WARNING

Warnings, cautions and notes placed at critical points in this manual to direct the operator's attention to significant items. They are defined as follows:

WARNING: Failure to comply with a WARNING may result in serious injury or death.

CAUTION: Failure to comply with a CAUTION may result in injury to the operator, or damage to the iron or components involved. Two examples are given below.

NOTE: A NOTE indicates a procedure or point that is important to the process being described.

EXAMPLE: An EXAMPLE is given to demonstrate a particular procedure point or process.

3. WARNINGS, CAUTIONS AND NOTES

CAUTION

When power is ON, tip temperatures will be between 200°C and 450°C. (392°F to 840°F.) To avoid injury to personnel or damage to personal items in the work area, observe the following:

1. Do not touch the tip or the metal parts near the tip.
2. Do not allow the tip to come close to or touch flammable materials.
3. Inform others in the area that the iron is hot and should not be touched.
4. Turn the power off when not in use, or left unattended.
5. Turn the power off when changing parts or storing the HAKKO FX-951.

To prevent accidents or damage to the HAKKO FX-951, be sure to observe the following:

1. Do not use the HAKKO FX-951 for applications other than soldering.
2. Do not allow the HAKKO FX-951 to become wet, or use it when hands are wet.
3. Do not modify the HAKKO FX-951.
4. Use only genuine HAKKO replacement parts.
5. Do not bathe or damage the control card. If the card does become damaged, do not force the card into the place it.
6. Do not strike the iron against hard objects to remove excess solder. This will damage the iron.
7. Use the work area is well ventilated. Soldering produces smoke.
8. While using HAKKO FX-951, don’t do anything which may cause bodily harm or physical damage.

4. INITIAL SETUP

A. Iron holder

1. Loosen the adjusting screws to change the angle of the iron receptacle as you like, then tighten the screws.

B. Handpiece cord assembly

1. Pass the cord through the hole in the heat resistant pad.

C. Soldering station

1. Insert the power cord into the receptacle at the back of the station.
2. Insert the soldering iron into the receptacle at the front of the station.
3. Plug the power cord into a grounded wall socket.

5. OPERATION

Displays

The HAKKO FX-951 has a three-digit display element. Depending upon the selected mode, it will display:

- Normal mode:
  - Sensor temperature (tip temperature)

- Data entry:
  - Selected quantity (see “data entry procedures” for exact characteristics)

- Temperature scale:
  - °C or °F depending upon selection

- Error detection:
  - Refers to “ERROR MESSAGES” section

In addition, heater lamps will flash when the station has reached the desired temperature, indicating that it is ready for use.

The station has reached the set temperature. The buzzer will sound loudly.

- When the low temperature threshold has been crossed, the buzzer will sound continuously, the buzzer will sound softly when the sensed temperature returns to the acceptable range.

- The station has reached the desired temperature, the display will blink and the buzzer will sound continuously.

- The auto power shut off is activated and the power to the heating element is shut off, the the buzzer will sound three times.

- When a temperature error occurs with the HAKKO FX-951 the buzzer will sound continuously.

Changing the temperature setting

Example: 350°C to 400°C

1. Insert the control card into the slot in the front of the unit.

- The hundreds digit will begin to flash, indicating that the unit is in the TEMPERATURE SET mode and data may be entered.

2. Entering the hundreds digit

- Press the button to set the desired figure. Any value from 0 to 9 can be selected.

- If the desired figure is displayed, press the button to enter. The digit is will begin to flash.

3. Entering the tens digit

- Press the button to set the desired figure. Any value from 0 to 9 can be selected.

- When the desired figure is displayed, press the button to enter. The units digit will begin to flash.

4. Entering the units digit

- Press the button to set the desired figure. Any value from 0 to 9 can be selected.

- When the desired figure is displayed, press the button to enter. The units digit is will begin to flash.

When the station is ON and the card is in the station, the data entry procedure follows:

1. Hold the button down for at least one second.

2. The current temperature setting will be displayed, then the hundreds digit will begin to flash. This indicates that the station has entered the temperature setting mode.

3. Continue with the procedure of step 1.
5. OPERATION

Replacing the tip

Removing and inserting the tip:

Removing the tip: Hold the sleeve assembly to remove the connector. Remove the tip from the sleeve assembly. (If the tip is hot, hold it with the heat-resistant pad.)

Inserting the tip: Hold head part and insert the tip into the sleeve assembly. Push until the sleeve assembly touches the ring round the tip; at this point the tip should not be forced further into the sleeve assembly. Put the tip into the connector. Insert the new tip firmly into the connector. (If the tip is not properly inserted, [ ] will be displayed.)

How to enter the offset value into the HAKKO FX-951

Example 1

1. If the measured temperature is 410°C and the set temperature is 400°C, the difference is +10°C. So, enter the figure which 10 is deducted from present offset value.

2. Hold the [ ] button down for at least one second.

3. Insert the control card into the card slot in the front of the unit.

4. Press and hold down the [ ] and [ ] buttons simultaneously and then turn power ON.

5. Hold the [ ] and [ ] buttons down until the display shows (not [ ] or [ ]). When either the display shows or the station is in parameter input mode, this operation will be allowed.

6. Pressing after the [ ] and [ ] button will cause the display to alternate between [ ] and [ ].

7. When the desired scale is displaced by setting the [ ] button, the system will automatically sequence to power save mode.

When the display shows [ ], pressing any button will immediately return to tip temperature.

When there is the possibility that a failure has occurred, an error message will be displayed and the power is shut down. The error message will indicate what the specific cause is.

6. PARAMETER SETTINGs

The HAKKO FX-951 comes from the factory with the following values preset.

- Temperature scale
- Low temperature alarm setting
- High temperature alarm setting

When the operator control setting is on, all the parameters have been set, normal operation will be resumed. The operator control setting mode will be automatically sequence to power save mode.

The HAKKO FX-951 has the following four parameters:

1) °C or °F temperature display selection
2) Power save
3) Low temperature alarm tolerance setting
4) Reseeting the supervisory/operater control setting

Changing the temperature setting

When the tip enters the parameter input mode, the procedure is as follows.

1. Hold the [ ] button down for at least one second. The current offset value will be displayed, then the hundreds digit will begin to flash. When the desired figure is displayed, press the [ ] button to enter. The desired temperature is now ready for normal operation.

2. Power save setting

Power save is an optional setting HAKKO FX-951 has two kinds of power save functions. To turn off the power save function, select 0 and then press the [ ] button.

3. Re-setting the low temperature alarm tolerance setting

The unique function alerts the operator when the sensed temperature drops below a set limit. Should this occur, an error message will be displayed, and the buzzer will sound continuously. When the temperature returns within the allowable range, the buzzer will stop.

4. Reseeting the supervisor/operater control setting

To change the supervisor/operater control settings, the procedure is as follows.

- The display will show [ ] or [ ] then this mode is entered.

When the sensor temperature falls below the difference between the current temperature setting and the low temperature alarm tolerance, [ ] will be displayed and the warning buzzer sounds. When the tip temperature rises to a value within the set tolerance, the buzzer will stop sounding.

When the temperature setting is 400°C/750°F and the tolerance 50°C/100°F, if the temperature continues to decrease and finally falls below the value indicated below while the heating element is on, the displayed value starts blinking to indicate that the tip temperature has dropped.

7. ERROR MESSAGES

Sensor Error

Low temperature alarm tolerance error

Heater terminal short circuit error

Soldering iron error

No offset value can be entered without inserting the card.

An offset value can be entered without inserting the card.

Card incorrectly inserted.

Card inserted correctly.