My First Fuzz

Low parts count fuzzy goodness

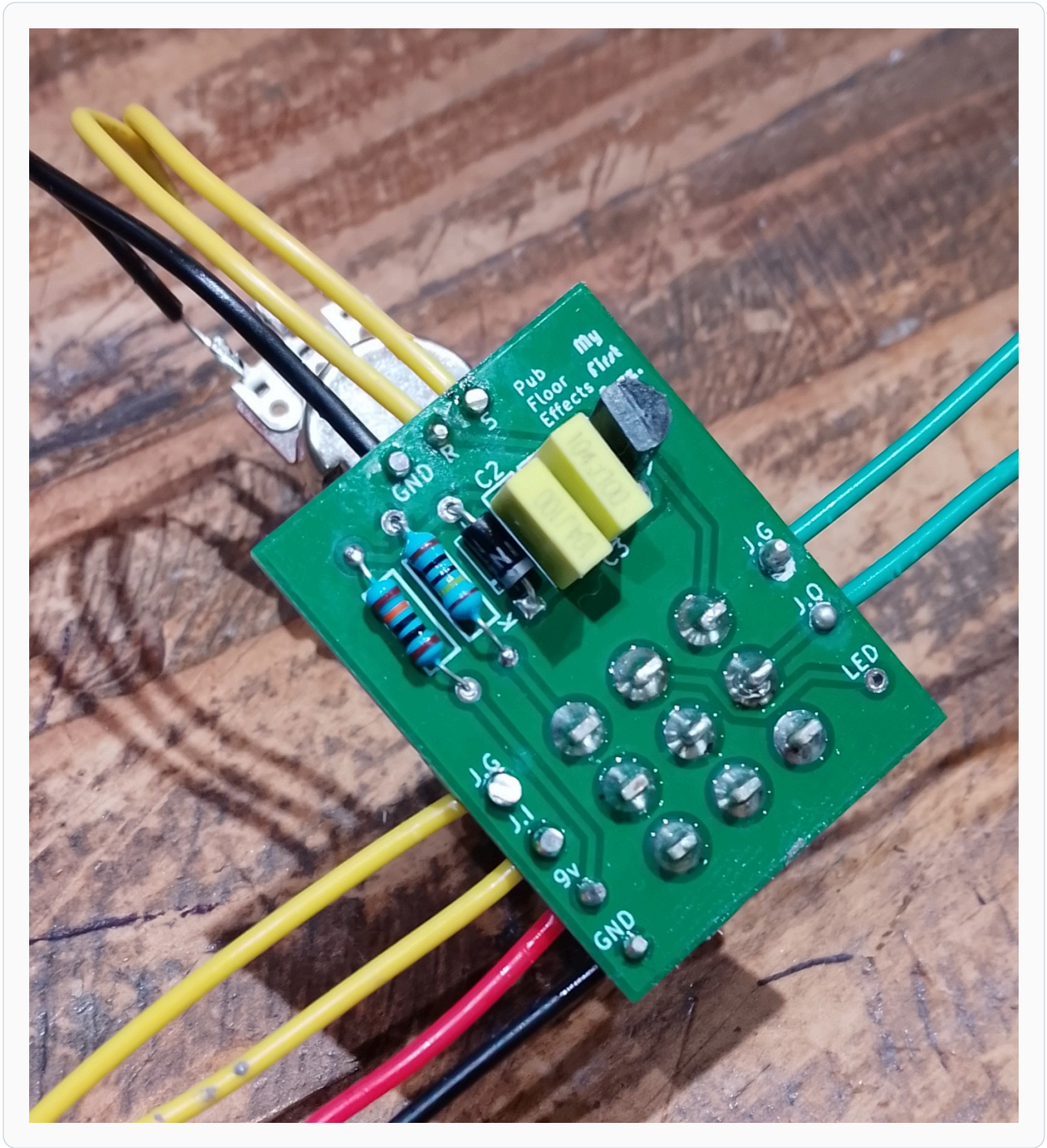


Figure 1: *Completed My First Fuzz Pedal Overview*

Overview

Bazz Fuss Fuzz DIY Kit – Big Fuzz, Small Footprint Build your own thick, ripping silicon fuzz pedal! This kit features a custom PCB with an integrated 3PDT switch for clean, frustration-free assembly. Loaded with a high-gain BC549C transistor, it delivers wall-of-sound distortion with maximum sustain.

