EARTHSHINE

Earthshine is medium to very high gain, tube-ish, distortion pedal that relies on a MOSFET (BS170) to overdrive three JFETs (J201). The tone controls are designed to provide adjustment to the middle and upper frequencies. Voltage at the drains of Q2 through Q4 should be between 4.5 and 6, but make sure to tune by ear. I strongly recommend the use of mica capacitors for the pF values, as these sound more clear than ceramic. All capacitors are in uF unless otherwise noted. Consider excluding D1 if a battery is your primary power source (You may notice that it sounds better this way). You might need shielded wiring at the inputs and outputs.

Modifications: Increase R20 for more switchable bass. Or, reduce C11 for less bass. A deeper midrange notch results from increasing R15. A lower value sounds thicker, while the higher value sounds more relaxed.

A notch switch modification based on this resistor has been incorporated into the PCB layout. For starters, make R16 18K, with a 3.9K resistor to increase notch.

PCB Instructions: Print without "fit to page" option. To ignore the Notch mod, just populate the board with no alterations. To use the Notch switch, cut the trace connecting "Notch a" pad to" Notch b" pad, and mount the notch resistor on the switch as shown in the diagram below. Use snapable sockets for the transistors in case you install a bad one. Also, use sockets for C2, C8, C11 and R16.

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