

PRINTED CIRCUIT BOARDS (PCBs)

V.Ryan © 2000 - 2009

On behalf of The World Association of Technology Teachers

W.A.T.T.



World Association of Technology Teachers

This exercise can be printed and used by teachers and students. It is recommended that you view the website (www.technologystudent.com) before attempting the design sheet .

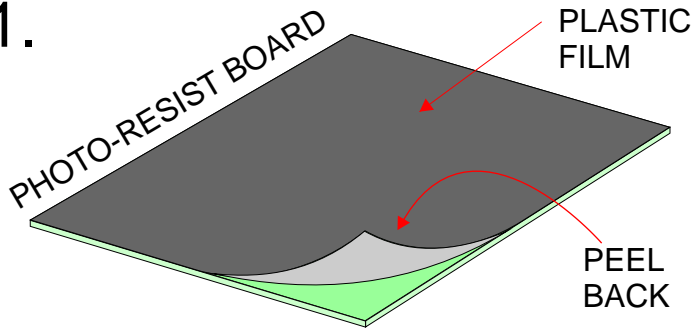
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MANUFACTURE OF PRINTED CIRCUIT BOARDS

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The stages involved in the manufacture of a Printed Circuit Board are shown below. They are incomplete. Add a diagram or text to complete the description of each stage.

1.

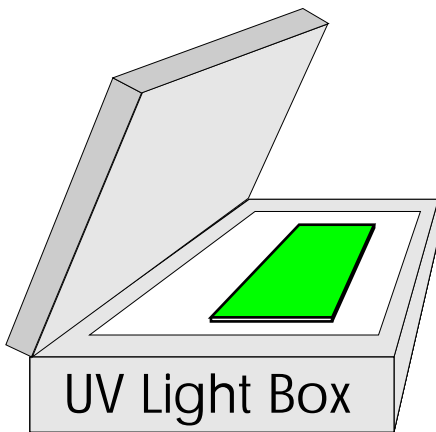


2.

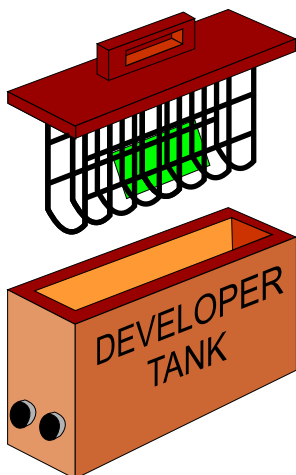
The PCB mask (now on a transparency) is placed underneath the photo-resist board, touching the sensitive surface. Remember the plastic film must be removed. PCB mask and board are then transferred to the UV light Box.

You must be careful to ensure that the PCB mask is the right way up, otherwise when the circuit is etched you will discover that the tracks are also the wrong way round.

3.

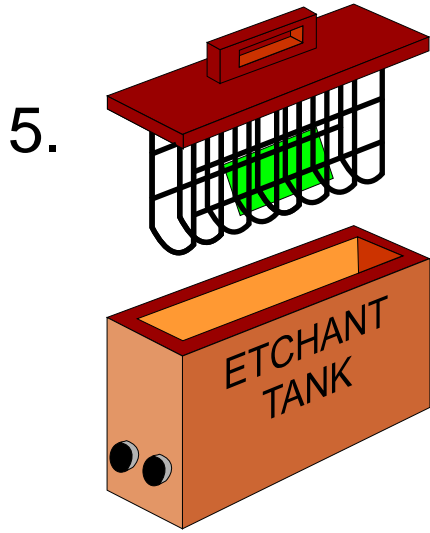


4.



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6.

When removed from the etching solution, the PCB is washed and a PCB eraser is used to remove any film from the tracks. This must be done carefully because the film will prevent good soldering of the components to the PCB. The tracks can be checked using a magnifying glass. If there are gaps in the tracks, sometimes they can be repaired using wire but usually a new PCB has to be etched.

7.

The last stage is drilling the holes for the components. A small PCB drill is used for this purpose.

Again care is needed as a good PCB can be ruined by careless drilling.

8.

