



5. OPERATION

● Replacing the tip

⚠ CAUTION

The tip may be hot. Avoid holding the hot tip for a long time even if using the heat-resistant pad. Otherwise burns may result.

Removing the tip:

- Hold down the lock release buttons in the sleeve assembly, pull out the tip together with the sleeve assembly from the connector.

⚠ CAUTION

- Be sure to keep the lock release buttons hold down while pulling out the sleeve assembly. Failure to do so will damage the locking mechanism.
- Be sure to pull out the tip only after separating the sleeve assembly from the connector. Otherwise, the sleeve assembly may fall down and break.

- Holding the front end of the sleeve assembly, pull out the tip.

Inserting the tip:

Holding the front end of the tip, insert it into the sleeve assembly.

⚠ CAUTION

Insert the tip into the sleeve assembly until it clicks into place. When you hear it clicks, avoid forcing the tip into the sleeve assembly.

- Insert the tip securely into the connector.

NOTE:

Improper insertion of the tip will cause **[S-E]** to appear on the display.

The temperature accuracy of iron tips is ±15°C (±27°F) except for some tips.  
If a higher temperature accuracy is required, use the following offset function:

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

Example 1;

If the measured temperature is 710°F and the set temperature is 700°F, the difference is -10°F (need to decrease by 10°F). 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:

- 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.

- 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                                    | Fahrenheit |
| Power save                                           | 0 min.     |
| Low temperature alarm setting                        | 300°F      |
| Resetting the supervisor or operator control setting | 4 0        |
| Setting temperature                                  | 750°F      |
| 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:

- 0 Sleep (immediately after the soldering iron is placed on the iron holder)
- 10 Sleep (10 minutes after the soldering iron is placed on the iron holder)
- 20 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

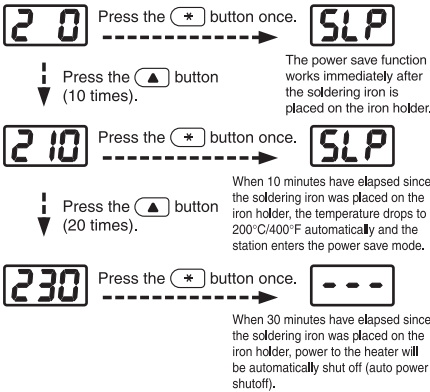
The HAKKO FX-951 has the following six parameters:

- °C or °F temperature display selection
- Power save
- Low temperature alarm setting
- Resetting the supervisor/operator control setting
- Buzzer setting (C-E sound, S-E sound)
- 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.

- Turn power OFF.
- Insert the control card into the card slot in the front of the unit.
- Press and hold down the **[▲]** and **[▼]** buttons simultaneously, and then turn power ON.
- Hold **[▲]** and **[▼]** buttons down until the display shows **[1C]** (Celsius) or **[1F]** (Fahrenheit).  
When either the display shows either **[1C]** or **[1F]** the station is in parameter input mode.
  - Pressing either the **[▲]** and **[▼]** button will cause the display to alternate between **[1C]** or **[1F]**.
  - 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), **[S-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.

