



HAKKO

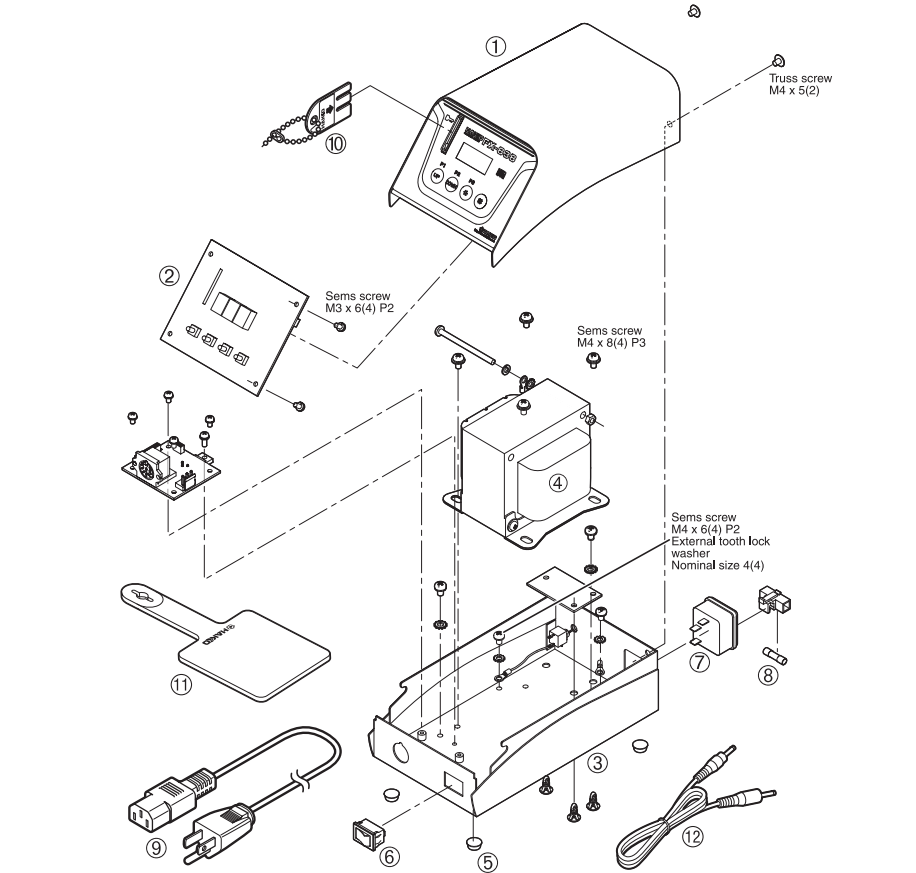
SOLDERING STATION

FX-838

Heavy Duty Soldering Station

Maintenance & Checking

1. PARTS LIST

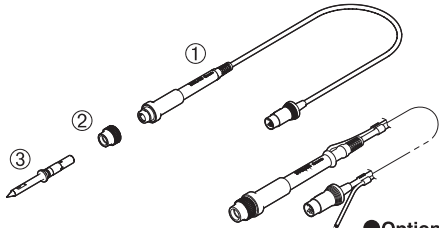


● HAKKO FX-838 Station

| Item No. | Part No. | Part Name   | Specifications   |
|----------|----------|-------------|------------------|
| ①        | B3530    | Cover       | W/membrane sheet |
| ②        | B3526    | P.W.B.      |                  |
| ③        | B3529    | Chassis     | With rubber feet |
| ④        | B3525    | Transformer | 100-120 V        |
|          | B3549    | Transformer | 220-240 V        |
| ⑤        | B2748    | Rubber foot |                  |
| ⑥        | B2852    | Switch      |                  |

