

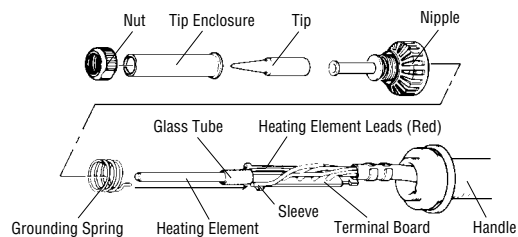
No.A1321

# HAKKO 900 907 908 913 914 951 952

No.A1321(900M • 900L • 907 • 908 • 913 • 914 • 951 • 952)

## Replacing the Heating Element

### ■ 900M/L



#### 1 Checking the heating element

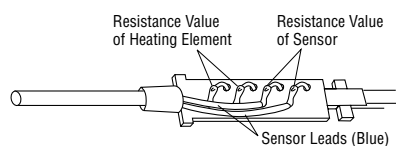
1. Remove the nut, tip enclosure, tip and nipple.

**CAUTION** Be sure to remove the nut before removing the nipple. Removing the nipple first could cause the heater leads to twist and cause a short-circuit.

2. Push the cord asse'y in the direction of the tip and remove the terminal board from the handle. For 900M-ESD/900L-ESD, move the terminal tube if it is covered with the tube.
3. Remove the grounding spring from the sleeve.
4. Measure the resistance values at the sensor and heating element of the terminal board in normal condition.

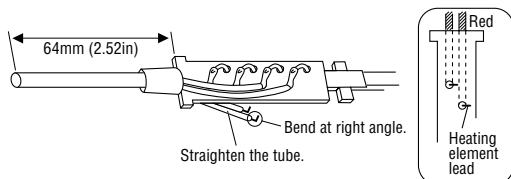
Resistance value of heating element (red)	2.5-3.5Ω
Resistance value of sensor (blue)	43-58Ω

If the value you get is outside this range, replace the heating element.  
If the resistance value is normal, the cord asse'y may be broken.



#### 2 Replacing the heating element

1. Desolder the heating element leads and sensor leads.
2. Remove the old heating element and replace it with a new one.
3. Bend the leads at right angle.
4. Pass the leads through the terminal, push the lead down inside the terminal board, then solder it. Be sure that the insulation covering the lead is long enough to leave NO exposed wire. Cut the wire to leave no more than 1 to 2mm from the solder joint. Move the tube back to its original position for ESD safe type.
  - Solder in the joints must be visible from both sides of the terminal board.
  - There is no polarity between leads of the same colors.

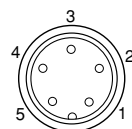


#### 3 Inspection after replacement and reassemble

After replacing the heating element,

1. Measure the resistance value between pins 4 & 1 and 4 & 2, and pins 5 & 1 and 5 & 2. If it is not infinite, the heating element and sensor are touching.
2. Measure the resistance value 'a', 'b', and 'c' to confirm that the leads are not twisted and that the grounding spring is properly connected.

a	Between pins 4 & 5 (Heating Element)	2.5 - 3.5Ω (Normal)
b	Between pins 1 & 2 (Sensor)	43 - 58Ω (Normal)
c	Between pin 3 & Tip	Under 2Ω



#### 4 Recalibrate the temperature

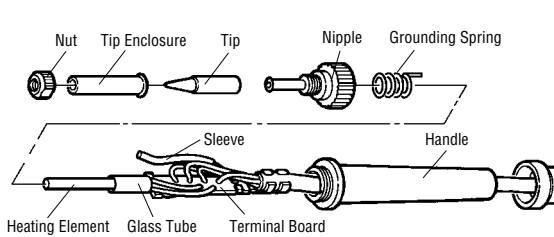
To ensure accurate soldering temperatures, always calibrate the temperature after replacing the heating element. Connect your iron/gun to the station for calibration.

For HAKKO 926 • 928 • 936 • 700 • 701 • 702 • 702B

1. Set the temperature control knob to 400°C (750°F).
2. Turn the power switch on and wait until the L.E.D. heater lamp comes on and off.
3. Using a straight-edge (-) or small cross point screwdriver, adjust the temperature calibrator (marked "CAL") so that the tip temperature is 400°C (750°F).

\* Turn the temperature calibrator clockwise to increase the temperature and counterclockwise to reduce the temperature.  
\* Using the supplied hex wrench, remove the screw (M4x5mm) labeled "CAL" on the bottom of the station, and then turn the power on (HAKKO 927).  
\* Remove the CAL pot plug before calibrating HAKKO 936/937.  
\* We recommend the HAKKO 191/192 thermometer for measuring the tip temperature.

### ■ 907/908/913/914



\*HAKKO 913 and 914 are different from HAKKO 907 and 908 in shape of the handle.

#### 1 Checking the heating element

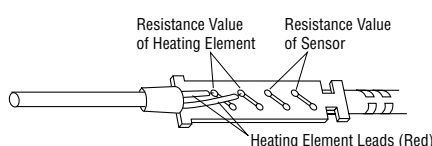
1. Remove the nut, tip enclosure, tip and nipple.

**CAUTION** Be sure to remove the nut before removing the nipple. Removing the nipple first could cause the heater leads to twist and cause a short-circuit.