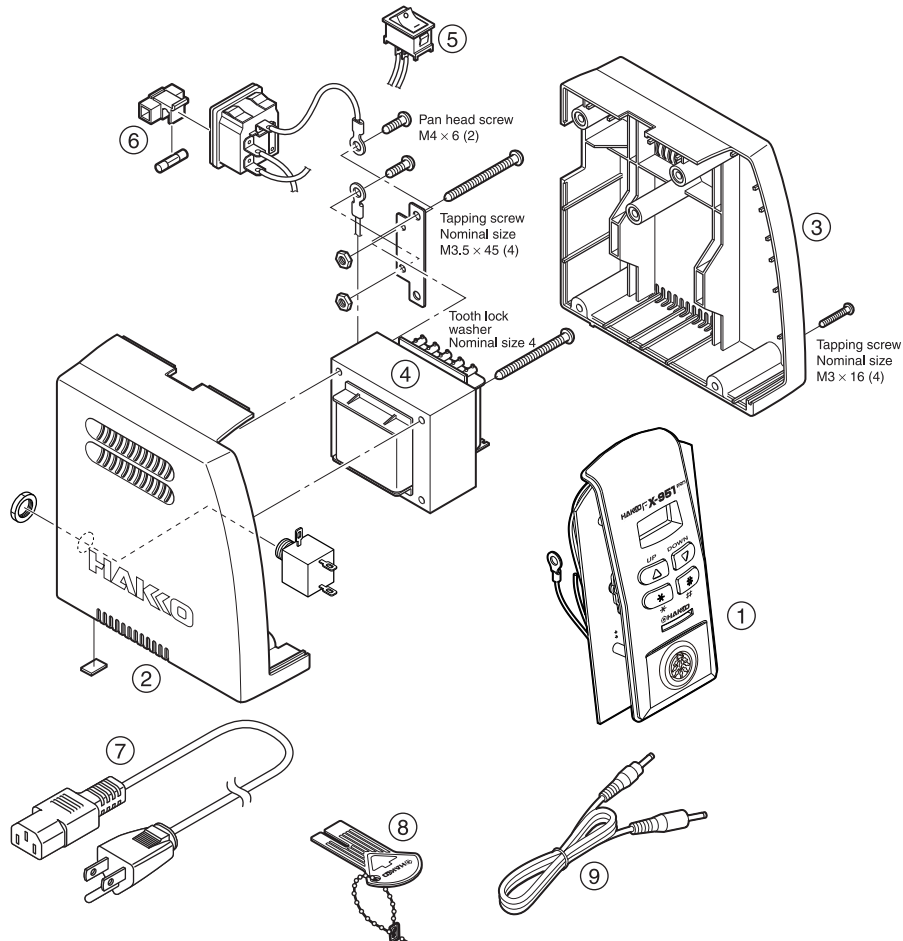
※ 各言語（日本語、英語、中国語、フランス語、ドイツ語、韓国語）の取扱説明書は以下のURL、HAKKO Document Portalからダウンロードしてご覧いただけます。  
（商品によっては設定の無い言語がありますが、ご了承ください）  
\* 各國語言(日語,英語,中文,法語,德語,韓語)的使用說明書可以通過以下網站的HAKKO Document Portal 下載參閱。  
（有一部分的產品沒有設定外語對應,請見諒）  
\* Instruction manual for the language, Japanese, English, Chinese, French, German and Korean can be downloaded from the following URL, HAKKO Document Portal.  
(Please note that some language may not be available depending on the product.)