● HAKKO FX-838 Station

| Item No. | Part No. | Part Name                                  | Specifications       |
|----------|----------|--------------------------------------------|----------------------|
| ⑦        | B2384    | Power receptacle                           |                      |
| ⑧        | B2468    | Fuse                                       | 125 V-5 A            |
| ⑨        | B1258    | Fuse                                       | 250 V-3.15 A         |
|          | B2419    | Power cord, 3 wired cord & American plug   | 120 V USA            |
| ⑩        | B2421    | Power cord, 3 wired cord but no plug       |                      |
|          | B2422    | Power cord, 3 wired cord & BS plug         | 220 V India          |
| ⑪        | B2424    | Power cord, 3 wired cord & European plug   | 220 V KTL / 230 V CE |
|          | B2425    | Power cord, 3 wired cord & BS plug         | 230 V CE             |
| ⑫        | B2426    | Power cord, 3 wired cord & Australian plug |                      |
|          | B2436    | Power cord, 3 wired cord & Chinese plug    | 220 V China          |
| ⑬        | B3508    | Power cord, 3 wired cord & American plug   |                      |
|          | B3550    | Power cord, 3 wired cord & SI plug         |                      |
| ⑭        | B2388    | Control card                               |                      |
| ⑮        | B2300    | Heat resistant pad                         |                      |
| ⑯        | B3253    | Connecting cable                           |                      |



● Option  
HAKKO FX-8302



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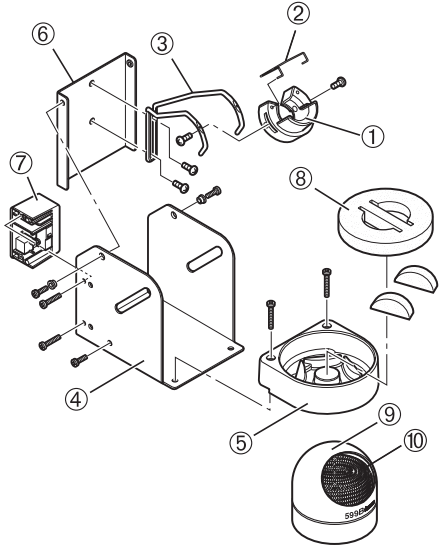
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● HAKKO FH-200 Iron Holder

| Item No. | Part No. | Part Name    | Specifications |
|----------|----------|--------------|----------------|
| ①-⑦,⑨,⑩  | FH200-01 | HAKKO FH-200 |                |

● Iron holder parts

| Item No. | Part No. | Part Name            | Specifications   |
|----------|----------|----------------------|------------------|
| ①        | B3001    | Iron receptacle      | With screws      |
| ②        | B2791    | Tip fixing spring    |                  |
| ③        | B3248    | Retaining clip       | With screws      |
| ④        | B3251    | Iron holder base     | With rubber feet |
| ⑤        | B3249    | Cleaner base         | With rubber feet |
| ⑥        | B3250    | Stay                 |                  |
| ⑦        | B3252    | Switch case assembly |                  |
| ⑧        | A1536    | Cleaning sponge      |                  |
| ⑨        | 599B-02  | Tip cleaner          |                  |
| ⑩        | 599-029  | Cleaning wire        |                  |

2. MAINTENANCE/CHECKING PROCEDURE

Performing proper and periodic maintenance extends product life and contributes to the quality of soldering work. Efficient soldering depends upon the temperature, the quality and quantity of the solder and flux. Apply the following service procedure as dictated by the conditions of the usage.

⚠ WARNING

Since the soldering iron can reach a very high temperature, please work carefully. Except where indicated, always turn the power switch OFF and disconnect the power plug before performing any maintenance procedure.

● Tip maintenance

1. Tip temperature

High temperatures shorten tip life and may cause thermal shock to components. Always use the lowest possible temperature when soldering. The excellent thermal recovery characteristics of the HAKKO FX-838 ensures effective soldering at low temperatures.

2. Cleaning

Always clean the soldering tip before use, to remove any residual solder or flux adhering to it. Use a clean and moist cleaning sponge or the HAKKO 599B tip cleaner. Contaminants on the tip have many deleterious effects, including reduced heat conductivity, which contribute to poor soldering performance.

3. After use

Always clean the tip and coat it with fresh solder after use. This guards against oxidation.

4. When the unit is not being used and the auto power shutoff is not active.

Never allow the unit to idle at a high temperature for extended periods. This will allow the tip to become oxidized. Turn the power switch OFF. If it is to be out of service for several hours, it is advisable to disconnect the power plug as well.

