

Assembling a Niftymitter v0.24 board - a short range FM transmitter

by **royshearer** on December 1, 2009

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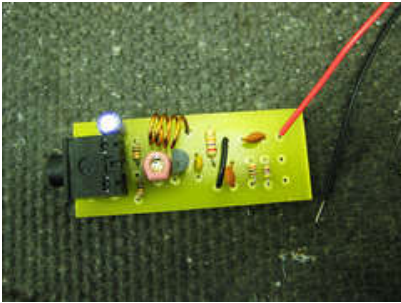
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Intro: Assembling a Niftymitter v0.24 board - a short range FM transmitter

This Instructable will guide you through assembling the circuit for **Niftymitter**, an open source mini FM transmitter. The circuit uses a free running oscillator and is based on **Tetsuo Kogawa's Simplest FM transmitter**.

The project is housed at www.openthing.org/products/niftymitter



step 1: What you need

- Complete Parts List [.xls]
- PCB Layout v0.24 [.png]
 - The PCB source is designed for etching onto copperplate, using iron on acetate (such as that [described here](#)) or using Michael Shorter's laser engraving method described here [instructables].
- Circuit assembly diagram for etched PCB [.png]
You will also need the following tools: Soldering iron, kit and solder. Wire snips.



File Downloads



niftymitter v0.24 parts list.xls (25 KB)

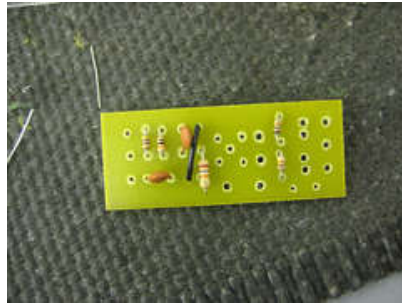
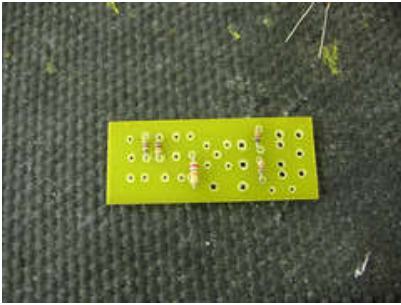
[NOTE: When saving, if you see .tmp as the file ext, rename it to 'niftymitter v0.24 parts list.xls']

step 2: Solder on the resistors and capacitors

Place components flush up against the board from above. After soldering the legs onto the pads, trim the excess.

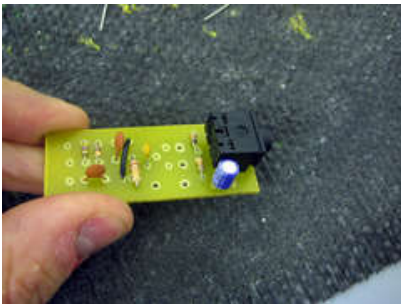
Start by soldering all the resistors. Follow with all the capacitors and the jumper lead. Ensure that the electrolytic capacitor is oriented as described on the circuit layout diagram, the negative side away from the socket.





step 3: Solder on the socket, coil and trimcap

Next solder on the socket. Take care to ensure the socket is solidly soldered on. Solder on the trimcap, taking care to orient the flat side as shown. Then add the coil. The instructable for making the coils is [here](#).



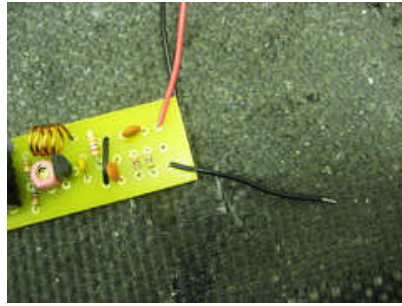
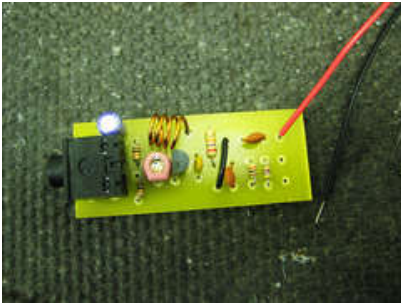
step 4: Solder on the transistor

Finally add the transistor, taking care to orient the pins correctly.



step 5: Add the power connections

Solder on the positive lead from the PP3 clip to +9V. Add a short length of wire to the ground connection.



step 6: Prepare the switch

Bend the positive lead of the switch LED around one of the switch pole legs as shown. Solder and trim the LED leg as shown. Bend over the remaining LED leg to make a loop.



