



**MANUAL**

# OVERVIEW

Ahoy ahoy, you've just accessed the lore of the Tribute, a pedal that literally every guitarist needs. Yes, even you, outlaw country fan, and you, person wearing indecipherable metal logo band shirt. You see, the Tribute is an all-analog circuit that combines an extremely expressive high-headroom drive engine with an obscenely powerful and flexible tone control. The back end of the Tribute pays—ahem—*homage* to one of our oldest designs, the VariOboost. This circuit gives you a supercharged one-band parametric EQ in lieu of a tone control for some serious studio-esque tone sculpting power. Playing rhythm? Dial in a low-mids grunt and boost that band for some fat chords. Playing leads? Flip that thing and inject some sparkle into your sound. Want to fake a cocked wah pedal to nail your cover of "Money for Nothing"? Want to simulate some Peter Green-esque out-of-phase pickups? Want your single-coils to sound like humbuckers? What about the other way around? Sure, why not? Want all of that and more? It's time to play Tribute.

# CONTROLS

**TONE:** After dialing in the Freq[uency], use this control to boost or cut the selected frequency by 12dB. This control is equipped with a center-detent potentiometer; just click it to noon and the frequency is flat; this means that nothing is boosted or cut regardless of Freq position. Clicking the Tone knob to noon effectively removes the VariOboost component.

**VOL:** You like it loud? Good thing! The Volume control gives you plenty of the good stuff.



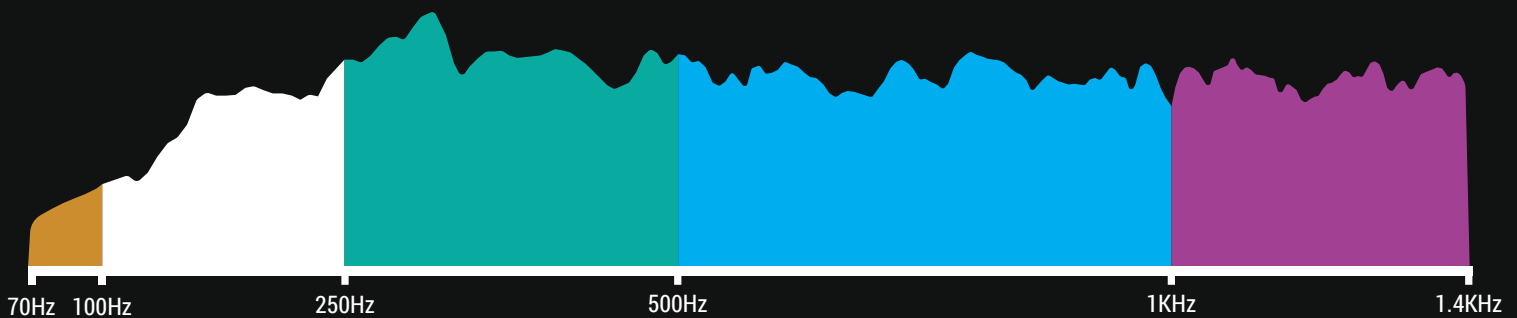
**FREQ:** This control is part of the original VariOboost circuit, and Freq and Tone work in tandem. Freq selects a frequency between 70Hz and 1.4KHz, which is then cut or boosted by the Tone control. See diagram on the next page if this makes no sense right now.

**DRIVE:** The Drive control utilizes a dual-gang potentiometer. This means that turning the Drive knob affects two parameters at once instead of just one. Here, those two controls are clean blend and overdrive gain. At minimum you get your pristinely buffered clean signal with a gentle treble filter. Turned all the way up, maximum gain is achieved with no clean signal present. Anywhere in between gives you a carefully balanced clean-drive combo that lets your tone breathe at all positions.



# NUTS & BOLTS

“Hertz”, abbreviated Hz, is the unit of measurement of frequency, which is how your ear perceives sound. One Hertz is equivalent to one cycle (or “event”) per second. Want to make a 1Hz oscillator (signal generator) right now? Bang your fist on the nearest surface once per second. Want to make a 2Hz oscillator? Do it twice as fast. You see where this is going. If you can somehow beat your fist on your table 100 times per second, you will generate a tone whose frequency is 100Hz. Guitar strings vibrate when you play them, and they vibrate a certain amount of times per second. For simplicity’s sake, your pickups “pick up” these frequencies, and then your amp amplifies them. A guitar tuned to standard generates 80Hz from an open low E, and up to whatever the fretboard allows on the high E. Whatever you add after that is between you and the amp. Most electrical music gear splits the frequency range into three makeshift “bands,” bass, middle and treble, each with their specified range of Hertz. For those of you unaccustomed to thinking about sound in this way, we’ve created a simple chart to explain how you might apply these numbers in players terms:



**70-100Hz:** Sub bass. Boost this section to bring out some tones that are more felt than heard. Cutting this band is guaranteed to incite far fewer arguments with your bass player. In standard tuning, your low E fundamental lives here at 82Hz. Downtuned guitars love this frequency; a low C# fundamental is close to 70Hz.

