

5. OPERATION

● Replacing the tip

⚠ CAUTION

- When holding the head of the tip, there is a danger of burn. Be sure to use the heat-resistant pad.
- The tip may be hot. Avoid holding the hot tip for a long time even if using the heat-resistant pad. Otherwise burn may result.

Removing the tip:

- Remove the tip from the iron.

Inserting the tip:

- Insert the tip fully into the iron.
When inserting the tip, there are no direction of the tip connector.

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

Example 1;
If the measured temperature is 410°C and the set temperature is 400°C, the difference is -10°C (need to decrease by 10°C). So, enter the figure which 10 is deducted from present offset value.

1. Insert the control card into the slot in the station.
- The station is in the temperature setting mode. The hundreds digit will begin to flash.
2. Press the **[±]** button on the front panel.
- This will set the station to offset value entry mode.

3. Enter the offset value
- The allowable ranges for offset values are from -50 to +50°C (In °F mode from -90 to +90°F).

NOTE:
During offset data entry mode with blinking, the tip temperature is controlled by present offset value.

a. Entering the hundreds digit

- Press the **[▲]** or **[▼]** button to set the desired figure. Only 0 (plus) or - (minus) can be selected. (In °F mode, it is the same as °C mode). When the 0 (plus) or - (minus) is selected, press the **[*]** button to enter. The tens digit will begin to flash.

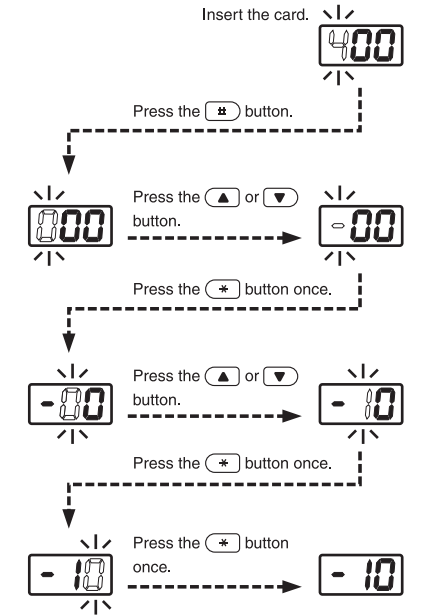
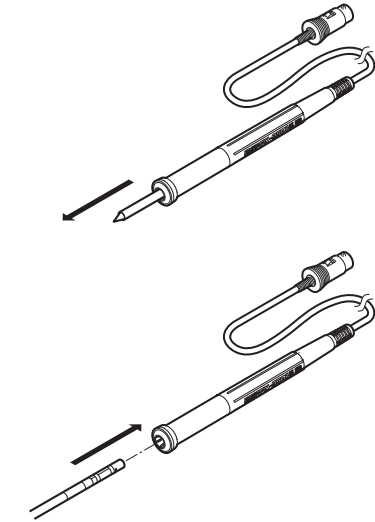
b. Entering the tens digit

- Press the **[▲]** or **[▼]** button to set the desired figure. Any value from 0 to 5 (In °F mode, 0 to 9) can be selected. When the desired figure is displayed, press the **[*]** button to enter. The units digit will begin to flash.

c. Entering the units digit

- Press the **[▲]** or **[▼]** button to set the desired figure. Any value from 0 to 9 (In °F mode, same value can be selected.) When the desired figure is displayed, press the **[*]** button to enter. The desired temperature is now entered into the system memory and heater control will begin with new offset value.

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



NOTE:
When the unit is in offset-free mode, you can go into the offset value entry mode without control card by pressing the **[±]** button for second.

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. This indicates that the station has entered the offset value input mode. Continue with the procedure of a - c, above.

2. When the **[±]** button is pressed for less than one second, the current offset value is displayed for two seconds, then returns to tip temperature.

6. PARAMETER SETTINGS

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

Temperature scale	Celsius
Power save	0 min.
Low temperature alarm setting	150°C
Resetting the supervisor or operator control setting	4 0
Setting temperature	350°C
Buzzer setting (C-E sound, S-E sound)	ON
Buzzer setting (Set temperature alert)	ON

● Entering the parameter

- 1 °C or °F temperature display

2 Power save setting

Set the time from the placement of the soldering iron on the iron holder to the activation of the sleep function.

NOTE:
When not using the power save function, do not connect the iron holder and the soldering station with the connecting cable.

Power save example:

- 2 0 Sleep (immediately after the soldering iron is placed on the iron holder)
210 Sleep (10 minutes after the soldering iron is placed on the iron holder)
230 Auto-power shutoff (30 minutes after the soldering iron is placed on the iron holder)

NOTE:
The power save time can be set in steps of one minute (30 minutes max.)

