

# **B.Y.O.C Compressor Kit Instructions**

**Parts Checklist.....page 2**

**Populating the Circuit Board.....page 3 - 7**

**Assembly.....page 8**

**Wiring.....page 9 - 14**

**Finishing up.....page 15**

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## Parts Checklist for Compressor Kit

### Resistors:

- 1 - 4.7k (yellow/purple/red/gold)
- 6 - 10k (brown/black/orange/gold)
- 1 - 15k (brown/green/orange/gold)
- 2 - 27k (red/purple/orange/gold)
- 1 - 56k (green/blue/orange/gold)
- 2 - 150k (brown/green/yellow/gold)
- 2 - 220k (red/red/yellow/gold)
- 2 - 470k (yellow/purple/yellow/gold)
- 5 - 1M (brown/black/green/gold)
- 1 - 4.7m (yellow/purple/green/gold)

### Capacitors:

- 1 - 100pf ceramic disc(101)
- 1 - .001uf film (102k)
- 5 - 0.01uf film (103k)
- 1 - 0.05uf film (503k)
- 6 - 1uf aluminum electrolytic
- 2 - 10uf aluminum electrolytic

### Transistors:

- 5 - 2N5088

### Diodes:

- 3 - 1N914 (small orange with black stripe)

### Integrated circuits:

- 1 - CA3080e
- 1 - 8 pin socket

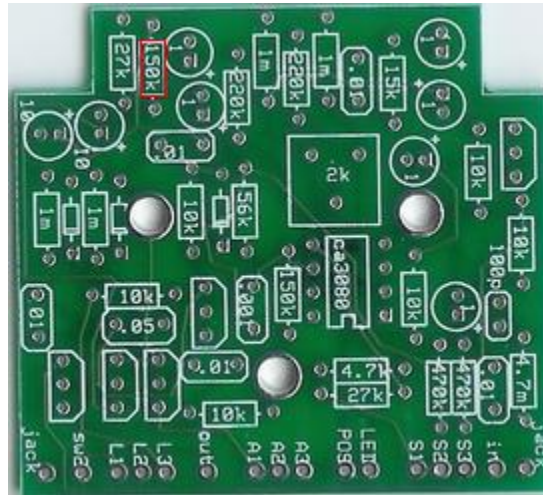
### Potentiometers:

- 1 - 2k trim pot
- 1 - B500K Linear "sustain" pot
- 1 - B250k Linear "attack" pot (not included in standard kit)
- 1 - A50k Audio "level" pot

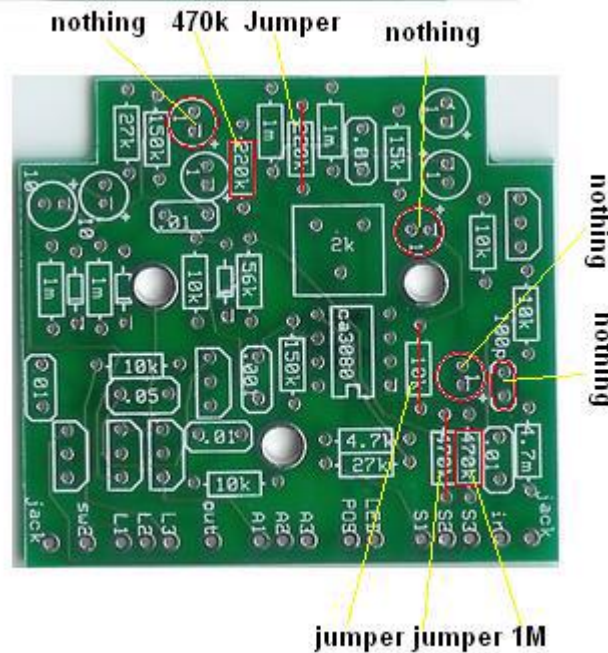
### Hardware:

- 1 - enclosure w/ 4 screws
- 1 - compressor kit circuit board
- 1 - 3pdt footswitch
- 2 - knobs (or 3 with fully loaded kit)
- 1 - AC adaptor jack
- 1 - 1/4" stereo jack
- 1 - 1/4" mono jack
- 1 - battery snap
- 1 - red LED
- 1 - LED bezel
- 2 nylon standoffs (3 with fully loaded kit)
- hook up wire

# Populating the Circuit Board



Step1: If you are building the compressor kit with the attack knob, you do NOT want to use this 150k resistor. This slot is to remain empty



Step 2: If you are building your compressor kit to “DYNACOMP” specs, you will need to do the following:

- Leave out the three 1uf caps
- Leave out the 100pf cap
- Jumper the 10k, 220k, and 470k resistors
- Change the 220k to a 470k and the 470k to a 1

Everything else will be the same for both the “ROSS” and “DYNACOMP” specs.

