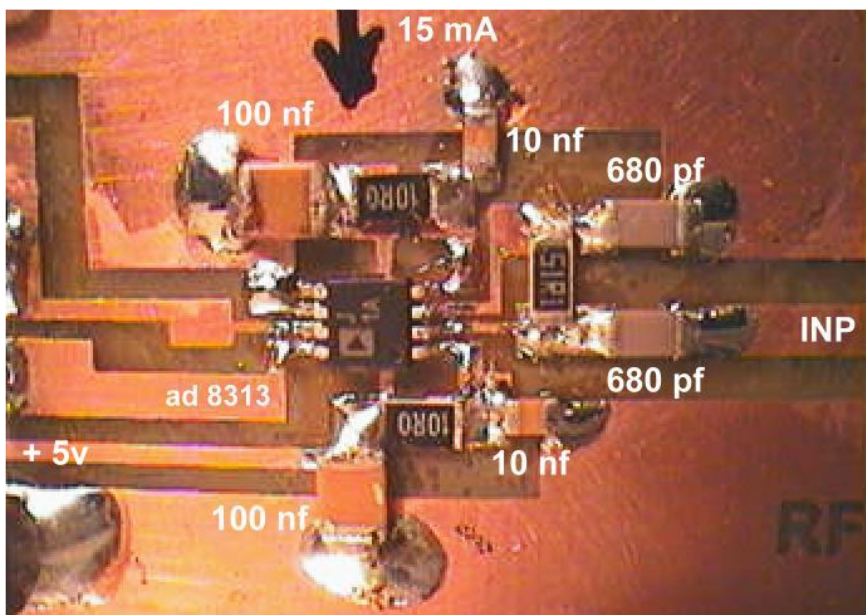
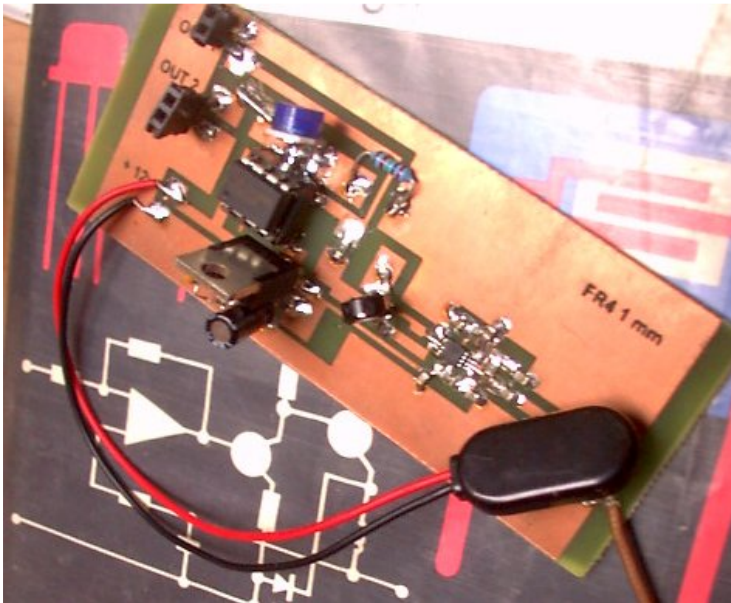




## Images:



## Description:

The circuit detects, demodulates the amplitude and amplifies high frequency electromagnetic emissions (100 MHz to 2.5 GHz approx) for audio frequency output. The main component is the Analog Devices AD8313 IC: RF logarithmic detector and controller, whose output is further amplified by the TL082 op-amp.

## Construction notes:

Clean the board first with pure alcohol. Solder the AD8313 chip first, taking care of orientation. With the board facing you and text the right way up as in the photograph above the arrow (within darker square) should be in the bottom left corner and the dot bottom right. Place first a very small blob of solder on the top left two pins and place the chip carefully here, reheating the solder to place the IC in the right position. Carefully solder the remaining pins in place. use the golden solder braid to mop up any solder bridges, putting the braid next to the bridge and heating the braid with the soldering iron to soak up excess solder. Check that the

AD8313 is properly soldered using a magnifying glass. Next solder the remaining surface mount components and then larger components such as the IC socket and voltage regulator (7805). The variable resistors are soldered with one pin on one side and two pins together on the other. Make a bridge in the top left to the second output. the first OUT1 is straight from the AD8313, OUT2 is from the TL082 op-amp. A socket could be connected to RF IN in order to test connection to different antennas. The power lead (9v battery is fine) is soldered to +12v and GND (the large copper area pictured).

#### **References:**

<http://www.baudline.com/>

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