How to Solder

When components are soldered onto the printed circuit board (PCB), electric current from a battery will flow to them along the copper tracks on the back, or track side, of the board.

●Equipment Required

You need a Soldering Iron, some cored solder and a soldering iron stand with a damp sponge. Place the soldering iron in its stand then plug the iron in and wait for it to warm up. DO NOT AT ANY TIME TOUCH THE METAL BIT ON THE IRON AS IT MAY BE HOT, EVEN IF THE IRON IS UNPLUGGED.

Always make sure you put the legs of the components through the right holes in the P.C.B. Bend the legs away from each other as they come through the holes as this will help to hold the components in place.

●Cleaning the Bit

Wipe the hot bit of the iron on the damp sponge in the stand to clean off any old solder. Then, touch the bit with the end of the solder wire. The solder should melt immediately and a drop of solder will cling to the bit. If it doesn't then place the iron back into its stand for a few more minutes and repeat above.

●Making the Joint

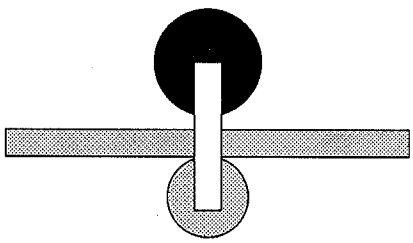
Next, place the bit and the solder wire on the track, up against the leg of the component. Leave them there for only a few seconds until the solder melts and flows around the leg, joining it to the track.

Let the `Joint' cool and then cut the leg about 1mm from the solder with the wire cutters. Hold the leg as you cut to stop it from flying into the air. Be careful. Bits of flying metal can be very dangerous.

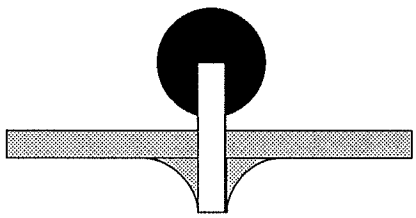
Joints should be smooth and shiny and there must not be any solder between tracks or the current will flow across them. To remove solder, run the hot iron along the grooves between the tracks.

●Removing Components

If you solder a component in the wrong place, you can remove it by melting the joint. Place the iron on the joint and gradually lift off the solder, wiping the bit on the damp sponge. Pull out the leg of the component then repeat it on the other legs wiping the bit after each leg has been removed. Clean up the legs and replace them in the correct holes.



A Badly Soldered Joint



A Very Good Solder Joint