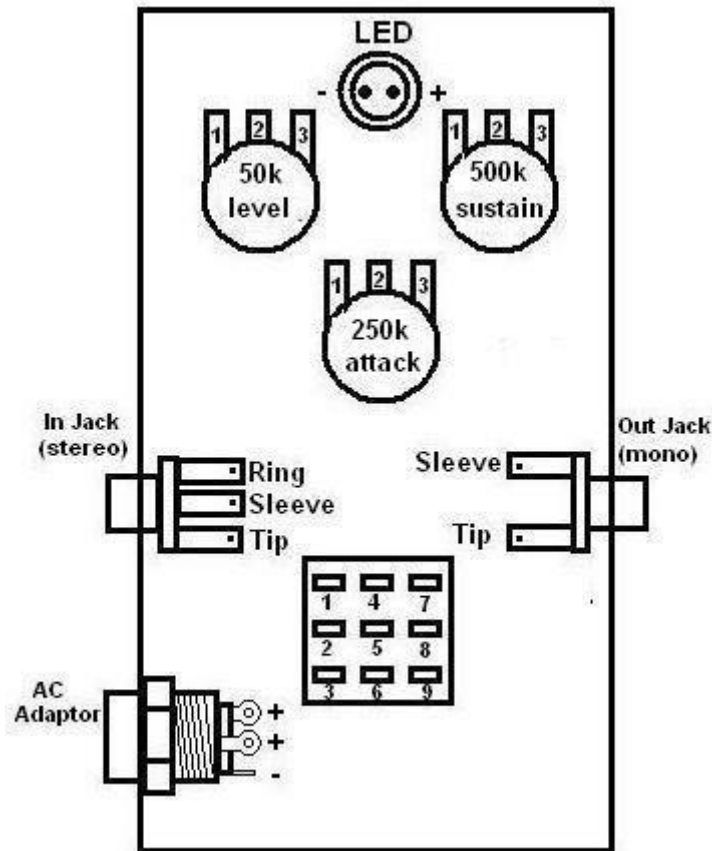








# Assembly

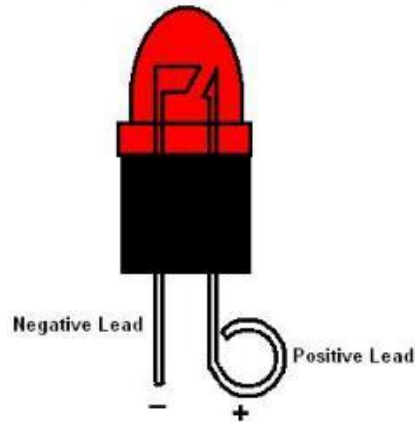


If you are not building the compressor kit with “attack” knob, the LED should be in the place of the 250k pot.

1. Install the jacks first. If you are looking down inside the enclosure, the mono jack goes on the right side and the stereo jack goes on the left. Place the washer on the outside of the enclosure. Use a 1/2" wrench to tighten.
2. Install the AC adaptor jack. The bolt goes on the inside. Use a 3/4" or 14mm wrench to tighten.
3. Install the bezel. The washer and bolt go on the inside. Use a 10mm wrench to tighten.
4. Install the potentiometers so that the solder lugs are pointing. Use a 10mm wrench to tighten but only snug. Do not over tighten the pots.
5. Install the footswitch. The first bolt and metal washer go inside. The plastic washer and second bolt go on the outside. It does not matter which side you designate as the "leading edge" of the footswitch as long as you orientate it so that the flat sides of the solder lugs are aligned in horizontal rows, not vertical columns. Use a 14mm wrench to tighten.

