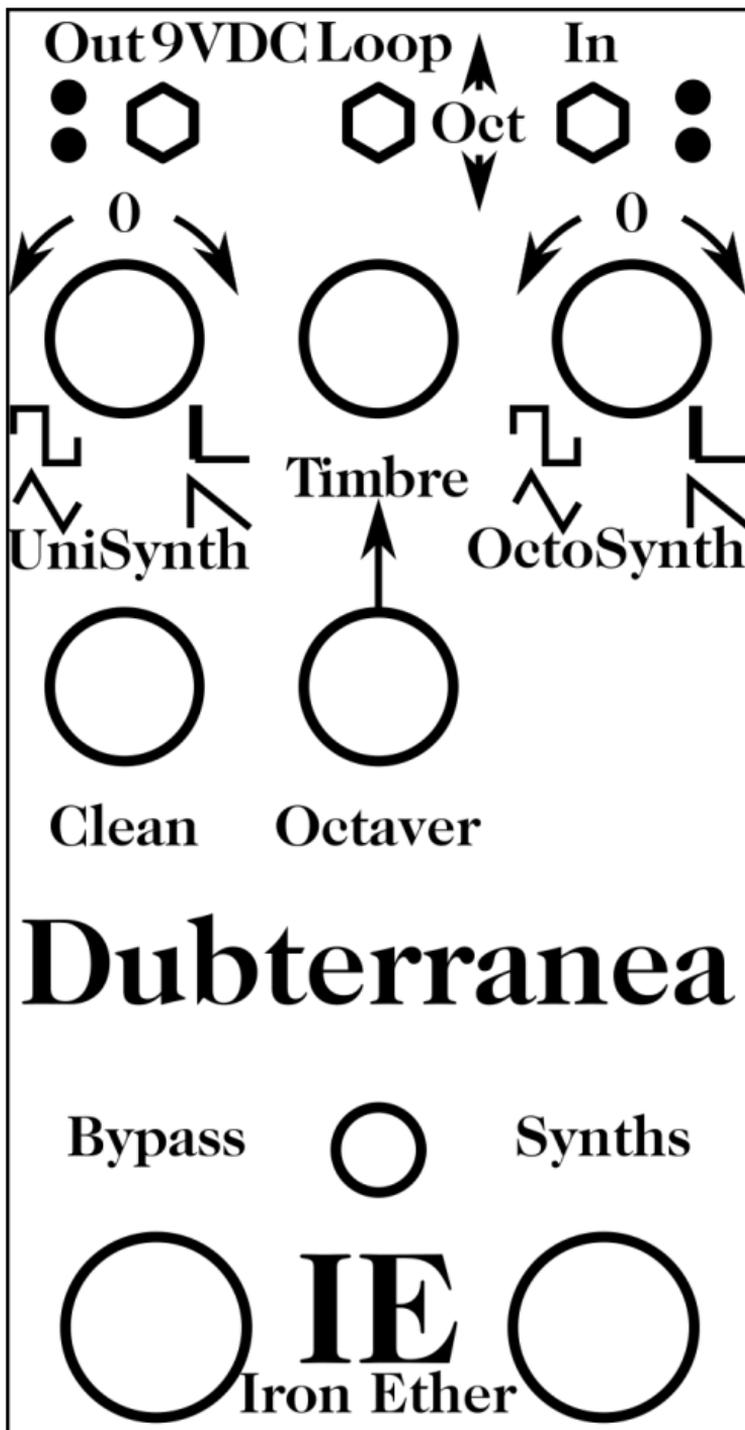


**IE**

**Iron Ether  
Dubterranea  
Owner's Manual**



Dubterranea is a pitch-tracking oscillator pedal, capable of generating harmonically-rich classic synthesizer waveforms in up to 3 octaves simultaneously. It was designed as a companion to the Xerograph Deluxe filter, and when the two are combined, they form a full monophonic subtractive synthesizer, controlled by your bass, guitar, voice, saxophone, etc. Although Dubterranea can be used on its own, it will only truly shine when combined with a filter, just like the classic synthesizers we love wouldn't be half of what they are without their filters.

### Pitch tracking

The Dubterranea extracts both pitch and volume information from the signal you send into it, and uses this to control the pitch and volume of a pair of oscillators. Because every instrument and every player has a different sound, due to differing levels of harmonics, different plucking styles, and the shifting levels of harmonics over time within a single note, you may need to adjust your playing style or signal

to get the best pitch tracking:

- Turn the tone or treble knob on your instrument down, and use the neck pickup rather than the bridge. Fret clank and high frequency noise will be tracked if they are loud enough, so you want to remove these noise sources to avoid glitching.
- Pluck the strings cleanly close to the neck, with fingers rather than a pick or slapping.
- Place the Dubterranea at or near the beginning of your effects chain, and avoid placing it after anything that adds harmonics, like distortion.

### Controls

***Octaver:*** Volume control for traditional octave-down voice. This voice is all about generating low end. Think of it as the bedrock of your sound, which you will stack additional harmonics on top of.

***Timbre:*** Controls the sound of the Octaver voice. Turning down removes harmonics,

becoming nearly a sine wave at fully counter-clockwise. Turning up allows more harmonics from your original signal through, and also exaggerates signal discontinuities inherent in the phase-flipping octave divider circuitry, for a more growly, harmonically-rich signal.

*Clean:* The volume of the clean signal.

*Oct switch:* Sets the OctoSynth voice to either play one octave below or one octave above the note you play.

*Synths foot switch:* Turns the UniSynth and OctoSynth voices on and off. LED will light purple when Synths are on, and blue when Synths are off.

*Synth waveform selector/volume:* For each voice, a switch selects either the angled waves (triangle and sawtooth, indicated in orange or gold) or the rectangular waves (square and narrow pulse, indicated in blue or white). The associated knob then chooses the waveform and sets the voice's volume by turning up or down from 0.

For example, to select a square wave, set the switch up (blue or white) and turn the knob to the left. To select a sawtooth wave, set the switch down (orange or gold) and turn the knob to the right.

### Waveforms

Triangle is the mellowest wave, with very few harmonics, often used for flute-like sounds.

Sawtooth is a buzzy, harsh wave containing both even and odd harmonics, often used in synthesizing bowed string sounds.

Square is sometimes described as sounding "hollow", containing only odd harmonics, and is often used to create woodwind and brass instrument sounds.

Narrow pulse has a thin tonal quality, rich with harmonics but without much fundamental.

## Loop jack

The Synth voices are sent out on the ring connection of this jack, and return on the tip connection. Use an insert cable here to add effects only to the Synth voices and switch off your entire synth chain with the Synths foot switch, or insert a volume or expression pedal to control the level of the synth voices dynamically.

## Power supply

The Dubterranea is powered by the industry-standard 9 volt DC center-negative power supply (2.1mm jack). It draws 85 mA of current. Use a power supply that can source at least this much.

## Warranty

Your Dubterranea is warranted for materials and manufacturing for one year from the date of purchase. The warranty is void if you use the wrong type of power supply, take the pedal apart, attempt to modify it, or use it in a way not intended.

## Bypass

The Dubterranea features a relay-based true bypass system. When the pedal is bypassed, the signal is connected directly from the input jack to the output jack via a mechanical switch, and does not pass through any buffers, electronic (FET) switching, or other circuitry that could have an effect on sound fidelity. It's different from the more common true bypass in that instead of a 3PDT stomp switch, this uses a mechanical relay designed specifically for low-voltage signals like audio. This makes for a quieter switch, greater reliability, and the bonus of automatically going into bypass if power to the pedal is lost.