<https://doc.hakko.com>

## Maintenance & Checking

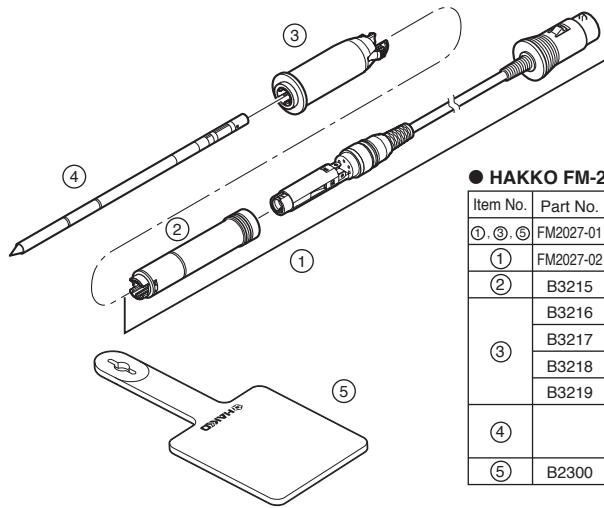
### 1. PARTS LIST



#### ● HAKKO FX-951 Station

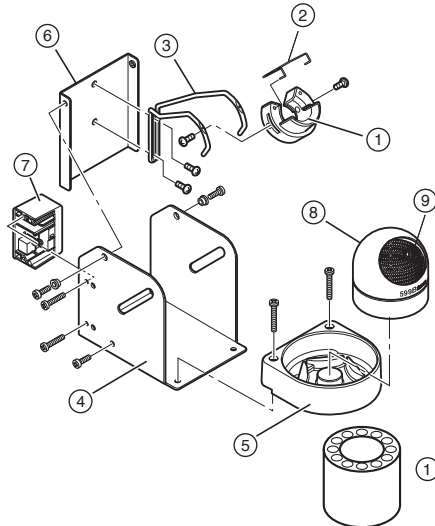
| Item No. | Part No. | Part Name         | Specifications   |
|----------|----------|-------------------|------------------|
| ①        | B3732    | Front panel assy. |                  |
| ②        | B3255    | Case/Left         | With rubber feet |
| ③        | B2978    | Case/Right        | With rubber feet |
| ④        | B2979    | Transformer       | 100V             |
|          | B2983    | Transformer       | 110V             |
|          | B2836    | Transformer       | 120V             |
|          | B2984    | Transformer       | 220V             |
|          | B2985    | Transformer       | 230V             |
|          | B3067    | Transformer       | 240V             |
| ⑤        | B2852    | Power switch      |                  |
| ⑥        | B2403    | Fuse/250V-2A      | 100-110V         |
|          | B3011    | Fuse/250V-2A      | 120V             |
|          | B2987    | Fuse/250V-1A      | 220-240V         |

| Item No. | Part No. | Part Name                                 | Specifications      |
|----------|----------|-------------------------------------------|---------------------|
| ⑦        | B2419    | Power cord, 3-wire cord & American plug   | 120V USA            |
|          | B2421    | Power cord, 3-wire cord but no plug       |                     |
|          | B2422    | Power cord, 3-wire cord & BS plug         | India               |
|          | B2424    | Power cord, 3-wire cord & European plug   | 220V KTL<br>230V CE |
|          | B2425    | Power cord, 3-wire cord & BS plug         | 230V CE             |
|          | B2436    | Power cord, 3-wire cord & Chinese plug    | China               |
|          | B2426    | Power cord, 3-wire cord & Australian plug |                     |
|          | B3508    | Power cord, 3-wire cord & American plug   |                     |
|          | B3550    | Power cord, 3-wire cord & SI plug         |                     |
|          | B3616    | Power cord, 3-wire cord & BR plug         |                     |
| ⑧        | B2972    | Control card                              |                     |
| ⑨        | B3253    | Connecting cable                          |                     |



#### ● HAKKO FM-2027

| Item No. | Part No.  | Part Name          | Specifications              |
|----------|-----------|--------------------|-----------------------------|
| ①, ③, ⑤  | FM2027-01 | Conversion kit     | ③ is yellow                 |
| ①        | FM2027-02 | Connector assembly |                             |
| ②        | B3215     | Connector cover    |                             |
| ③        | B3216     | Sleeve assembly    | Yellow                      |
|          | B3217     | Sleeve assembly    | Orange                      |
|          | B3218     | Sleeve assembly    | Blue                        |
|          | B3219     | Sleeve assembly    | Green                       |
| ④        |           | Tip                | See back page: 'TIP STYLES' |
| ⑤        | B2300     | Heat resistant pad |                             |



#### ● Iron Holder

| Item No. | Part No. | Part Name   | Specifications |
|----------|----------|-------------|----------------|
| ①-⑨      | FH200-01 | Iron holder | With 599B      |

