



HAKKO 373 SELF FEEDER

SELF FEEDER Instruction Manual



Thank you for purchasing the HAKKO 373 Self Feeder. Please read this manual carefully before operating the HAKKO 373. Store the manual in a safe, easily accessible place for future reference.



CAUTION: You must install the Solder Dia. Adjustment Ring before use.

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Precautions



- Setting up should be done while the soldering iron is cool, or you may get burnt.
- Do not force the guide pipe bend or turn as this may result in damage.
- Do not operate with tube bending or holding in sharp angle. It may cause to clogging.
- Input of switching is no-voltage input. Do not apply voltage to the jack for switch.
- Periodically, remove the guide pipe and clean out clogged flux.
- Do not force the adjustment screw to adjust the amount of solder return. It may cause to damage.
- If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified person in order to avoid personal injury or damage to the unit.

Specifications

-Usable Solder

Usable solders are as follows. Some of the parts should be changed according to the diameter of solder desired to use.

| | | |
|----------------|--------|--|
| Dia. of solder | (mm) | 0.6, 0.65, 0.8, 1.0, 1.2, 1.6 |
| | (inch) | 0.024, 0.025, 0.031, 0.039, 0.047, 0.063 |

Maximum quantity of usable solder is 1 kg (2.2 pounds).

-Usable Soldering Iron

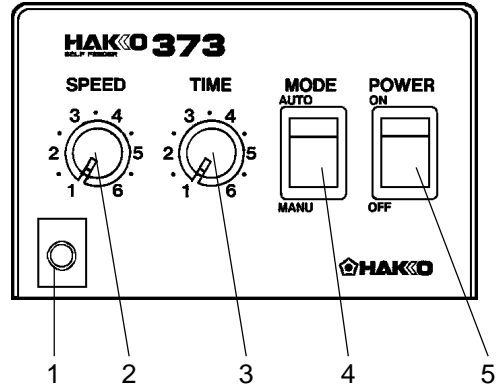
| Soldering Iron | Remarks |
|--------------------------------------|-------------------------------------|
| HAKKO 900M (For HAKKO 926, 927, 928) | |
| HAKKO 900L (For HAKKO 926, 927, 928) | |
| HAKKO 902 (For HAKKO 931) | |
| HAKKO 903 (For HAKKO 939) | |
| HAKKO 904 (For HAKKO 929) | |
| HAKKO DASH | |
| HAKKO MACH-I | Operationable only with Foot Switch |
| HAKKO 907 (For HAKKO 936, 937) | |
| HAKKO 908 (For HAKKO 936, 937) | |

-Specifications

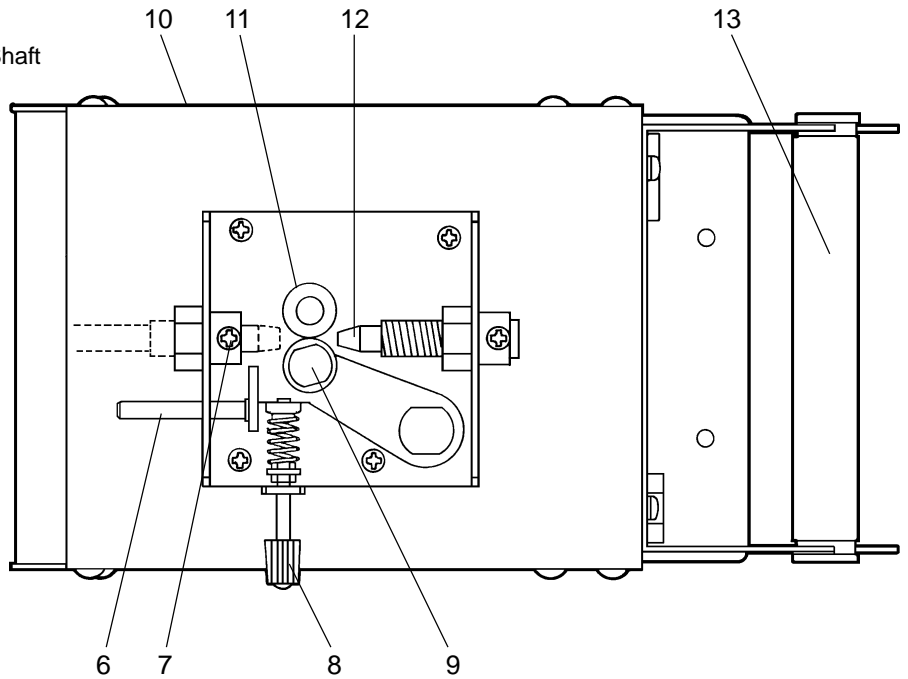
| | |
|------------------------|----------------------------------|
| Power Consumption | 6 W |
| Motor Rate | DC 24 V 3.2W |
| Solder Feed Time | 0~7 sec. |
| Solder Feed Speed | 4.5~26 mm (0.14~1 in.)/sec. |
| Solder Feed Quantity | 0~182 mm (0~7.2 in.) |
| Solder Return Quantity | 0~5 mm (0~0.2 in.) (Fixed Speed) |
| Outer Dimensions | 107(W) x 110(H) x 215(D) |
| Weight | Approx.1.5 kg/3.3 pounds |

