By Basir Atan (basir.atan@gmail.com)

The PCB design, using Eagle Software
(www.cadsoft.com)
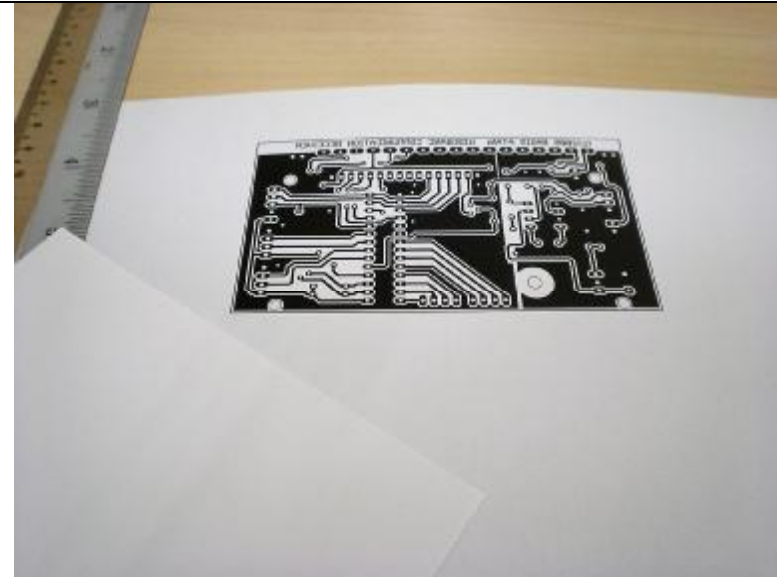
The PCB design printed actual size (mirror image) using normal laser printer
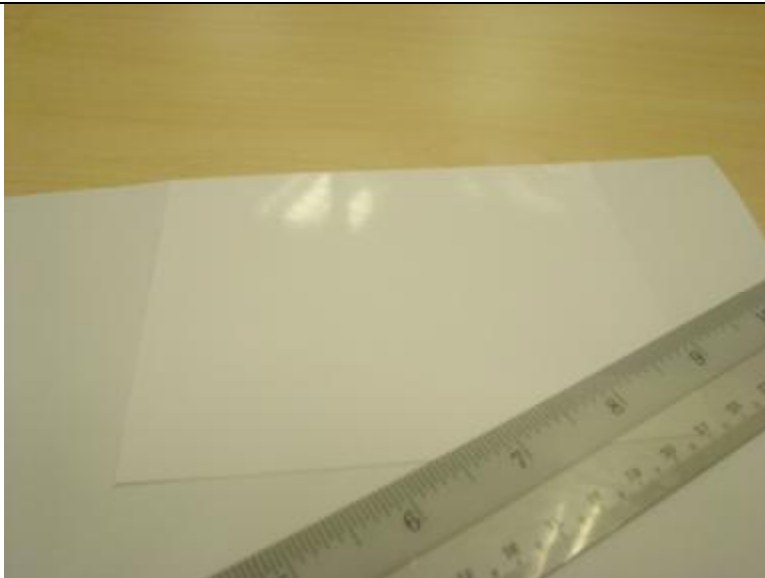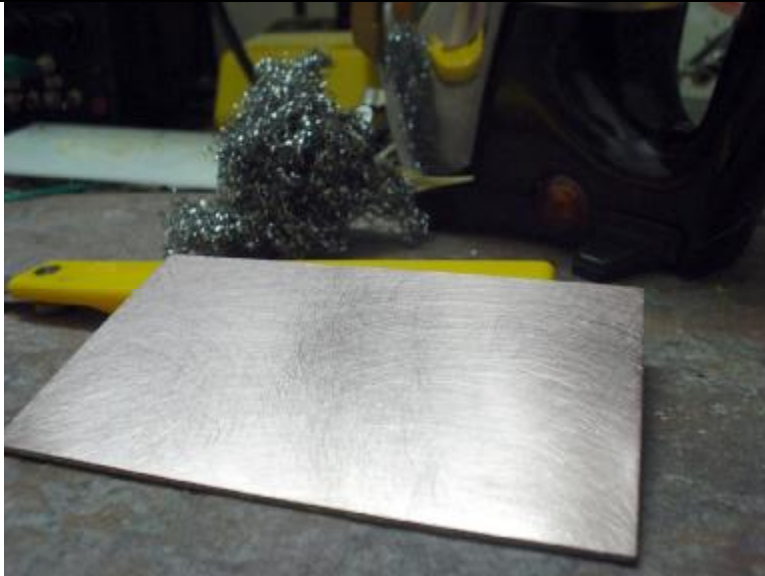