5. Inspecting and cleaning the tip

⚠ CAUTION

NEVER file or use abrasive materials on the tip to remove oxides!

This procedure, if followed daily, will materially add to tip life.

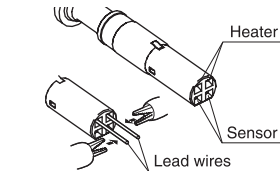
1. Set the temperature to 250°C (482°F).
2. When the temperature stabilizes, clean the tip (see 2, above) and check the condition of the tip. If the tip is badly worn or deformed, replace it.
3. If the solder plated part of the tip is covered with black oxide, apply fresh solder, containing flux, and clean the tip again. Repeat until all the oxide is removed, then coat the tip with fresh solder.
4. Turn the power OFF and remove the tip, using the heat resistant pad. Set the tip aside to cool.
5. Remaining oxides, such as the yellow discoloration on the tip shaft, are not harmful but can be removed with isopropyl alcohol.

● Checking Procedure

⚠ WARNING

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

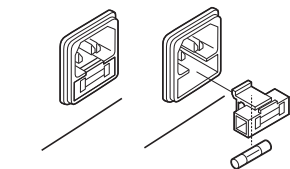
● Check for a broken heater or sensor



● Check the grounding line



● Checking the power cord for damage



3. ERROR MESSAGES

● Sensor Error



● Low-temperature alarm



EXAMPLE: 350°C (400°C - 50°C)  
Set temperature | Low-temperature alarm limit

● 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.

NOTE:

The sensor error also occurs if the tip is not inserted properly. When the soldering iron is connected, **[S-E]** may be displayed momentarily. This does not indicate a malfunction.

If the tip temperature falls below the low-temperature alarm limit, **[H-E]** is displayed and the warning buzzer sounds. When the tip temperature rises above the low-temperature alarm limit, the warning buzzer will stop.

EXAMPLE:

Assume that the temperature setting is 400°C/750°F and the low-temperature alarm limit is 50°C/120°F. If the temperature continues to decrease and finally falls more than the set limit while the heating element is on, the temperature display starts blinking to indicate that the tip temperature has dropped below the limit you set.

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

4. TROUBLE SHOOTING GUIDE

⚠ WARNING

Before checking the inside of the HAKKO FX-838 or replacing parts, be sure to disconnect the power plug. Failure to do so may result in electric shock.

● The unit does not operate when the power switch is turned on.

**CHECK** : Is the power cord disconnected?  
**ACTION** : Connect it.  
**CHECK** : Is the fuse blown?  
**ACTION** : Investigate why the fuse blew and then replace the fuse. If the cause can not be determined, replace the fuse. If the fuse blows again, send the unit in for repair.

● The tip does not heat up.  
• The sensor error **[S-E]** is displayed.

**CHECK** : Is the tip inserted properly?  
**ACTION** : Insert the tip completely.  
**CHECK** : Is the heater/sensor broken?  
**ACTION** : See the appropriate section of this manual regarding how to check the soldering iron cord and/or the heater/sensor for breakage.

● Solder does not wet to the tip.

**CHECK** : Is the tip temperature too high?  
**ACTION** : Set the appropriate temperature.  
**CHECK** : Is the tip contaminated with oxide?  
**ACTION** : Remove the oxide (see "Tip maintenance" in section 2).

● The tip temperature is too high.

**CHECK** : Is the entered offset value correct?  
**ACTION** : Enter the correct value.  
**ACTION** : Contact your HAKKO representative.

● The tip temperature is too low.

**CHECK** : Is the tip contaminated with oxide?  
**ACTION** : Remove the oxide (see "Tip maintenance" in section 2).  
**CHECK** : Is the entered offset value correct?  
**ACTION** : Enter the correct value.

● The soldering iron error **[I-E]** is displayed.

**CHECK** : Is incorrect soldering iron connected?  
**ACTION** : Connect the HAKKO FX-8301 soldering iron.

● The low-temperature alarm limit error **[H-E]** occurs frequently.

**CHECK** : Is the tip too small for the items to be soldered?  
**ACTION** : Use a tip with a larger thermal capacity.  
**CHECK** : Is the setting value for the low-temperature alarm limit too low?  
**ACTION** : Increase the setting value.

