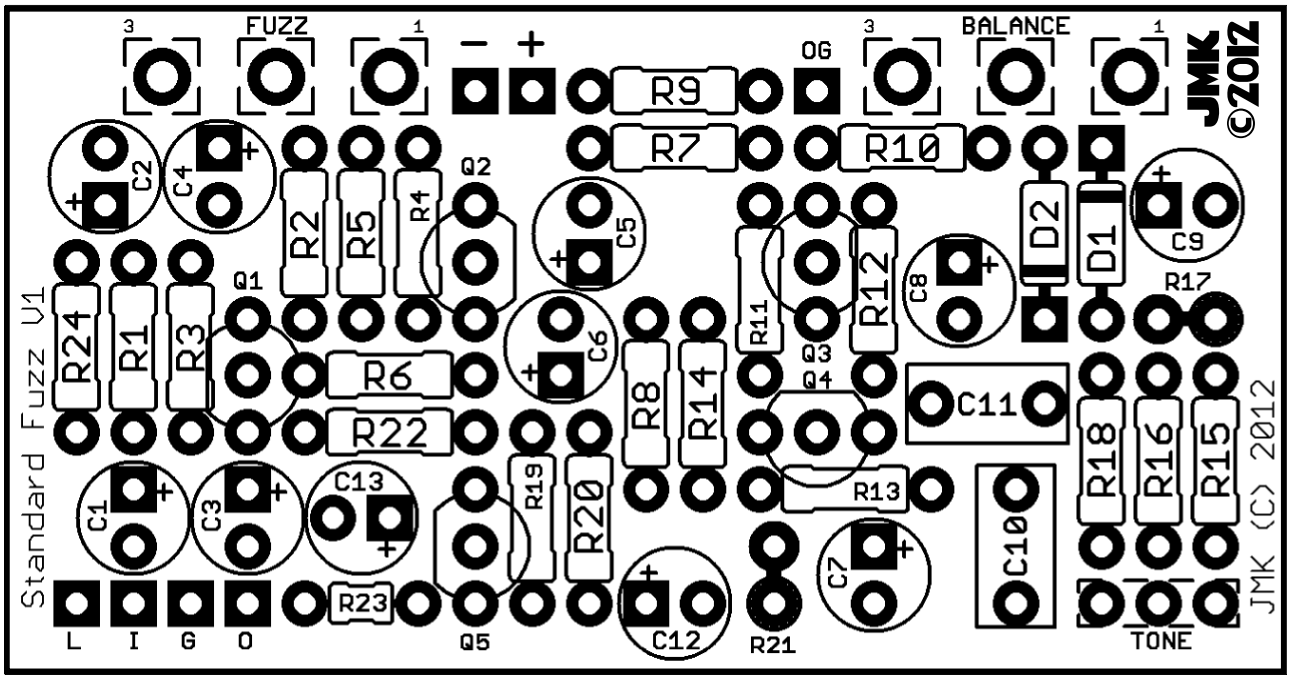
JMK PCBS PRESENTS...

