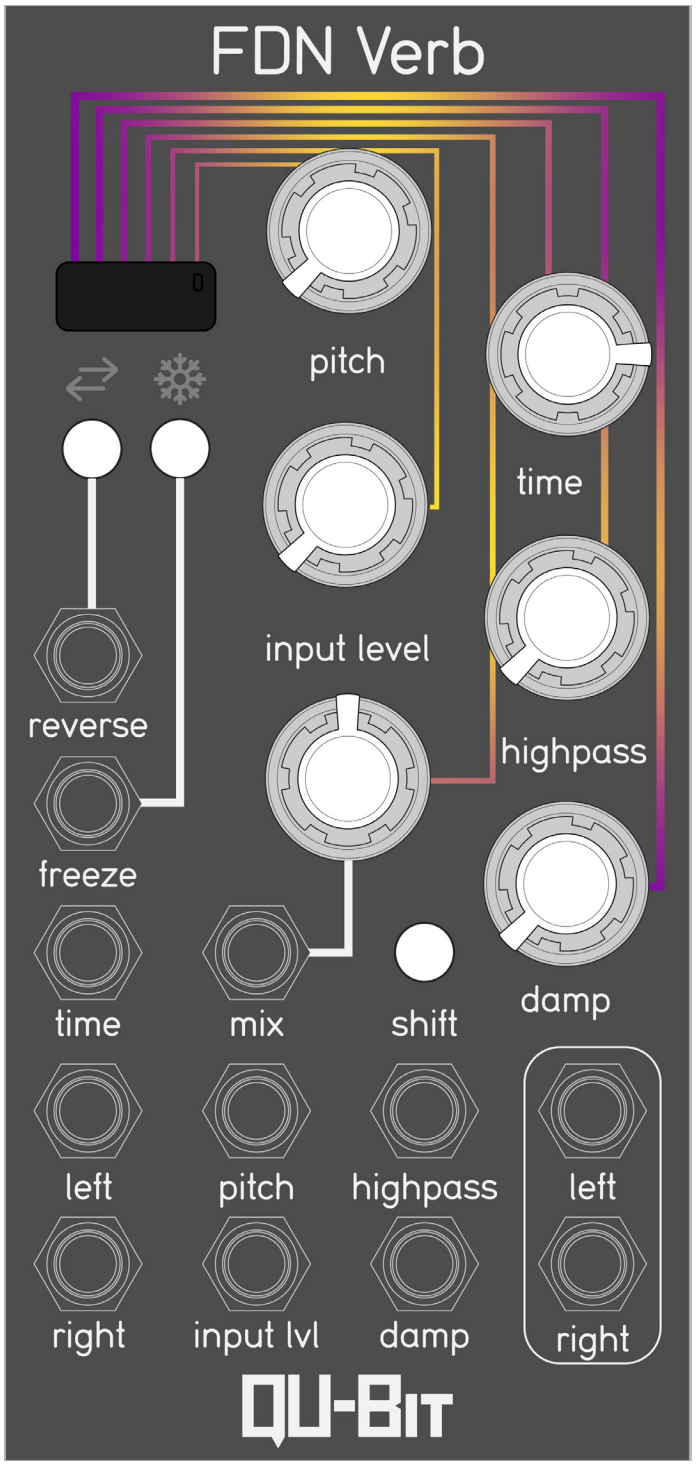
A standard, natural sounding hall reverb to pull together your next ambient jam! Dial in the input level, highpass, and dampening to taste to fit the reverb perfectly in your mix.

Patch: Supersaw



Patch in any sawtooth based sound source for immediate supersaw-ification. Bump up the input level to introduce a bit of soft clipping growl, and verb it out by ramping up time.

Patch: Selective Verb



Input Level Mode: ❄

Send a gate sequence to the Input Lvl CV input to selectively choose what inputted audio enters the reverb. This is handy for emphasizing specific notes within a composition with reverb, choosing which part of a vocal sample gets reverberated, and more!