# Wiring LED

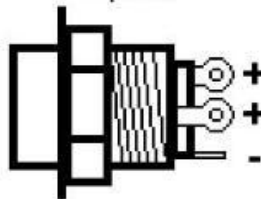
(Light Emitting Diode)



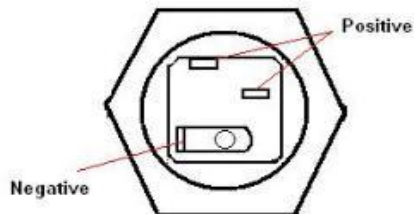
On most polarized components such as an LED the positive lead will be longer than the negative. You will need to make solder lugs for your LED by bending the leads into circles (needle-nose pliers work well for this). Insert the leads into the rubber bezel cork before you do this. You will need to clip the leads so that they are not too long, but don't make them so short that they touch the bezel when you insert the LED and cork into the bezel. Be sure to keep track of which newly formed lug is positive and negative once the leads are clipped. If you forget you can tell them apart by the flag shaped filament that is connected to the negative lead.

## AC Adaptor

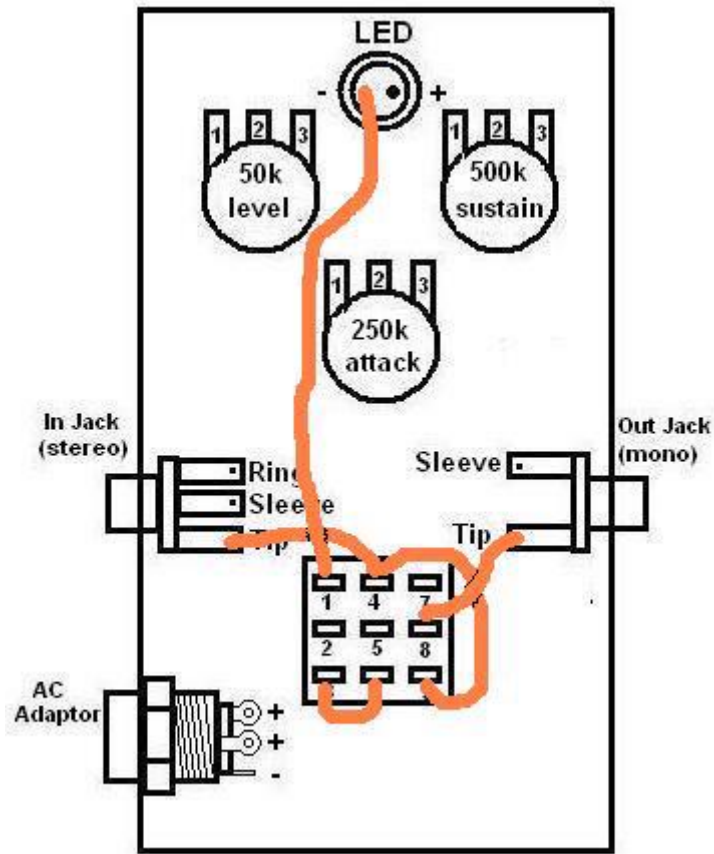
Top View



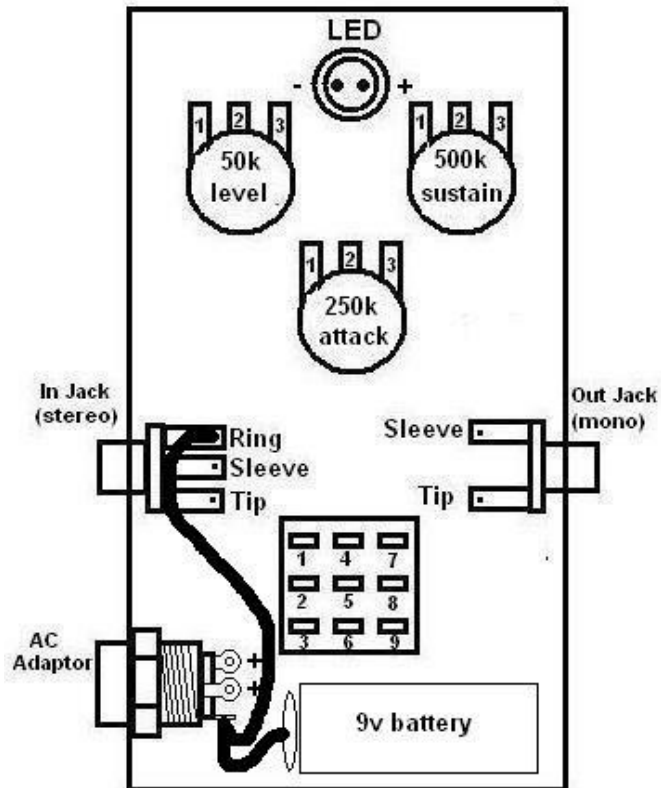
Back View



This is a “disconnect” ac adaptor jack. That means that when you have a battery connected and you plug in the adaptor, it will disconnect the battery. That is why there are 2 positive terminals. They are both connected when there is no plug in the jack, but when the plug is inserted only one of the terminals (the uppermost terminal in the “back view”) is connected to the sleeve of the adaptor. The advantage of this is that you can leave batteries in your pedals as a back up power source if you are a “working” musician and they will stay fresh even when you have the input jack plugged in as long as you keep the adaptor plugged in.