Inkjet Glossy Photo Paper glued over the PCB artwork.
Just glue the side going into the laser printer

Items required:
Blank PCB, iron, scouring pad (stainless steel), paint thinner

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Blank PCB cleaned using the scouring pad.
Clean using circular motion

Iron-on the artwork (temp setting to wool) for about 4 mins
Keep even pressure until artwork start to 'appear'

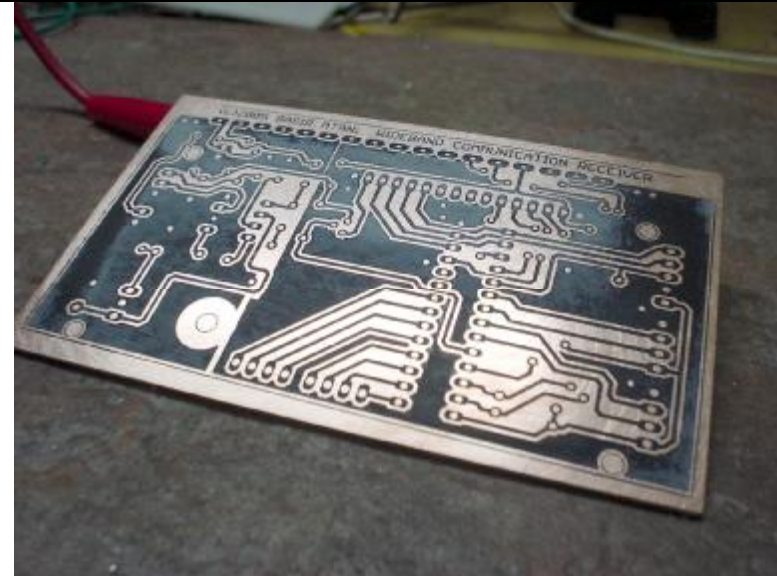Soften the paper with running water

After initial removal then gently remove remaining paper

Clean the remainder with soft toothbrush, ensure all 'clay' is removed
Note the shiny copper (clean) and translucent copper (not cleaned)

Double check holes & gaps. Clay turns white when dry.
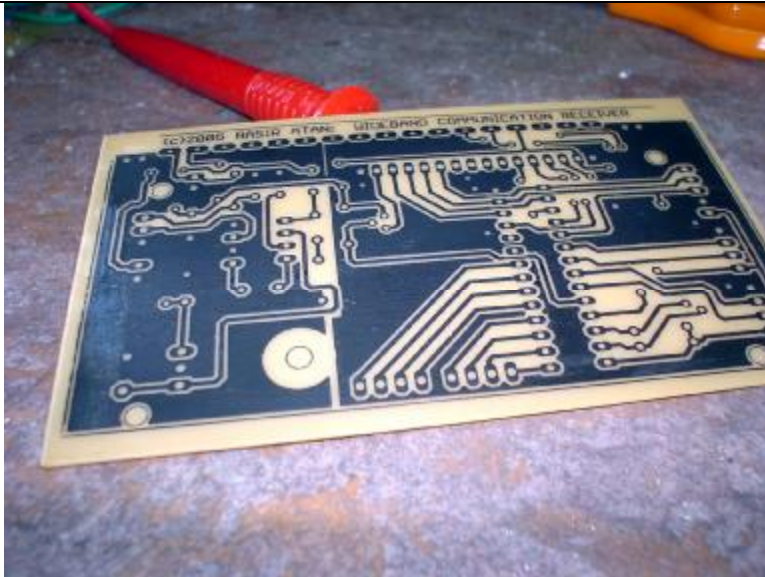If required, clean with wet toothbrush again

