Soldering stations

Hakko FX-888D with fume extraction



Station, iron holder and extractor arm



The soldering corner

Station	Hakko FX-888D, 70 W, digital temperature control
Temperature	50 to 480 °C. Factory setting 350 °C
Tips	Hakko T18 series
Controls	UP and ENTER buttons, three-digit display
Extraction	One extractor with a flexible arm for each station

1. Set up

1. Switch on the fume extractor and pull an arm over where you will solder.
2. Check that the iron is in its holder, then switch the station on.
3. Wait until the display settles at the set temperature.
4. Clean the tip in the brass wool or on the damp sponge, then melt a little solder onto it. This is called tinning.

2. Set the temperature

1. 350 °C suits most work. Go a little lower for small parts, a little higher for thick wires and large pads.
2. To change it, hold ENTER until the first digit flashes. Press UP to change the digit and ENTER to move to the next. After the last digit the new value is stored.
3. Use the lowest temperature that makes a good joint. Hotter is not faster: it burns the flux and wears the tip.

3. Make a joint

1. Hold the part still: a clamp, a vice or tape.
2. Touch the tip to the pad and the lead together for a second or two.
3. Feed solder into the joint, not onto the tip, until it flows around the lead.
4. Take the solder away first, then the iron.
5. Don’t move the joint until it has set. A good joint is smooth and cone-shaped.
6. Clip the lead, holding it as you cut.

4. Finish

1. Clean the tip and coat it with fresh solder. This protects it until next time.
2. Put the iron in its holder and switch the station off.
3. Switch off the extractor. Bin the offcuts. Wash your hands.

If it goes wrong

Problem	Fix
Solder balls up and won't stick	The tip is oxidised or the joint is dirty. Clean and re-tin the tip, then heat the joint for longer
Dull, grainy joint	It moved while cooling or was not hot enough. Reheat it and add a little solder
Solder bridge between pins	Draw it off with solder wick, or with a clean tip
Pad lifts off the board	Too hot for too long. Lower the temperature and work faster