#### ● Iron Holder Parts

| Item No. | Part No. | Part Name                  | Specifications   |
|----------|----------|----------------------------|------------------|
| ①        | B3001    | Iron receptacle            | With screws      |
| ②        | B2791    | Tip fixing spring          |                  |
| ③        | B3248    | Holder for iron receptacle |                  |
| ④        | B3251    | Iron holder base           | With rubber feet |
| ⑤        | B3249    | Cleaner base               | With rubber feet |
| ⑥        | B3250    | Stay                       |                  |
| ⑦        | B3252    | Switch case assembly       |                  |
| ⑧        | 599B-02  | Tip cleaner                |                  |
| ⑨        | 599-029  | Cleaning wire              |                  |

#### ● Tip tray

| Item No. | Part No. | Part Name | Specifications |
|----------|----------|-----------|----------------|
| ①        | B2756    | Tip tray  |                |

## 2. PARAMETER SETTINGS

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

| Temperature scale                                    | Fahrenheit |
|------------------------------------------------------|------------|
| Power save                                           | 0 min.     |
| Low temperature alarm setting                        | 300°F      |
| Resetting the supervisor or operator control setting | 4 0        |
| Setting temperature                                  | 750°F      |
| Buzzer setting (C-E sound, S-E sound)                | ON         |
| Buzzer setting (Set temperature alert)               | ON         |

#### ● Entering the parameter

##### 1 °C or °F temperature display

- Turn power OFF.
- Insert the control card into the card slot in the front of the unit.
- Press and hold down the and buttons simultaneously, and then turn power ON.
- Hold and buttons down until the display shows (Celsius) or (Fahrenheit).

When either the display shows either or the station is in parameter input mode.

- Pressing either the and button will cause the display to alternate between or .
- When the desired scale is displayed, select by pressing the button. The system will automatically sequence to power save mode.

The HAKKO FX-951 has the following six parameters:

- °C or °F temperature display selection
- Power save
- Low temperature alarm setting
- Resetting the supervisor/operator control setting
- Buzzer setting (C-E sound, S-E sound)
- 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.

## 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.)

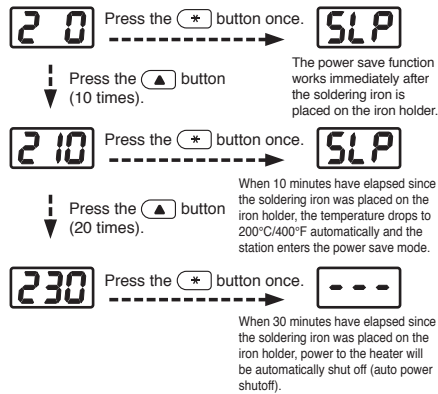
- When the sleep function is activated, the temperature of the tip begins to drop.
- When the display shows **SLP**, pressing any button the power will be turned on again.

### 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.

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



## 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: 50 - 300°F

1. 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."
2. 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.
3. Once the value is stored, the system will automatically sequence to resetting the supervisor/operator control setting mode.

### 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

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, **5 0** or **5 1** is displayed.

**5 0**: The buzzer does not sound.

**5 1**: The buzzer sound

Select **▲** or **▼** and press the **\*** button.

## 6. Buzzer setting (Set temperature alert)

- In the buzzer sound setting mode, which sets whether to sound the buzzer when a sensor error or soldering iron error occurs, **6 0** or **6 1** is displayed.

**6 0**: The buzzer does not sound.

**6 1**: The buzzer sound

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.

### 3. CHECKING PROCEDURE

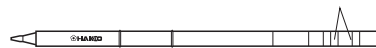
#### ⚠ WARNING

Unless otherwise directed, carry out these procedures with the power switch OFF and the power UNPLUGGED.

#### ● Check for a broken heater or sensor

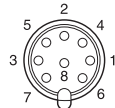
1. Check for a broken heater or sensor

Measure the resistance across this position.

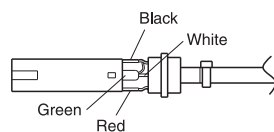


Verify the electrical integrity of the heater and sensor. Measure the resistance of the heater and sensor while at room temperature (15 to 25°C.; 59 to 77°F.). It should be  $8\Omega \pm 10\%$ . If the resistance exceeds these limits, replace the tip.