Homemade etching tank (FeCl) with aquarium air pump
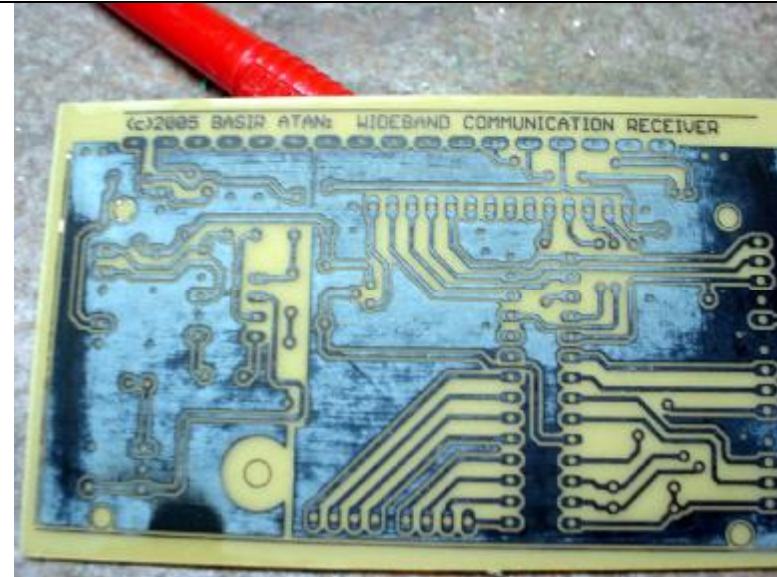FeCl stains everything. Exercise caution.
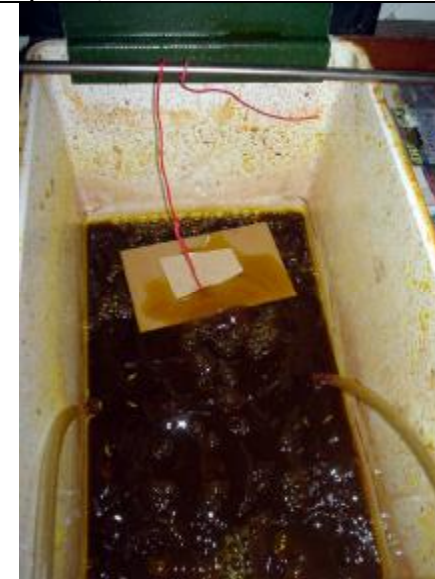
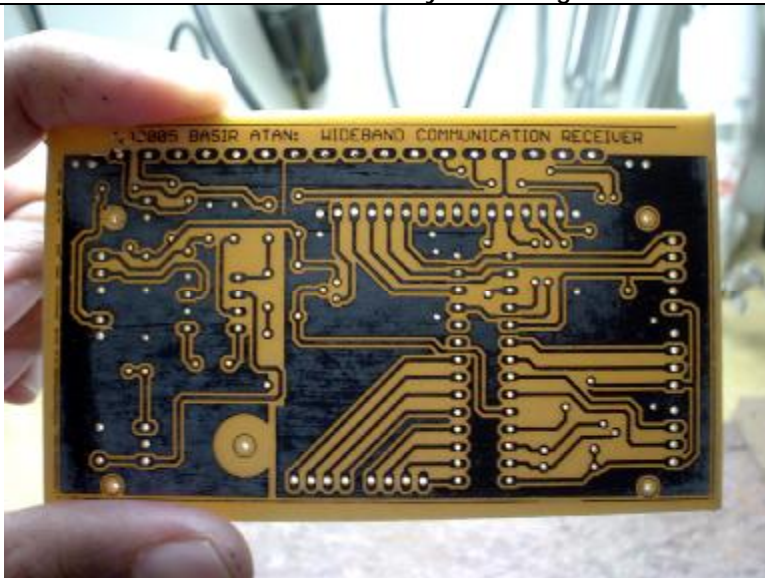Etch the board for about 5-10 mins (depends on FeCl strength)
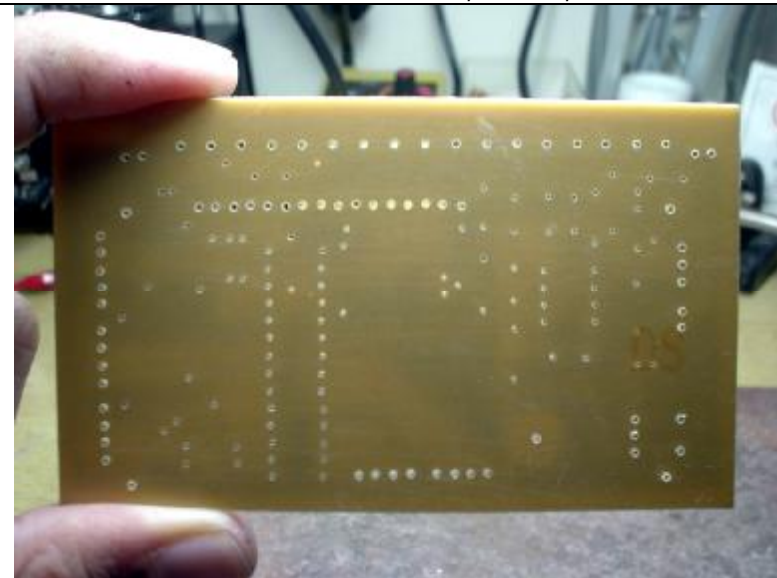
Etched board ready for drilling