**100-250Hz:** Bottom end, also known as “grunt”. Increase this to add some low-end push, fatten up some thin pickups, give a little extra push to stubborn amps or bring some overall weight to your tone. Cut this to keep your guitar tight in the mix, or if you’re playing leads. Your A, D, G, and B fundamentals live here (110Hz, 147Hz, 196Hz, 247Hz, respectively).

**250-500Hz:** Low mids, also known as “warmth”. Bring this up to, as we say, “warm up” your tone. Some careful adjustments to this band will lead to some truly amazing rhythm tones. Cutting this band, sometimes called the “mud band,” provides a bit of harmony within a crowded mix. For reference, your high E fundamental lives here at 330Hz.

**500Hz-1KHz:** Mids, also known as “body.” Boosting this band lets you really stand out in even the densest mixes with multiple instruments. If you’re playing in a band that occupies one of the many subgenres of metal, this is likely where you’d “scoop the mids,” aka “lower the mids level relative to the surrounding frequencies.” Quite frankly, if you’re in a death metal band, the Tribute just became your new best friend. Faking a different pickup type usually involves some careful adjustment in this region; boost to turn single coils into humbuckers, cut for the opposite.

**1-1.4KHz:** High mids and treble, also known as “presence”. If you’re feeling saucy, boosting this band augments your solos because it amplifies the frequency band in which your pick attack lives. This is also where some harshness can live so adjust sparingly. Slightly cutting here can shave a little top end from your sound if you’re playing with other instruments that normally occupy this space. Deeper cuts can simulate out-of-phase pickups (in the middle position) for a somewhat hollow, but very unique tone.

# DESIGNER'S NOTES

I originally built the “rough draft” of this pedal for my dear friend Tom Keithly years ago. As good as it was, it wasn't perfect. When it came time to design the Tribute, I thought “we have so many pedals that sound like other amps, but what about *your* amp?” I got hold of the prototype and took it back to the drawing board, stripped it down to a component level and markedly improved every aspect of it in an organic and agonizingly pedantic way.

Firstly, I'd like to say that despite the dual-ganged Drive control, the Tribute is not based on one of those “K-style” overdrives. While that circuit is great, it just wasn't what I was after. However, I did borrow one thing from that circuit: the charge pump. +18V and -9V (27V rail-to-rail) is just about the maximum I could push the charge pump while allocating enough current to supply the rest of the circuit and not melting the ICs.

The front end of the Tribute is front-loaded with a very powerful transistorized buffer circuit, which is, might I say... overengineered... in a good way? It uses a lot of components for a seemingly inconsequential payout, which is an extremely transparent and warm rendition of your dry tone. This preps your circuit for the split into clean and drive pathways to maintain maximum signal integrity while avoiding a tone-sucking passive split. It also runs at +18V internally.

One of Catalinbread's earliest designs that I remember playing was the VariOboost; the shop I worked at had an original “horizontal” model and I always liked that circuit quite a bit. By itself it was great, but when paired with a dirt circuit the results were unquestionably stellar. Now that I find myself able to work with that IP, putting it into this circuit was a no-brainer.

In my prototype drive circuit, I used a two-band passive tone stack; and while that did the job well enough, I always wanted a more precision control with a ton of power. That's where the VariOboost comes in. Unlike the original, the second half of the Tribute runs on the same supercharged 27 R2R volts for a high-headroom version of our original circuit. This ensures that it will envelop anything you throw at it with ease.

This design pays tribute to my pedal from long ago, to the amazing VariOboost, to Tom, and to you, the player that deserves such a device. I now defer to you and your equipment.

# POWER SUPPLY

The Tribute ONLY accepts a 9V center-negative DC power supply capable of supplying at least 50mA of current (over is fine). Plugging in anything other than this (center-positive, AC, higher voltage) will damage the pedal, perhaps irreparably. And if that happens, you are guaranteed to have a bad time. Check your supply and make sure it says all the right stuff. Plugging in the wrong supply will void the warranty and possibly let the magic smoke out. Neither are desirable.

# MEASUREMENTS

**Input impedance: 1.6M**

**Output impedance: 8K**

**Current draw: 50mA**

**Dimensions: 4.33" x 2.36" x 1.96" (110mm x 60mm x 50mm)**

**Weight: 0.5lbs/227g**