

## THE HAKKO 950 HOT TWEEZER

The Hakko 950 hot tweezer is a useful adjunct to any rework operation. It allows you to remove components quickly and easily. As with any tool, there are certain precautions that must be taken if you are to get the most out of it.

Most, if not all, rework operations are conducted between 550 and 700 degrees F., depending upon the type of solder used, the construction of the board, and the board geometry. However...

There are those who believe that 'if a little bit is good, a lot is better'. Sometimes this is so. Sometimes it is not. When it comes to rework, a lot of heat is not always the answer to removing recalcitrant parts from the board. The part may come off at 800 degrees, true. It will probably bring some of the board with it. Always work at the lowest possible temperature. Your Hakko 950 will work wondrous well on any station up to 750 degrees F. Tests in Hakko's experimental laboratory, where a 936/950 combination was operated at 899<sup>0</sup> F. (the maximum temperature) for one week, demonstrated that:

- You run the risk of damaging the board. That is obvious.
- Temperature stability degrades (you can't hold temperature within  $\pm 10^0$  F.) The Hakko 950 has two heaters in parallel, so it draws twice the current from the transformer that a soldering iron will draw. Above 750<sup>0</sup> F., the control circuit is 'ON' all the time.
- You run the risk of damaging the soldering station (!) Prolonged operation at high temperatures puts an inordinate load on the transformer, heating it to the point of discomfort and shortening its life.

### A CAUTIONARY NOTE

Do not operate the Hakko 950 above 400<sup>0</sup> C. (750<sup>0</sup> F.) under any circumstances whatever, with any soldering station or rework station!

For those fortunate enough to own a Hakko soldering station or rework station and a set of Hakko 950 hot tweezers, here are some simple instructions for calibrating. A reasonable person might think that this is obvious. He, she, or it is entitled so to do; since the world is not made up of reasonable people, we offer this simple illustrated procedure. Your customers will bless you for showing them how to do this without involving a computer.

### CALIBRATION INSTRUCTIONS FOR HAKKO MODEL 950-936., - 937, - 702. - 703

Required: One Hakko 191 thermometer.

1. Set up station and 950 in the normal manner.
2. Ensure that the tips installed in the 950 are the standard (2 mm) ones.
3. Turn the station ON and set the temperature to 700<sup>0</sup> F.
4. When the station comes to temperature, measure each tip's temperature as shown in the sketch (hold the tip at 90<sup>0</sup> to the sensor) and record the temperature in the table below.
5. If the temperatures of the two tips are within  $\pm 20^0$  F., the tweezer/station combination is in tolerance. No further steps are necessary.
6. If the temperatures of the two tips are not within  $\pm 20^0$  F., adjust the calibration pot until they agree within these limits. (Only one handle has a sensor - the handle on the side where the cord is. Adjusting the calibration pot will affect only that tip. Its temperature must be raised or lowered to bring it into tolerance with respect to the other tip.)

It is a good idea to keep records of these calibrations, in case some curious person wants to know what you have been up to. The format below may help.

STATION SERIAL NO. \_\_\_\_\_ 950 SERIAL NO. \_\_\_\_\_

TIP A, °F.	TIP B, °F.

CALIBRATED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

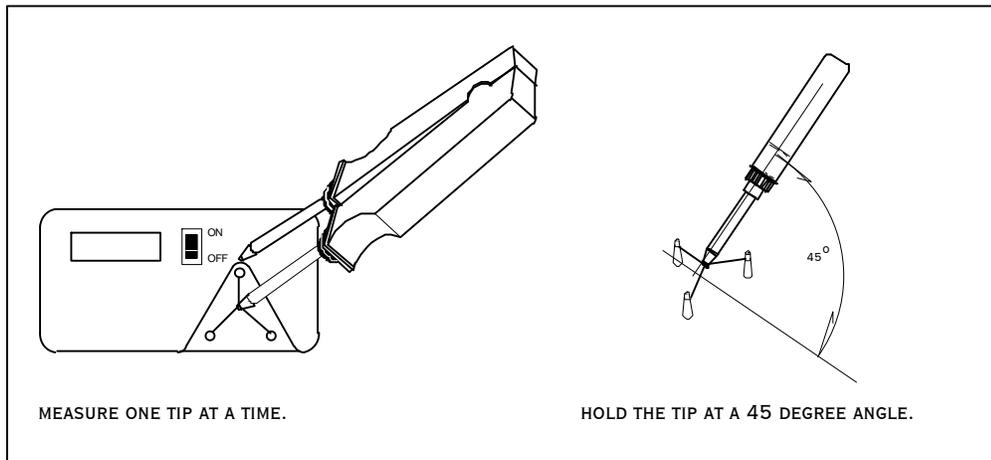


FIGURE 1. HOW TO MEASURE THE TEMPERATURE OF A TWEEZER TIP.