

# Fuzz Face

## Original Version (PNP) Components

<b>C1</b>	10uF Electrolytic	<b>R1</b>	470 OHM	<b>FUZZ</b>	1K Linear
<b>C3</b>	10nF	<b>R2</b>	33K	<b>VOLUME</b>	500K Log
<b>C4</b>	Empty	<b>R3</b>	100K		
<b>C5</b>	Empty	<b>R4</b>	Jumper	<b>Q1, Q2</b>	PNP Germanium Transistor
<b>C6</b>	22uF Electrolytic				
<b>C7</b>	2u2 Electrolytic	<b>Q1 BIAS</b>	Connect pins 2 and 3	<b>D1</b>	1N4148
<b>C8</b>	10uF Electrolytic	<b>Q2 BIAS</b>	20K Trimmer	<b>D2</b>	1N4001
<b>C9</b>	100uF Electrolytic			<b>IC1</b>	7660S

To use a PNP Fuzz Face with a normal 9V power supply, you need to include the power inverter section which is C1, C8, C9, D1 and IC1 which generates the -9V required. Unless you know what you're doing and have a positive ground PSU, you should use all these components, otherwise omit them and solder a jumper between J1 and J2. (**Do NOT** connect the jumper if using the power inverter or you will get a short circuit).

Adjust Q2 BIAS until you get the sound you like. You can use a multimeter to measure the voltage between the collector on Q2 and GND and it should be around 4.5V

## NPN Version Components

<b>C1</b>	Empty	<b>R1</b>	470 OHM	<b>FUZZ</b>	1K Linear
<b>C3</b>	10nF	<b>R2</b>	33K	<b>VOLUME</b>	500K Log
<b>C4</b>	47pF – 470pF	<b>R3</b>	100K		
<b>C5</b>	47pF – 470pF	<b>R4</b>	Jumper	<b>Q1, Q2</b>	BC108 (or experiment with NPN transistors)
<b>C6</b>	22uF Electrolytic				
<b>C7</b>	2u2 Electrolytic	<b>Q1 BIAS</b>	Connect pins 2 and 3	<b>D1</b>	Empty
<b>C8</b>	Empty	<b>Q2 BIAS</b>	20K Trimmer	<b>D2</b>	1N4001
<b>C9</b>	Empty	<b>J1 + J2</b>	Jumper	<b>IC1</b>	Empty

C4 and C5 cut out some high frequency noise, you can use different value ceramic capacitors here and higher ones will cut out more of the high end but might affect your tone. 100pF is considered a good value to start with. **Solder a jumper between J1 and J2**

Adjust Q2 BIAS until you get the sound you like. You can use a multimeter to measure the voltage between the collector on Q2 and GND and it should be around 4.5V

### **CHECK ELECTROLYTIC CAPACITORS!**

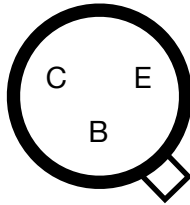
If you are building the NPN version, the **polarity of C6 and C7 need to be reversed** from what is printed on the board, so put the negative leg in the hole with a +

# Fuzz Face

## Transistor Pinouts

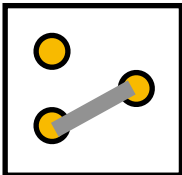
Looking at the top of the board, the pinout for the transistors is:

C: Collector  
B: Base  
E: Emitter



## Trimmers and Jumpers

Where a component is listed as jumper, solder a piece of wire between the pads to make a connection. Where Q1 BIAS is not used, you should put a jumper between pins 2 and 3 like the diagram below:



Where a trimmer is used, as for biasing Q2, the PCB is designed to fit this style of trimmer:



## Board Connections

The PCB connections are labelled as the following:

I - Input, O - Output, V - 9V DC in, G - Ground

Potentiometers are connected from pin 1 to the square pad on the PCB. This board was designed so you can use right-angle board mount potentiometers on it if desired, otherwise you will need to solder wires from the pads to the correct pin/lug. Jack sleeves and DC centre pin should be connected to ground. V, LED + should be connected to the positive pin of the DC connector.