- **Enclosure Size:** 1590B
- **Power Supply:** 9V DC Center-Negative (Standard 2.1mm barrel jack)

Tools & Workshop Accessories

Building guitar pedals cleanly and reliably requires a standard set of electronics workbench tools. Having the right accessories on hand prevents damaged PCB traces and cold solder joints.

Essential Soldering Gear

Tool / Equipment	Specification & Purpose
Soldering Station	Temperature-controlled iron (set to 350°C / 660°F) with a chisel or conical tip.
Solder Wire	63/37 Tin/Lead rosin-core solder (0.8mm diameter recommended for through-hole work).
Solder Sucker / Wick	Desoldering pump or braided copper wick for cleaning up solder bridges or mistakes.
Flux Pen	Rosin flux pen to improve solder flow on stubborn component pads and ground planes.

Hand Tools & Hardware Assembly

Tool / Equipment	Specification & Purpose
Flush Cutters	Precision diagonal cutters for trimming component leads close to the PCB solder joints.
Needle-Nose Pliers	For bending component leads, holding parts, and tightening pot/jack nuts.
Wire Strippers	For stripping 24 AWG hook-up wire for off-board wiring connections.
Digital Multimeter	Essential for checking resistor values, continuity, and measuring power supply voltages before testing.

Enclosure & Mechanical Work

Tool / Equipment	Specification & Purpose
Step Drill Bit	Titanium-coated step bit (or 3mm, 1/4″, 3/8″, 1/2″ twist bits) for drilling aluminum enclosures.
Center Punch	Spring-loaded punch to mark drill locations on enclosures so drill bits do not slip.

PCB Stencil & Mask Reference

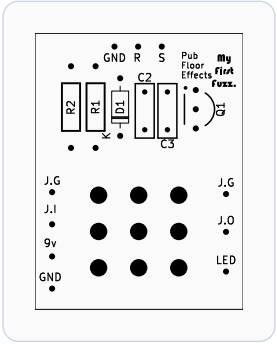


Figure 2: *PCB Stencil and Top Mask Reference View.*

Bill of Materials (BOM)

Resistors (1/4W Metal Film, 1% Tolerance Recommended)

Ref	Value	Note
R1,	1Meg	
R2	100k	

Capacitors

Ref	Value	Type	Voltage	Note
C2	100nF	Film / Box		
C3	100nF	Film / Box		

Semiconductors & Active Components

Ref	Value / Part	Package	Note
Q1	BC549c	TO-92	Silicon BJT (Check pin out compared to board pin out)
D1	1N5819		
D2	RED LED		

Potentiometers & Switches

Ref	Value	Taper	Mount Type
VOL	100kA	Logarithmic	16mm lug connection
SW1	3PDT	Latching	True Bypass Footswitch
Hook up Wire	22 AWG		
6.35mm mono jack	2		

2.1mm power jack	1		

Component Placement & Assembly Sequence

Assemble components in order of physical height to simplify soldering:

1. **Diodes & Resistors:** Lay flat to board. Double-check cathode bands for D1, D2, and D3.
2. **Transistor (Q1):**Match the pinout of the TO-92 package to the silkscreen outline. Seat it slightly off the board or bend leads carefully if needed, and double-check orientation before soldering.
3. **Box & Ceramic Capacitors:** Seat flush to PCB.
4. **Electrolytic Capacitors:** Ensure long leg (+) goes into the square pad (indicated by + on silkscreen).
5. **Off-Board Wiring Leads:** Pre-tin pads for IN, OUT, LED, 9V, and GND.
6. **Potentiometers (Lug-Type):**Mount panel-style pots directly to the enclosure, tighten the mounting nuts, and wire the solder lugs to the corresponding PCB pads using short lengths of hook-up wire.