- When the sleep function is activated, the temperature of the tip begins to drop.
- When the display shows **[SLP]**, pressing any button the power will be turned on again.

NOTE:
The sleep function does not work in case the setting temperature is less than 300°C/570°F.

- When the auto-power shutoff function is activated and power to the heater is shut off, the buzzer sounds three times.
- When the display shows **[---**], and to begin soldering, cycle the power switch OFF, then ON.

3 Resetting 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.

Range of allowable low temperature alarm tolerance for °C: 30 - 150°C
for °F: 60 - 300°F

Example:
When the setting temperature is 350°C and the low temperature alarm tolerance is 100°C, buzzer will sound when the tip temperature will drop over 250°C.

4 Resetting the supervisor/operator control setting

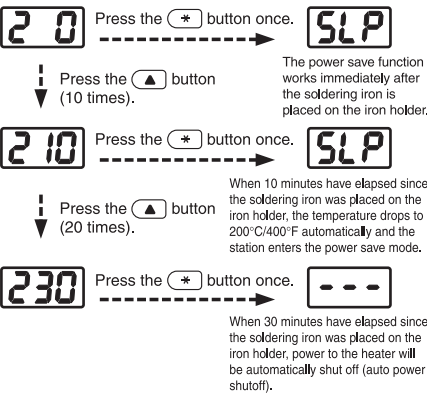
The HAKKO FX-951 has the following six parameters:

- 1) °C or °F temperature display selection
- 2) Power save
- 3) Low temperature alarm setting
- 4) Resetting the supervisor/operator control setting
- 5) Buzzer setting (C-E sound, S-E sound)
- 6) Buzzer setting (Set temperature alert)

Once the station enters parameter mode, set the parameters in the order shown below. After all the parameters have been set, normal operation will be resumed.

1. Turn power OFF.
 2. Insert the control card into the card slot in the front of the unit.
 3. Press and hold down the **[▲]** and **[▼]** buttons simultaneously, and then turn power ON.
 4. Hold **[▲]** and **[▼]** buttons down until the display shows **[1 C]** (Celsius) or **[1 F]** (Fahrenheit).
When either the display shows either **[1 C]** or **[1 F]** the station is in parameter input mode.
- Pressing either the **[▲]** and **[▼]** button will cause the display to alternate between **[1 C]** or **[1 F]**.
 - When the desired scale is displayed, select by pressing the **[*]** button. The system will automatically sequence to power save mode.

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



- When the station enters low-temperature alarm tolerance setting mode, the hundreds digit begins flashing. Enter and store the value in the same manner as described in "Changing the temperature setting."

- If you enter a value exceeding the allowable range shown to the left, you will be brought back to entering a value in the hundreds digit. If this occurs, reenter a correct value.

- Once the value is stored, the system will automatically sequence to resetting the supervisor/operator control setting mode.

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

- The display will show **[4 0]** or **[4 1]** when this mode is entered.

[4 0] : No offset value can be entered without inserting the card.

[4 1] : An offset value can be entered without inserting the card.

Pressing the **[▲]** or **[▼]** button will change **[4 0]** and **[4 1]**.

When the desired setting is displayed, select by pressing **[*]** button.

5 Buzzer setting (C-E sound, S-E sound)

- In the buzzer sound setting mode, which sets whether to sound the buzzer when a sensor error or soldering iron error occurs, either **[5 0]** or **[5 1]** is displayed.

[5 0] : The buzzer does not sound.

[5 1] : The buzzer sounds.

Select **[▲]** or **[▼]** and press the **[*]** button.

6 Buzzer setting (Set temperature alert)

- In the set temperature alert setting mode, either **[6 0]** or **[6 1]** is displayd.

[6 0] : The buzzer does not sound.

[6 1] : The buzzer sounds.

Select **[▲]** or **[▼]** and press the **[*]** button. The system will exit the parameter setting mode and begin heater control. It is now ready for normal operation.

7. ERROR MESSAGES

● Sensor Error



When there is the possibility that a failure has occurred in the sensor or heater (including the sensor circuit), **[5-E]** is displayed and the power is shut down.

⚠ CAUTION
The sensor error also occurs if the tip is not inserted properly.

● Low-temperature alarm tolerance error



EXAMPLE:

350°C (400°C - 50°C)
Set temperature Low-temperature alarm tolerance
OR
650°F (750°F - 100°F)
Set temperature Low-temperature alarm tolerance

EXAMPLE:
Assume that 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.

● Heater terminal short-circuit error



[HSE] will flash, and the buzzer will sound continuously, when the tip is inserted wrong way round, an incompatible tip is inserted, or a foreign object has found its way into the connector.

● Soldering iron error



[C-E] will be displayed if the connector cord is not attached to the station OR the wrong soldering iron is connected.