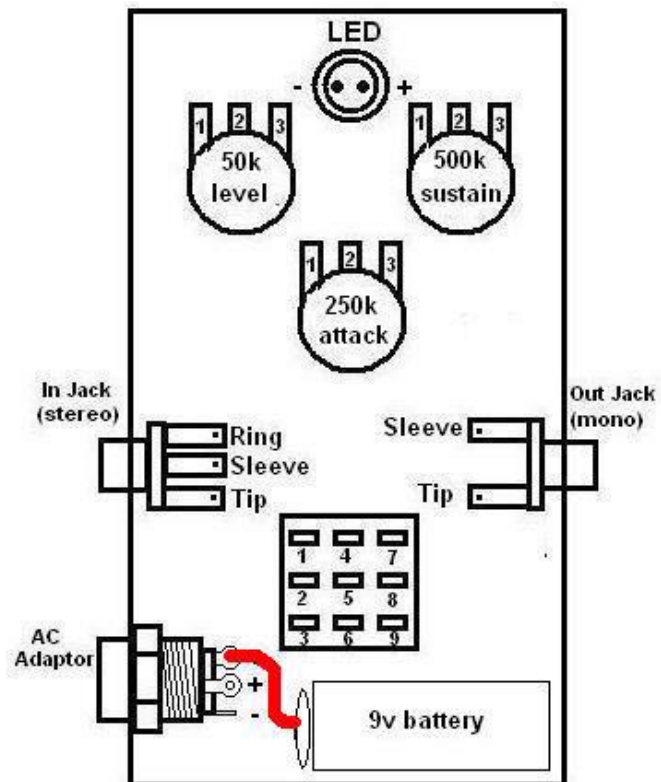


- Step 1: Jumper lug3 to lug 6
- Step 2: Jumper lug 9 to lug 4
- Step 3: Connect lug 4 to the tip of the in jack
- Step 4: Connect lug 8 to the tip of the out jack
- Step 5: Connect lug 1 to the negative terminal of the LED



Step 6: Connect the black battery snap wire to the negative terminal of the ac adaptor jack

Step 7: Connect the negative terminal of the AC adaptor jack to the ring of the in jack



Step 8: Connect the red battery snap wire to the positive "battery" terminal of the ac adaptor jack







## Finishing up & Troubleshooting

You're almost done, but don't close up the pedal yet.

1. Install the CA3080e into the socket. Make sure you match up the “u-shapes”. If your chip has no u-shape it should have a small dot in one corner. This dot marks pin 1. The dot should be on the same side as the u-shape of the socket.
2. Plug in your pedal and test it out.
3. Adjust your trim pot. You don't need any sort of meters or measuring devices...just use your ears. Set it so you get the most full sounding compression and longest sustain with the sustain and attack pots set to full turn clockwise.

If everything's working, take the paper backings off the nylon standoffs and adhere them to the back of their respective pots. Close it up and stick the self-adhesive bumpers on the bottom.

Is your pedal working? Here's a few common mistakes:

1. **No sound at all in either the bypass or on position.** If you aren't getting sound in bypass then you did not wire your footswitch correctly. Getting the bypass to work is the first thing you need to worry about.
2. **Bypass works and the LED lights up when “on”, but there's no sound.** You either have a problem with the wiring from the in to the out of the circuit board and foot switch. The green wire is the in and the brown wire is the out. Or you have a problem with something on the circuit board.
3. **Bypass works, but there's sound when on and the LED does not come on.** You probably aren't getting any power to the circuit. Check all the black and red wires.

If none of this helps, and you can't seem to figure out the problem, I always find that it is best to just set the pedal aside for a day or 2 and then come back to it with a fresh pair of eyes. Then the problem usually jumps right out at you...usually.

If you still can't get it working, start a thread on the BYOC forum and ask for help.

[board.buildyourownclone.com](http://board.buildyourownclone.com)

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