Circuit Schematic

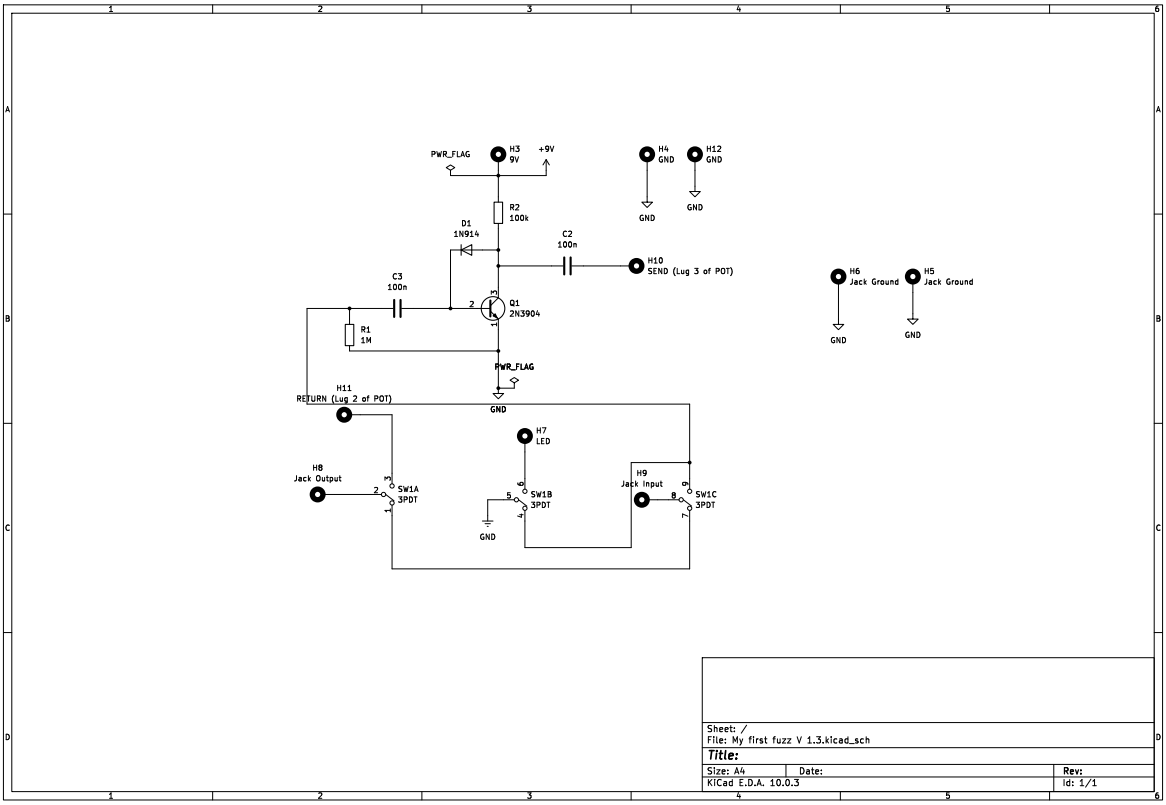
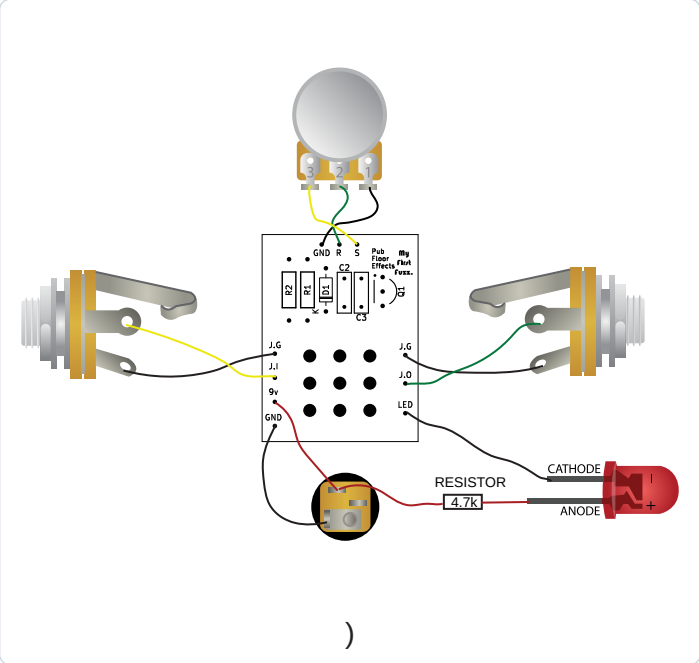


Figure 1: My First Fuzz Complete Circuit Diagram

PCB Assembly Layout



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Figure 4: Component Assembly and Placement Diagram