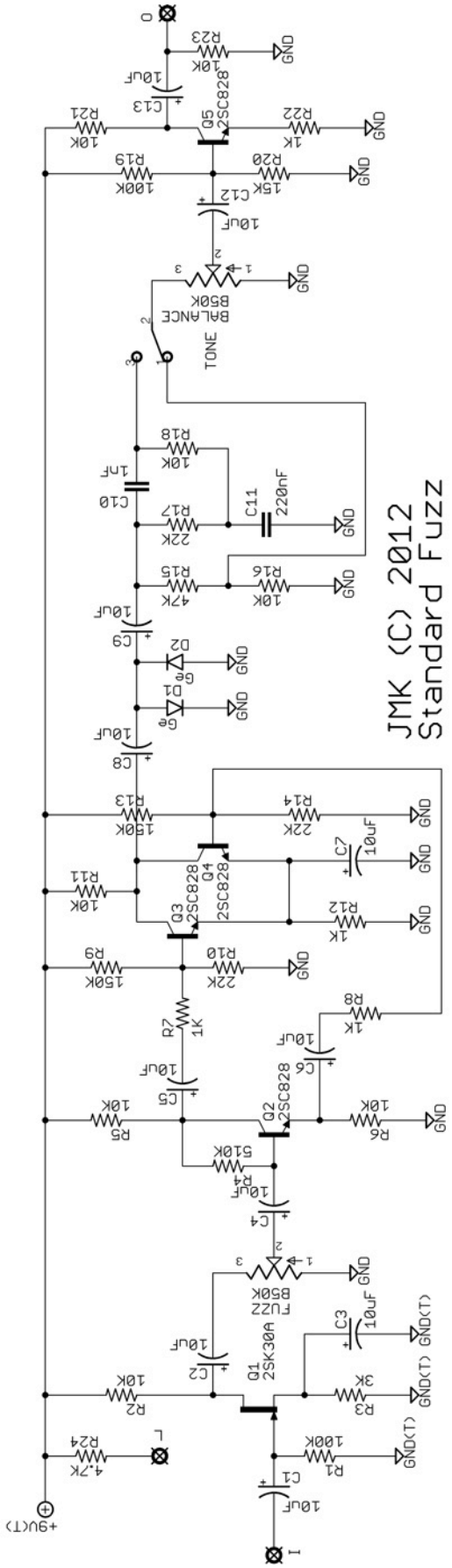
# STANDARD FUZZ

PCB AND SCHEMATIC ARTWORK (C) 2012 JMK PEDALS

VERSION 1.1: 10/30/2012




| Resistors | | | | Capacitors | | | | Transistors | |
|---|---|---|---|---|---|---|---|---|---|
| R1 | 100K | R13 | 150K | C1 | 10uF* | C8 | 10uF* | Q1 | 2SK30A |
| R2 | 10K | R14 | 22K | C2 | 10uF* | C9 | 10uF* | Q2-Q5 | 2SC828 |
| R3 | 3K | R15 | 47K | C3 | 10uF* | C10 | 1nF | **Potentiometers** | |
| R4 | 510K | R16 | 10K | C4 | 10uF* | C11 | 220nF | FUZZ | B50K |
| R5 | 10K | R17 | 22K | C5 | 10uF* | C12 | 10uF* | BALANCE | B50K |
| R6 | 10K | R18 | 10K | C6 | 10uF* | C13 | 10uF* | **Diodes** | |
| R7 | 1K | R19 | 100K | C7 | 10uF* | | | D1, D2 | Ge |
| R8 | 1K | R20 | 15K | | | | | **Switches** | |
| R9 | 150K | R21 | 10K | | | | | TONE | SPDT |
| R10 | 22K | R22 | 1K | | | | | | |
| R11 | 10K | R23 | 10K | | | | | | |
| R12 | 1K | R24 | 4.7K | | | | | | |

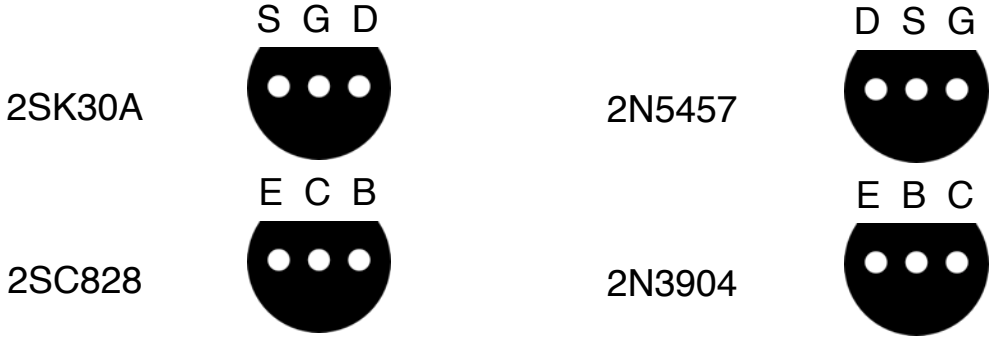


# Build Notes

- The Standard Fuzz is a clone of the (in?)famous Ibanez™ pedal of the same name.
- Hooking up the PCB is pretty simple, but to clarify: L = the connection for the + end of an LED (CLR is R24); I = PCB Input; G = Ground for the Switch; O = PCB Output; + = 9V input; - = Ground for DC Jack; OG = Extra Ground for 1/4" Output or Input Jack
- It should be noted that there are several odd parts in the BOM for this project. Below are some common substitutes for these parts. You can find precise parts if you would like, ebay is a good source for the transistors as an example.

| Part Number | Original Value | Common Substitute |
|---|---|---|
| Q1 | 2SK30A | 2N5457 |
| Q2-Q5 | 2SC828 | 2N3904 |
| D1, D2 | Unknown | 1N34a |

- Like with all Fuzz Pedals, the transistors matter for the right sound. In this case, the called for transistors are pretty much the same *sonically* to the common substitutes suggested below, however, the **pinouts are different**. This is why **we highly recommend socketing your transistors!** Socketing allows you to switch your transistors easily if you have installed them backwards, and also allows you to swap the pins if needed. See the diagrams below for the **typical** pinouts of these transistors.




- GAIN RANGES MATTER. It's been discovered that the HFE ranges of the 2SC828 are quite a bit lower than typical NPN transistors. For example, it was originally suggested that a 2N5088 would be good, but it's typical gain range is too high. The 3904 is better. Measure your transistors and aim for an **HFE of 150 or lower**.
- The tone switch is classically installed as a foot switch. However, you can also relegate this to a toggle switch, allowing you to easily fit this effect in a 125B (recommended) and potentially a smaller enclosure as well.
- If you find your pedal noisy, try using shielded wire on the output (and input) of the PCB. In particular, playing with the location of these wires in your enclosure may help.
- Centre to centre pot spacing is 1.3"
- The board measures 1.175" tall by 2.25" wide

# True Bypass Wiring Diagram