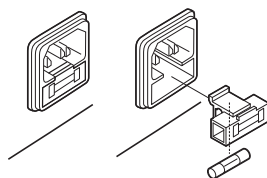
#### ● Check the grounding line



#### ● Checking the connection cord for breakage



#### ● Replacing the fuse



1. Unplug the connection cord from the station.
2. Measure the resistance value between Pin 2 and the tip.
3. If the value exceeds  $2\Omega$  (at room temperature), perform the tip maintenance described on section 2, maintenance for the tip. If the value still does not decrease, check the connection cord for breakage.

1. Remove the soldering tip and the sleeve assembly.
2. Turn the front piece of the HAKKO FM-2027 counterclockwise and remove the cover.
3. Measure the resistance values between the connector and the lead wires at the socket as follows:

Pin 1 – Red      Pin 2 – Green  
Pin 3 – Black      Pin 5 – White

If any value exceeds  $0\Omega$  or is  $\infty$ , replace the HAKKO FM-2027

1. Unplug the power cord from the power receptacle.
2. Remove the fuse holder.
3. Replace the fuse.
4. Put the fuse holder back in place.

### 4. ERROR MESSAGES

#### ● Sensor Error



#### ● 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

#### ● Heater terminal short-circuit error



#### ● Soldering iron error



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

#### ⚠ CAUTION

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

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

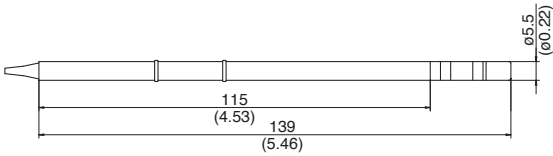
#### EXAMPLE:

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.

**[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.

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

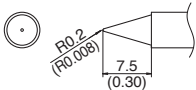
5. TIP STYLES



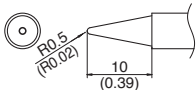
Unit: mm (in.)

