



ELECTRONIC AUDIO EXPERIMENTS

Model feT

Technical Manual (Rev 1)

Introduction

Thank you for your purchase of the Electronic Audio Experiments **Model feT**! This manual is an in-depth guide for properly using and enjoying your pedal.

The Model feT is my humble homage to the venerable Sunn Model T amplifier. The pedal exists somewhere between an overdrive and a full preamplifier. Many excellent “amp in a box” and “foundation” overdrive pedals exist, but 99% of them emulate just the driven tones of preamp of the amp in question while ignoring clean tones, or the character of the power amp. The Model feT, on the other hand, covers all of these. It was initially developed using detailed simulations of the Model T schematic, as well as side-by-side comparisons with the actual amplifier. (The most satisfying test was when we ran a Model feT with the EQ set at noon and volume at unity into a Model T at the same settings, and heard no change in the on or off states!)

The Model fet works equally well dirty or clean. As you turn up the gain controls, you can go from pristine cleans to the exquisite “dirty clean” the Model T is known for, all the way up to heavy rock tones with deep bass extension. When set for lower gain, it works shapes the tone of other pedals stacked into it. At the end of a signal chain, it adds an entirely new dimension to existing fuzzes, distortions, boosts, and even modulation or time-based effects. When boosted the input stages overload gracefully, adding harmonic content in the same way a cranked amplifier would with a loud pedal in front. The EQ curve is slightly mid-scooped in just the right spot, lending an additional heft to the lows and clarity to the highs that enhances distortion and fuzz. The Model feT also has plenty of output level, so it can be connected directly into a power amp or into a recording console with speaker impulses. With the Model feT, all the power and nuance of a rare amp can be at your feet.

-John Snyder, EAE

Operation

Only use a standard reliable **9-volt center-negative DC power supply** with this pedal! (e.g. *OneSpot, Voodoo Labs, Pedaltrain, etc.*) Also, the Model feT does not operate on batteries. Current draw is approximately 20mA.

Dialing in the Model feT is straightforward. Set up your amp to its optimal clean tone or plug the Model feT into your fx return/power amp input. Set all EQ knobs flat, **Normal** control at 12:00, and **Brite** and **Master** at zero. Turn on the pedal, and slowly bring up the **Master** until you reach the desired output level.

Depending on the output of your guitar, you should have a light to medium overdrive tone. Adjust the gain of the **Normal** channel as desired and correct for volume changes if necessary. If you want more top end bite or additional drive, turn up the **Brite** control to blend in that channel. The **Brite** channel may of course be used on its own, though most users will find it thin-sounding without the normal channel. The configuration is identical to a four-input amp on the "Hi" input with the channels jumped.

The EQ is a standard FMV (Fender/Marshall/Vox) arrangement and should be familiar to most guitarists, despite its idiosyncrasies. **A couple notes on this EQ:**

- It is a highly interactive EQ, so control settings will have an impact on each other. For example, the **Mid Range** control and **Treble** control overlap.
- Due to its placement in the circuit, it is more effective at lower gain settings, just like how a cranked tube amp tends to overwhelm the EQ settings because of power amp saturation.
- It is naturally a bit scooped in the midrange- in fact, the flattest response comes from setting **Bass** at 0, **Treble** at 0, and **Mid Range** at 10.
- The Treble control actually starts to increase bass content if it is turned counterclockwise past 11:00 or so. Bass players and low-tuned guitarists may find this helpful.

Note: This pedal can get ***EXTREMELY*** loud so starting from zero is recommended for new users. At higher gain settings, unity volume can be below 9:00. We gave this pedal a lot of power at the output, so that clean tones may be dialed in without sacrificing volume. Extremely high volume and gain settings can feed back with some setups.

Stacking Pedals

The Model feT shines when working with other pedals. Place the Model feT *after* your other pedals (at least boost/overdrive/fuzz), set the Model feT for a clean or low gain tone, and then see what happens when other pedals are added. Here's some we've tried:

- Rangemaster style boost - works great with the Normal channel with medium gain, tightening it up for classic heavy metal tones
- Full range boost - can quickly overwhelm the input for a thicker, heavier sound

- Muff style fuzzes - go crazy, these work fabulously well. May need to use lower output settings if the Model feT is set for high gain
- Fuzz Face style fuzzes - these also have lots of output, so to stack evenly keep the fuzz level on the lower side
- Op amp distortions - the combination of even harmonics from the op amp drive and odd harmonics from the Model feT can be devastating. Some of the best Model T tones come from slamming it with a Proco Rat (or similar pedal)!

In conclusion...

The Model feT is far more than a soundalike overdrive for doom metal - it is a full preamplifier and a powerful tool for both live and studio tone shaping. Thanks again!

Changelog

Version 2 (November 2016, current)

- Enclosure scaled down to 1590BB from a 1790NS/1590XX size
- New PCB layout

- Internal presence control removed and fixed to optimal value

Version 1 (January 2016)

- Original release



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