● Though the soldering iron is placed in the iron holder, the sleep function is not activated.

**CHECK** : Check that the connecting cable is inserted firmly into the jack.  
**ACTION** : Turn off the power switch and insert the connecting cable again.

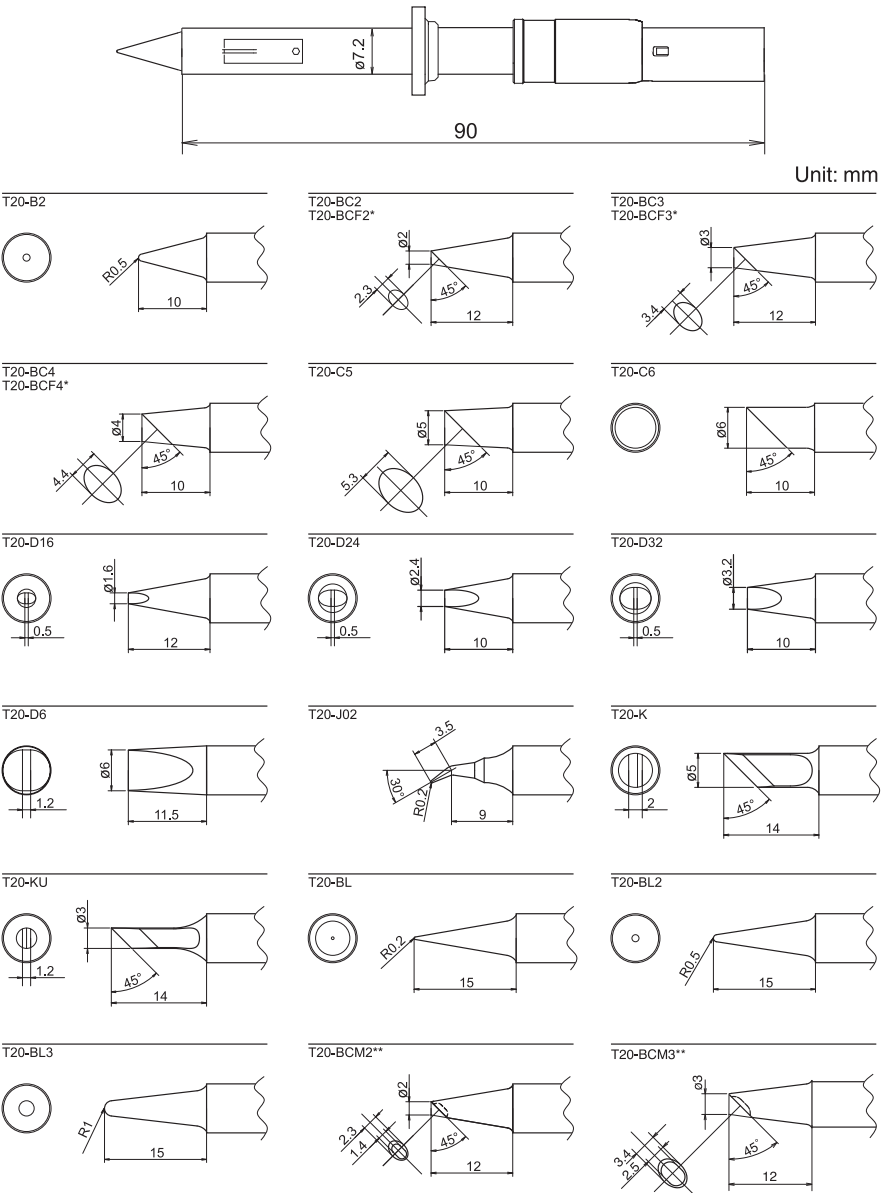
● Tip error **[-- ?]** is displayed.

**ACTION** : Contact your HAKKO representative.

● Tip error **[-- 2]** is displayed.

**CHECK** : Is the heater broken?  
**ACTION** : Replace the tip with a new one.  
If tip error **[-- 2]** continues to be displayed after replacing the tip, contact your HAKKO representative.

5. TIP STYLES



\*Tinned on the soldering surface only.

MEMO