SHAPE B

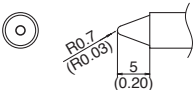
T15-B SHAPE-B



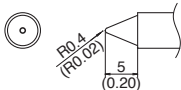
T15-B2 SHAPE-0.5B



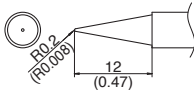
T15-B3 SHAPE-0.7B



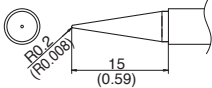
T15-B4 SHAPE-0.4B



T15-BL SHAPE-BL

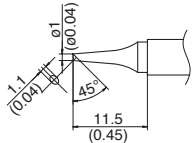


T15-BLL SHAPE-BL LONG

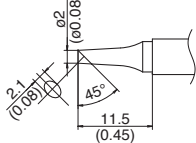


SHAPE BC  
SHAPE C

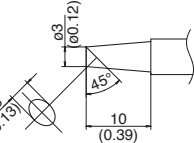
T15-BC1 SHAPE-1BC  
T15-BCF1\*



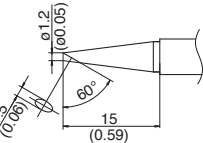
T15-BC2 SHAPE-2BC  
T15-BCF2\*



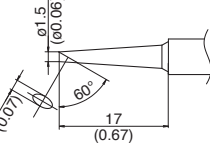
T15-BC3 SHAPE-3BC  
T15-BCF3\*



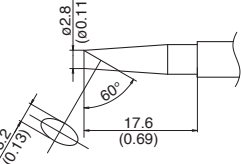
T15-BC12 SHAPE-1.2BC



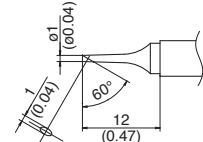
T15-BC15 SHAPE-1.5BC



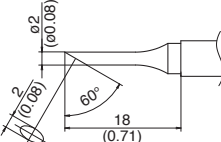
T15-BC28 SHAPE-2.8BC



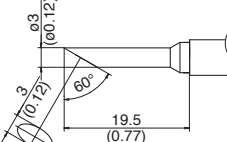
T15-C1 SHAPE-1C



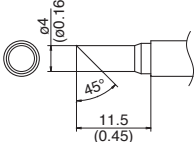
T15-CF2\* SHAPE-2C



T15-CF3\* SHAPE-3C

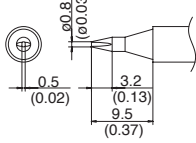


T15-C4 SHAPE-4C  
T15-CF4\*

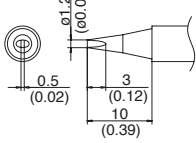


SHAPE D

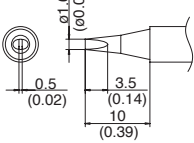
T15-D08 SHAPE-0.8D



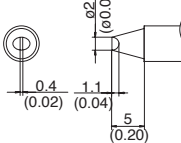
T15-D12 SHAPE-1.2D



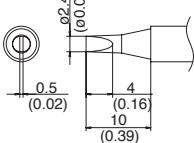
T15-D16 SHAPE-1.6D



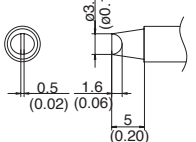
T15-D2 SHAPE-2D



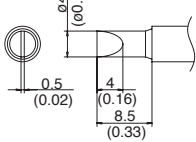
T15-D24 SHAPE-2.4D



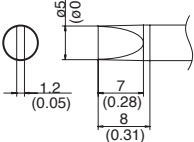
T15-D32 SHAPE-3.2D



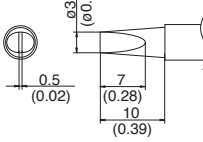
T15-D4 SHAPE-4D



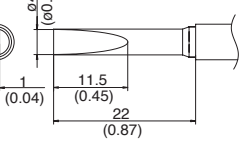
T15-D52 SHAPE-5.2D



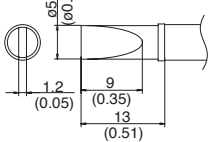
T15-DL32 SHAPE-3.2D LONG



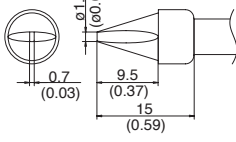
T15-DL4 SHAPE-4D LONG



T15-DL52 SHAPE-5.2D LONG

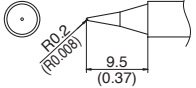


