

OSQ (Dan Armstrong™ Orange Squeezer™ Replica) Instructions

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This is a replica of the **Dan Armstrong**[™] **Orange Squeezer**[™] **Compressor** referred to as **OSQ** in these documents. This Compressor doesn't have all the controls of some of the other compressors, but it's got a very nice compression sound that is not completely attainable from the others.

Use the project documents provided, starting with the General Build Instructions. You should use the 2N5457 JFETs, you may be able to get it to sound good with other JFETs, but, we haven't personally found any good substitutes that sound as good. D1 is a 1N100 germanium diode. You can substitute other germanium diodes for the 1N100, but not silicon, it must be germanium unless you make some alterations to the circuit. Be very careful installing the 1N100, it has a glass case and is very fragile. Bend the leds with as little pressure as possible.

The original unit used a JRC4558D dual op amp IC, only half of the op amp is used. It may be possible to get a detectable audible quality improvement using different op amps, but we stuck with the original IC.

The sound difference between tantalum capacitors and aluminum electrolytic capacitors is very subtle, if even at all detectable to the ear. You would most likely not hearing any difference. It's also debatable which type of capacitor would sound better if you could hear the difference. The quality of aluminum electrolytic capacitors has improved greatly since this unit was designed. We use high quality aluminum electrolytic capacitors.



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There are two output pads on the PCB labeled **O1** and **O2**. If you build with a external volume control, use **O1** for the wire to the potentiometer. If you use a trimmer volume control, use **O2** pad for the wire to the foot switch.

When your unit is built, adjust the "Bias" trimmer by turning it counter-clockwise until the sound dies, then turn it slowly clockwise until you get the best sounding compression. Turning too far will lead to distortion.

Here's an inside view of the unit we built to give you some general ideas if needed.



Comments and questions are welcome and can be sent to info@generalguitargadgets.com

Here is a chart of voltages taken at the transistor and IC pins. This information can be used to help find and fix problems if your OSQ doesn't work when you test it.



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| Component | Location | Voltage | |
|---------------------|----------|------------|--|
| 9 volt power supply | | 8.8 | |
| Q1 | Gate | 2.4 | |
| | Source | 4.0 | |
| | Drain | 8.8 | |
| Q2 | Gate | 0.6 | |
| | Source | 2.6 | |
| | Drain | 2.1 to 2.6 | |
| IC1 | Pin 1 | 8.3 | |
| | Pin 2 | 8.3 | |
| | Pin 3 | 0 | |
| | Pin 4 | 0 | |
| | Pin 5 | 4.7 | |
| | Pin 6 | 4.8 | |
| | Pin 7 | 4.8 | |
| | Pin 8 | 8.8 | |