Double check for shorts, breaks, etc

Drilled board ready reading for toner removal

Top view of drilled board
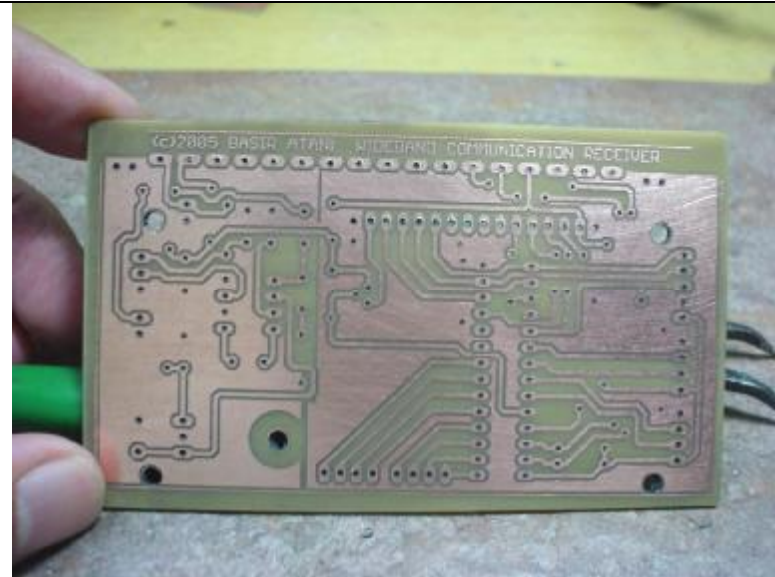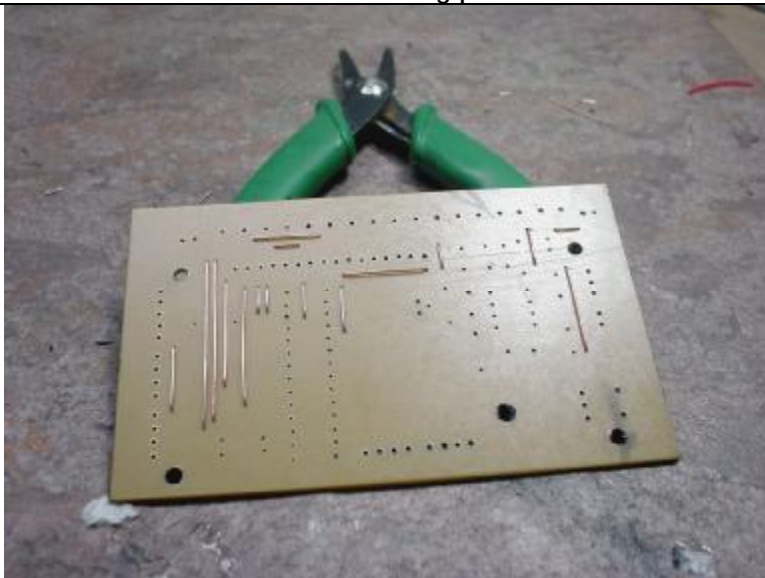
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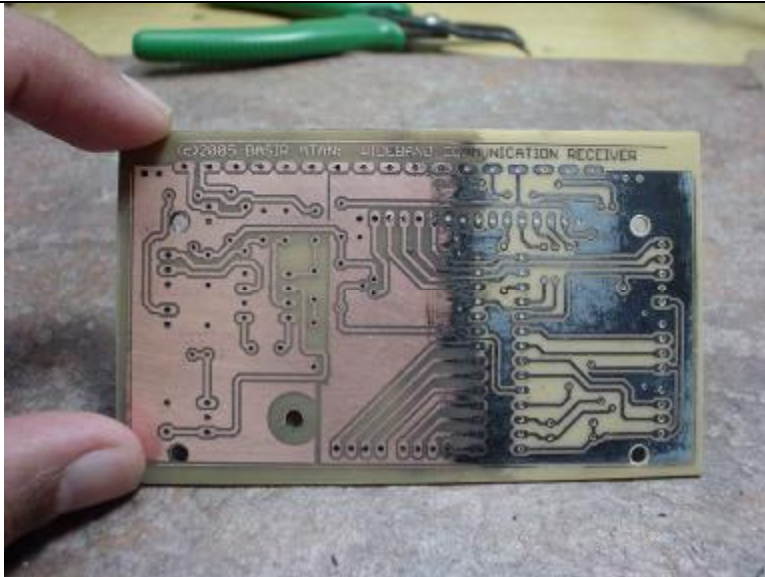
Remove the toner using paint thinner