2. Push the cord asse'y in the direction of the tip and remove the terminal board from the handle.
3. Remove the grounding spring from the sleeve.
4. Measure the resistance values at the sensor and heating element of the terminal board in normal condition.

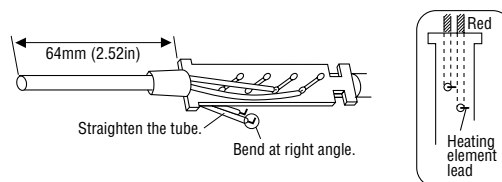
Resistance value of heating element (red)	2.5-3.5Ω
Resistance value of sensor (blue)	43-58Ω

If the value you get is outside this range, replace the heating element.  
If the resistance value is normal, the cord asse'y may be broken.



#### 2 Replacing the heating element

1. Desolder the heating element leads and sensor leads.
2. Remove the old heating element and replace it with a new one.
3. Bend the leads at right angle.
4. Pass the leads through the terminal, push the lead down inside the terminal board, then solder it. Be sure that the insulation covering the lead is long enough to leave NO exposed wire. Cut the wire to leave no more than 1 to 2mm from the solder joint.
  - Solder in the joints must be visible from both sides of the terminal board.
  - There is no polarity between leads of the same colors.

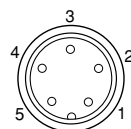


#### 3 Inspection after replacement and reassemble

After replacing the heating element,

1. Measure the resistance value between pins 4 & 1 and 4 & 2, and pins 5 & 1 and 5 & 2. If it is not infinite, the heating element and sensor are touching.
2. Measure the resistance value 'a', 'b', and 'c' to confirm that the leads are not twisted and that the grounding spring is properly connected.

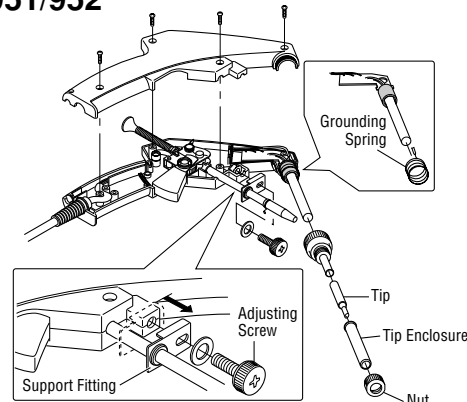
a	Between pins 4 & 5 (Heating Element)	2.5 - 3.5Ω (Normal)
b	Between pins 1 & 2 (Sensor)	43 - 58Ω (Normal)
c	Between pin 3 & Tip	Under 2Ω



For HAKKO 927 • 937

1. Turn the power switch on and insert the card. Set the temperature to 400°C (750°F).
2. Wait until the digital display indicates a tip temperature of 400°C (750°F).
3. Using a straight-edge (-) or small cross point screwdriver, adjust the temperature calibrator (marked "CAL") so that the tip temperature is 400°C (750°F).

### ■ 951/952



#### 1 Checking the heating element

1. Remove the adjusting screw and keep the support fitting apart from the housing.

**CAUTION** Be sure to remove the nut before removing the nipple. Removing the nipple first could cause the heater leads to twist and cause a short-circuit.

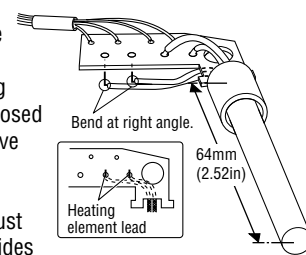
2. Remove the four screws securing the housing and open the housing.
3. Remove the grounding spring from the sleeve.
4. Measure the resistance values at the sensor and heating element of the terminal board in normal condition.

Resistance value of heating element (red)	2.5-3.5Ω
Resistance value of sensor (blue)	43-58Ω

If the value you get is outside this range, replace the heating element.  
If the resistance value is normal, the cord asse'y may be broken.

#### 2 Replacing the heating element

1. Desolder the heating element leads and sensor leads.
2. Remove the old heating element and replace it with a new one.
3. Bend the leads at right angle.
4. Pass the leads through the terminal, push the lead down inside the terminal board, then solder it. Be sure that the insulation covering the lead is long enough to leave NO exposed wire. Cut the wire to leave no more than 1 to 2mm from the solder joint.
  - Solder in the joints must be visible from both sides of the terminal board.
  - There is no polarity between leads of the same colors.

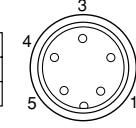


#### 3 Inspection after replacement and reassemble

After replacing the heating element,

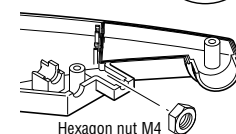
1. Measure the resistance value between pins 4 & 1 and 4 & 2, and pins 5 & 1 and 5 & 2. If it is not infinite, the heating element and sensor are touching.
2. Measure the resistance value 'a', 'b', and 'c' to confirm that the leads are not twisted and that the grounding spring is properly connected.

a	Between pins 4 & 5 (Heating Element)	2.5 - 3.5Ω (Normal)
b	Between pins 1 & 2 (Sensor)	43 - 58Ω (Normal)
c	Between pin 3 & Tip	Under 2Ω



**CAUTION**

When reassembling, match the convex part of the hexagon nut to concave part of the housing.



**NOTE** When repairs are needed, please send both the soldering iron and the station to your sales agent.  
\* Specifications subject to change without notice.

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