

X-FET

The X-FET is a very low to pretty high gain, tube-ish, distortion pedal that relies on a MOSFET (BS170) to overdrive two JFETs (J201). Voltage at the Q2 and Q3 drains is adjusted with the trimpots, and should be about 4.2 and 4.7, respectively, but make sure to tune by ear. All capacitors are in uF unless otherwise noted. I recommend the use of mica capacitors for the pF values, as these sound clearer than ceramic. Although D1 offers polarity protection, consider removing it if your primary power source is a battery. It just sounds better this way.

Modifications: For a fatter, higher gain tone, try these X-FAT mods: R1= 5.6M; No C3; C10 = 150pF; C7 = .05; C8 = 10; C13 = .001; C14 = .0047; Add C15 (22uF) to Q3 source to Gr.

PCB Instructions: Print this document without "fit to page" option. There are pads to switch in an additional capacitor in parallel with C5. There are also pads for the X-FAT mods, as well as for possible mods proposed by Ed Guidry.

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Special thanks to Ed Guidry for experimentation and feedback that led to the improvement of this circuit!