T15-XD15 SHAPE-1.5XD

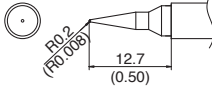


SHAPE I

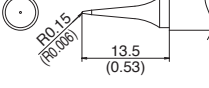
T15-I SHAPE-I



T15-IL SHAPE-IL

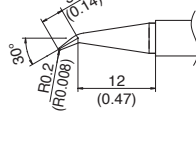


T15-ILS SHAPE-ILS

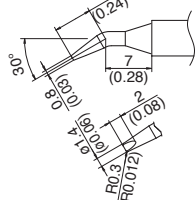


SHAPE J

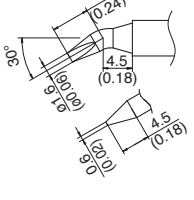
T15-J02 SHAPE-0.2J



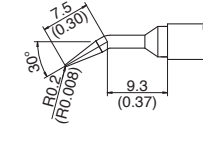
T15-JD14 SHAPE-1.4JD



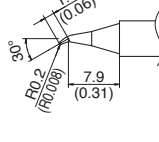
T15-JD16 SHAPE-1.6JD



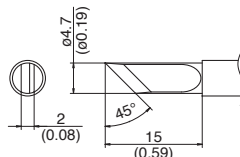
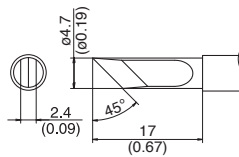
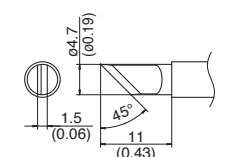
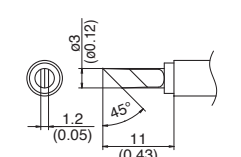
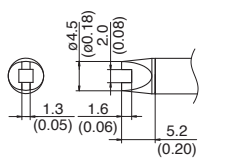
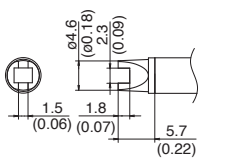
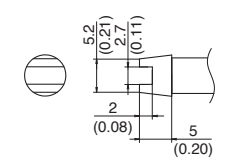
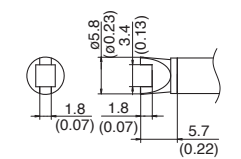
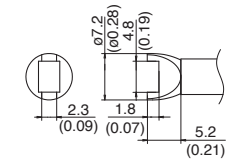
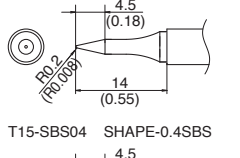
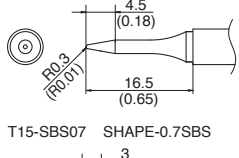
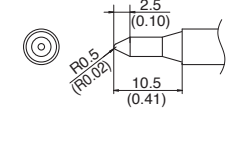
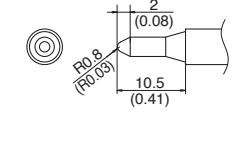
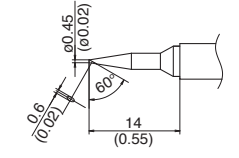
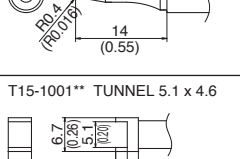
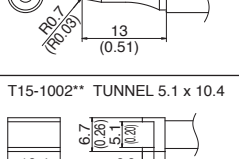
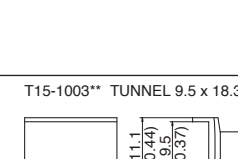
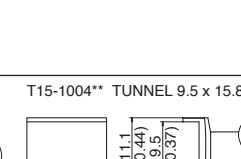
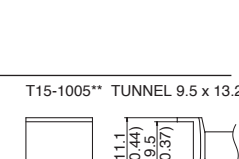
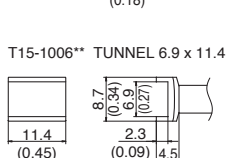
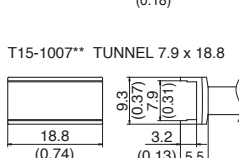
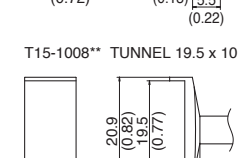
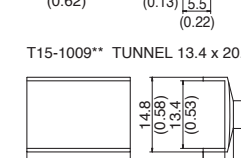
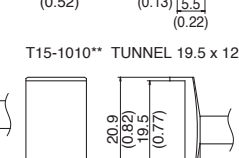
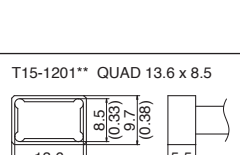
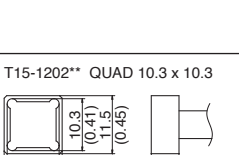
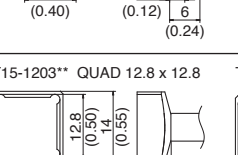
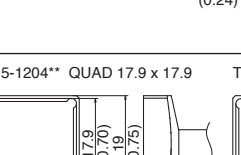
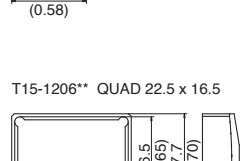
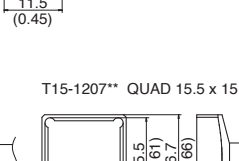
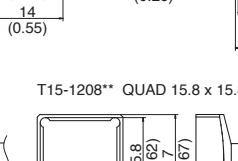
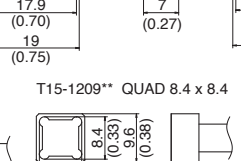
T15-JL02 SHAPE-0.2JL