Ensure all holes are clear of toner residues

Wire jumpers installed and soldered
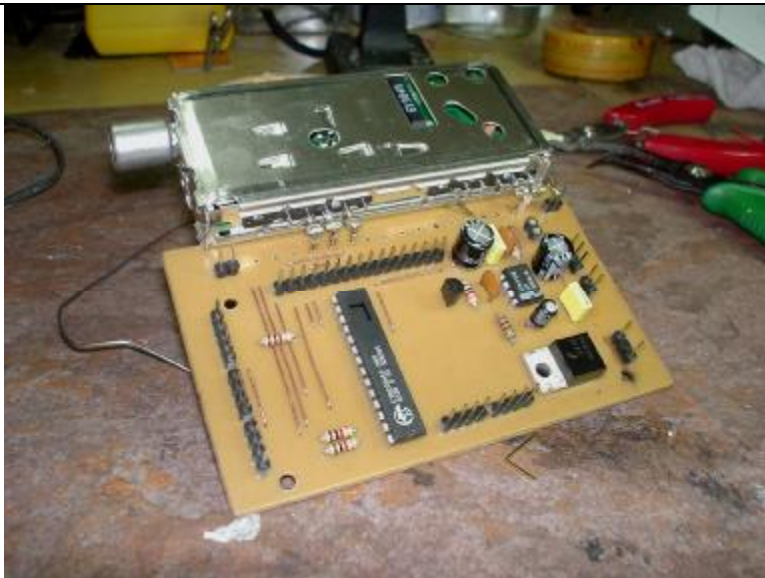

Board populated with components

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Solder side view

Additional component attached

Additional off-board component attached

Board populated & ready for testing