



# CRYSTAL DAGGER

The CRYSTAL DAGGER; resonantly rising like a modern Fortress of Solitude from beneath the icy depths of normalcy, to reanimate sad, listless guitars all around the world.

The CRYSTAL DAGGER is a dual harmonic device comprised of independent circuits; a scorching octave-up fuzz and a unique conglomeration of ring modulation, unpredictable octaving, and phasing. The circuits are both true-bypass footswitchable and run in series, from input to (OCT)FUZZ circuit to (MOD)RING circuit to output. Did we mention that it's all analog?

Let's explore the circuits in order of signal flow. 

#### ^^^^ (OCT)FUZZ

### We love Octavias. We love them, because they're awesome. Go get yourself an Octavia, play it a lot, love it, and then come get a Crystal Dagger when you're ready to move past doing Jimi emulations. The Crystal Dagger is not an Octavia.

The portion of the (OCT)FUZZ circuit that produces the strongest here. octave-up effect uses an audio transformer to produce two isolated, opposite polarity facsimiles of the fuzz signal,. Those The FREQ control is both a rate control for the phaser-like signals are then fed into a germanium diode array setup to provide settings and then a carrier frequency control that can be used to full wave rectification. The rectification doubles the peaks of the tune the (MOD)RING to a particular pitch, the "carrier" signal in re-combined signal ( compared to the original), which produces our circuit. Through heterodyning, the carrier and the input signals a doubled frequency that is loaded with lively personality. This combine to create a new mathematically complex signal that can sound alien in comparison to the original input signal. By using common way of achieving upper octave fuzz does owe some lineage to the first Octavia units designed for and used to the BLEND control you'll be able to dial in your input signal with astounding effect by the likes of Jimi Hendrix and later by Stevie subtle shades of barely-there ring modulation (which produces an Ray Vaughan, but our homage to historical lineage ends at the octave effect of its own) to blown out mix of world dominationtransformer/diode rectifier block. bent Dalek vocalizations. BUT even at its most extreme, with some imaginative playing the (MOD)RING manages to stay tonal and musically relevant to other accompanying instruments, unlike other implementations of ring modulation that can quickly become atonal and fatiquing.

The (OCT)FUZZ has an octave bypass toggle that differs from most commercial pedals in the octave fuzz vein in that we carefully matched an octave-up circuit to our tailored and toiledover fuzz circuit, not the other way around. We didn't resort to the Combing the ring modulation or octave effects of the (MOD)RING common diode-lift to go from full wave to half wave rectification, side with the pronounced octave fuzz of the (OCT)FUZZ side is which leaves a player feeling like the fuzz sound without the guaranteed to corrupt children with its chilling display of personal octave effect was just an afterthought. The raging fuzz with the octave bypassed is a high gain, gated affair (read: quiet) that's excess and implications of imminent danger. Thankfully, the output bristling with crunchy character that you won't find in any other LEVEL control will reassure the masses that everything is going to octave fuzz circuit. When combined with the octave circuit the fuzz be alright after all. party becomes markedly more orgiastic and intense. We chose not to incorporate a fuzz gain control for this circuit, because it only served to tame what we felt should be revered as untamable. FREO FUZZ W Blackout hasn't ever been synonymous with minimalism and while CONTROL OCTAVE-UP outwardly it may seem that we chose that route here, playing through the CRYSTAL DAGGER will have your guitar screaming "maximalist!"

The CRYSTAL DAGGER's (OCT)FUZZ circuit incorporates a dual highpass/lowpass FILTER control, an output LEVEL control and an OCTAVE bypass switch to toggle between using the high gain fuzz alone or combined with the highly-detailed upper octave circuit.

#### **GETTING THE MOST FROM YOUR OCTAVES:**

An input signal with steady and simple (less spiky) harmonic overtone content achieves the best analog octave effect. This means that you'll find the most pronounced upper octave effect when either using your guitar's neck pickup, rolling off your guitar's tone control, playing notes above the 12th fret or preferably all of the above. When you absolutely must have the most octave effect possible it really does bring the octave even further to the front, as there will be less competing harmonic content to stab through.

It's not a necessity though and can be considered circumstantially dependent, as our octave is as willful and petulant as they come. With the octave engaged big chords will bring out the classic ring modulator crash/clang. To accentuate the robotic sound of a ring modulator on single note runs, add in the (MOD)RING circuit with a high FREQ setting. Head-turning diverging upper/lower octave "divebombs" are easy to do with double stop bends.

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#### (MOD)RING

LFO-swept filter modulation in parallel with the input signal produces tones ranging from subtle pitch shimmers to fast & deep phaser throbs to robotic ring modulation with ghostly harmonic overtones. The (MOD)RING circuit is tuned for these ultra-fast warbles and far beyond, so you won't find any slow '70s sweeps



*9V DC, 100mA POWER SUPPLY JACK* for 2.1mm NEGATIVE CENTER BARREL PLUG

### POWERING YOUR PEDAL

The CRYSTAL DAGGER requires a 9V DC power supply, via a negative-center 2.1mm barrel-type plug. The current draw of the CRYSTAL DAGGER is minimal at around 100mA.

FOR BEST OPERATION use a well-regulated power supply specifically made for powering musical instrument gear and if possible use one with isolated taps. THERE IS A DIFFERENCE.

The CRYSTAL DAGGER does not consume batteries. They are an antiquated, landfill-bound plague on our environment. Several modern power supply options are now available with voltage "sag" features that can emulate the effect of a semiused battery.

Unlike many of the more classic octave fuzz interpretations, the CRYSTAL DAGGER is a negative ground circuit, so it can be safely powered alongside most other modern pedals on a daisy-chained power supply.



Look for the "negative center" symbol to be displayed on your power supply.



### OTHER TECHNICAL SPECS

DIMENSIONS: 5.625" W × 4.625" T × 1.75" D TRUE BYPASS, NON-BUFFERED SWITCHING MONO INPUT & OUTPUT JACKS ON SIDES (1/4" mono), POWER SUPPLY JACK ON REAR NO BATTERY CONNECTION TERMINAL PROVIDED. CURRENT DRAW: APPROXIMATELY LODMA

# WARRANTY

We're happy to offer a 2-year warranty covering failures resulting from defective parts or faulty workmanship. The length of the warranty is tracked by the serial number's initial sale date and transfers automatically from owner to owner. There's no need for new or used owners to (re)register their pedal with us.

While under warranty, we will repair your CRYSTAL DAGGER free of charge, excluding any shipping expenses. Repairs falling outside of the scope of the warranty are no problem either, but may incur a small bench fee. Give us a shout about the issue your unit is having and we'll discuss your options. Contacting us through the web site contact form is easy as pie.

Please contact us before shipping a pedal in for warranty repairs! Its often possible to track down the source of a problem without sending it in and why not exhaust that possibility first?

Once its been determined that your pedal definitely needs to be sent in we'll give you instructions on doing so. Always include a note with the pedal reminding us of the issue even though we just discussed it through email (a printout of our correspondence is a popular option), plus include your return shipping address and your paypal email address. That helps us get your pedal fixed, the work/return shipping charges invoiced (if applicable) and your pedal shipped back to you in the fastest amount of time possible.

The owner of the pedal is responsible for both shipping to and from Asheville, North Carolina, 28801, USA. We advise using a shipping service with tracking. After all, we can't repair a pedal that never makes it to us.

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