

CFM Bipolar Half-Wave Rectifier Build Guide

BOM(per PCB):

- 2x Diodes*
- 2x 1k Ohm Resistors**
- 3x 200k Ohm Resistors
- 3x Thonkiconn 3.5mm Jack

*Diodes can be chosen by the user. Schottkeys are probably best, however if you wish to use others, Germaniums for example, that is totally up to you. I use BAT48s.

**Depending on the diodes you use, the 1k resistors (R1 & R2) may need to be reduced or increased. They limit the flow of current through the diodes, and their value can be calculated using Ohms law. The current rating for your chosen diodes can be found in their respective datasheets.

This build guide is for a single PCB, so for a full Bipolar Half-Wave Rectifier Module, you will need two completed PCBs.

Build

1. Begin by soldering the two diodes in place.

Note the orientation, the marked side of the diode needs to be inserted in the hole which the arrow printed on the PCB is pointing to. See image 3/figure 1.

2. Now solder the resistors in place, the resistors marked 200k take 200k ohm resistors. There are three of these. R1 & R2 take the 1k resistors (or your chosen value). Note the orientation of the resistors (Fig. 2) and the position of the body of the resistor (Image 4). It should be above the hole further from where the jack will be placed, otherwise you may have difficulty fitting the jacks.

3. Place the jacks in place, place the panel on top, hold the PCB against the panel, and with the jacks still in place, and place the panel face down, as in image 7. It is advisable to have the panel a little raised to allow space for the protruding threaded section of the jack. Something I find quite good for the task is a big roll of cellotape. Solder the jacks in place, bolt them to the panel - and you're good to go!

