

Instructions of Pre-Sensitized P.C.B

1. Prepare your circuit artwork

- On a transparent film start your lay out with transfer paper, donut pads, black tapes etc.
- Draw your circuit on white paper then copy on an acetate film
- Directly copy the circuit on transparent film from a book or magazine by duplicator
- Print out from computer plotter

2. Exposing

- Cut the board to a size you desire if necessary
- Tear off the black protection film on the board
- 2A. Expose the board in the KINSTEN EXPOSURE box for 60-90 seconds (see instructions of exposure box)
- 2B. Put your artwork on top, then press a flat glass sheet as a top layer to make a good contact between the film and surface of a board. Just like a sandwich. Keep a 10 or 15 watts fluorescent table lamp on the glass with a distance of 5cm plus minus 1 cm. Turn on the light for 8-10 minutes. (If the board width is over 10cm divide the board into two sections then expose 6-8 minutes each). Its important to have good contact between the film and board. If double the distance between the light source and the board, it must triple the exposure time. For double sided board, line up two films and whilst taping their opposite edges together, insert the board between the films. Then tape the films of the board just like a sandwich expose the first surface the flip over to the other surface.

3. Developing (see instructions of developer DP -50)

- Put the whole pack of powder and one litre (1000c.c.) of water into a tray, agitate the tray till the powder is dissolved
- Immerse the board completely, agitate the board or the tray until the artwork is clear otherwise bare copper fail
- Rinse the board with running water

4. Trouble Shooting

- Small breaks or skips in the circuit pattern can be correct and repaired by applying oil type signature pen

5. Etching

- 5A. Etching the board in KINSTEN ETCHING TANK for 4-10 minutes (see instructions of ETCHING TANK)
- 5B. Pour enough etching solution (Ferric Chloride) into a plastic tray and immerse the board with the artwork side up. Gently agitate the tray, till the unwanted copper foil etched away, only the circuit pattern left. Rinse the board with plenty of water.
- 15-60 minutes may be required to etch the board completely
- The etching process is the most effective if the solution is kept at a temperature of about 50-60°C