T15-JS02 SHAPE-0.2JS



5. TIP STYLES

|                           |                                                                                     |  |                                                                                     |  |                                                                                     |  |                                                                                       |  |                                                                                      |  |
|---------------------------|-------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------|--|
| SHAPE K                   | T15-K SHAPE-K                                                                       |  | T15-KF SHAPE-KF                                                                     |  | T15-KL SHAPE-KL                                                                     |  | T15-KU SHAPE-KU                                                                       |  |                                                                                      |  |
|                           |    |  |    |  |    |  |    |  |                                                                                      |  |
| SHAPE R                   | T15-R20 SHAPE-2.0R                                                                  |  | T15-R23 SHAPE-2.3R                                                                  |  | T15-R27 SHAPE-2.7R                                                                  |  | T15-R34 SHAPE-3.4R                                                                    |  | T15-R48 SHAPE-4.8R                                                                   |  |
|                           |    |  |    |  |    |  |    |  |   |  |
| SHAPE SB                  | T15-SB02 SHAPE-0.2SB                                                                |  | T15-SB03 SHAPE-0.3SB                                                                |  | T15-SB05 SHAPE-0.5SB                                                                |  | T15-SB08 SHAPE-0.8SB                                                                  |  | T15-SBC04 SHAPE-0.4SBC                                                               |  |
|                           |    |  |    |  |    |  |    |  |   |  |
| TUNNEL                    | T15-1001** TUNNEL 5.1 x 4.6                                                         |  | T15-1002** TUNNEL 5.1 x 10.4                                                        |  | T15-1003** TUNNEL 9.5 x 18.3                                                        |  | T15-1004** TUNNEL 9.5 x 15.8                                                          |  | T15-1005** TUNNEL 9.5 x 13.2                                                         |  |
|                           |    |  |    |  |    |  |    |  |   |  |
| QUAD                      | T15-1201** QUAD 13.6 x 8.5                                                          |  | T15-1202** QUAD 10.3 x 10.3                                                         |  | T15-1203** QUAD 12.8 x 12.8                                                         |  | T15-1204** QUAD 17.9 x 17.9                                                           |  | T15-1205** QUAD 23.4 x 17.3                                                          |  |
|                           |   |  |   |  |   |  |   |  |  |  |
| SPATULA                   | T15-1401** SPATULA 10.4                                                             |  | T15-1402** SPATULA 15.7                                                             |  | T15-1403** SPATULA 21.2                                                             |  | T15-1406** SPATULA 40                                                                 |  |                                                                                      |  |
|                           |  |  |  |  |  |  |  |  |                                                                                      |  |
| SPECIAL APPLICATIONS TYPE | T15-1603** SHAPE-1.8MM LONG REACH CHISEL                                            |  | T15-1605** SHAPE-LONG REACH BENT CHISEL                                             |  | T15-BCM2 SHAPE-2BC Bevel with indent**                                              |  | T15-BCM3 SHAPE-3BC Bevel with indent**                                                |  |                                                                                      |  |
|                           |  |  |  |  |  |  |  |  |                                                                                      |  |

\* Tinned on the soldering surface only.  
\*\* The iron tips marked with double asterisks (\*\*) have a temperature accuracy of ±25°C (±45°F), when used with the default offset. Others have a temperature accuracy of ±15°C (±27°F), when used with the default offset.