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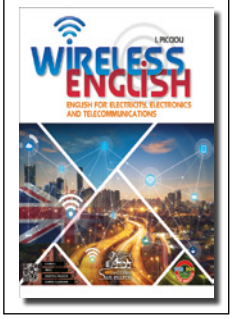

Tips for creating your own printed circuit board

Printed circuit boards (PCBs) are thin plates on which chips and other electronic components are placed. Computers consist of one or more boards, generally called cards or adapters.

What you need

- A printed circuit blueprint
- Overhead projection markers
- Pencil and paper
- Carbon paper
- Tape
- A copper clad[1] board
- Etching[2] solution
- A container
- A hand drill with replaceable drill bits
- Gloves

Instructions

- Draw the circuit pattern on ordinary paper with a pencil. Mark the points where you will have to drill[3] holes.
- Place tracing paper over the first sheet and trace the pattern with the overhead projection marker.
- Tape carbon paper to the copper side of the copper clad board. Neatly tape the tracing paper over the carbon paper.
- Once again trace the pattern with the overhead marker. Remove the tracing paper and carbon paper. The marker's ink will leave the pattern on the copper board.
- Wait 10 minutes for the ink to dry.
- Wear protective gloves. Place the copper board in a container, and submerge it in the etching solution.
- Allow the board to simmer[4] in the solution for a couple of hours.
- Wearing protecting gloves, clean the board with tap water.
- Drill holes where components will be attached.

What's happening?

Once the remnants of the marker ink are removed with a thinner, you will have the basic structure of a circuit board.

GLOSSARY

1 layer
2 printing
3 to pierce
4 to boil

A projection marker.

Protective gloves.

Hand drill and drill bits.