Names of Parts

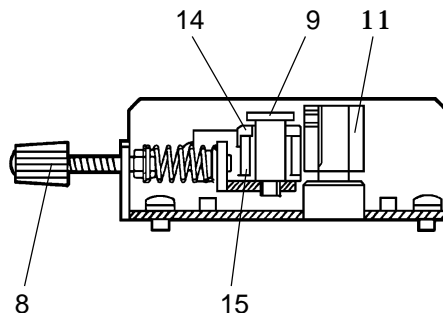
- 1. Jack for Switch
- 2. Feed Speed Control Knob
- 3. Feed Time Control Knob
- 4. Mode Switch
- 5. Power Switch



- 6. Release Lever
- 7. Securing Screw
- 8. Tension Adjustment Knob
- 9. Tension Gear Guide Shaft
- 10. Adjustment for the amount of solder return
- 11. Feed Gear
- 12. Supply Nozzle
- 13. Solder Bobbin Shaft



- 14. Solder Dia. Adjustment Ring
- 15. Tension Gear

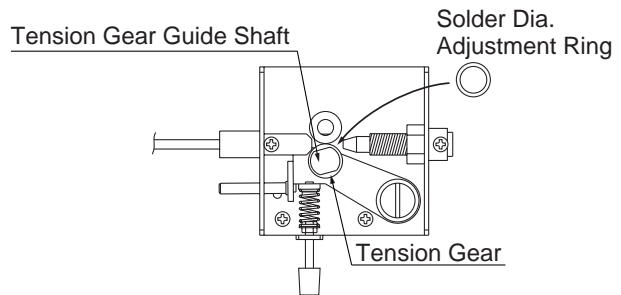


Setting Up the HAKKO 373

- Setting up should be done while the soldering iron is cool, or you may get burnt.
- Do not force the guide pipe bend or turn as this may result in damage.
- Do not operate with tube bending or holding in sharp angle. It may cause to clogging.

1. Install the Solder Dia. Adjustment Ring

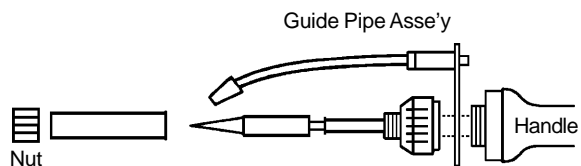
1. Remove the tension gear guide shaft.
2. Attach the solder dia. adjustment ring according to the diameter of your desired solder and attach the tension gear guide shaft.



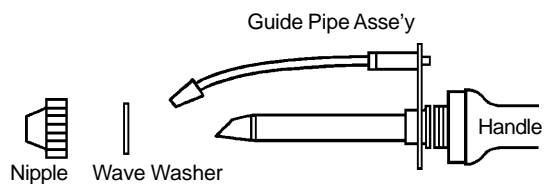
2. Setting the Guide Pipe Asse'y

Set the guide pipe asse'y between the nipple (or nut) and handle, and secure it. Washer may need depend on the type of iron. Please refer to the following figure.

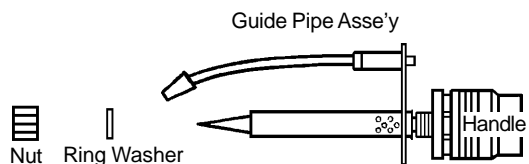
HAKKO 900, HAKKO DASH & 907, 908



HAKKO 902, 903, 904



HAKKO MACH-I



3. Setting the Tube Unit

(a) Attach the Tube to Guide Pipe Assembly.

(b) Set the Attachment on the Handle of Soldering Iron.

The tube is double structure. Insert the inside tube into the hole of the connection, and the outside black tube should fully cover the screw part of the connection. Be sure that not to bend the tube.

NOTE The Attachment is not necessary if you use HAKKO MACH-I

- i. Position the attachment on the handle of iron. Decide which outlet of attachment should use for the tube as the tube can be pulled out from either way of the attachment. Find the best position where can connect the tube straight to the pipe. Be careful not to damage the inner wiring if replace the tube inside of the attachment.
- ii. Secure the attachment. Set the attachment on the handle securely with clips and adhesive tape on backside of the attachment. Refer to the following figure on the setting position of the attachment and the guide pipe. Pay attention on the setting angle of the guide pipe and the attachment.

4. Connect the Feeding Nozzle

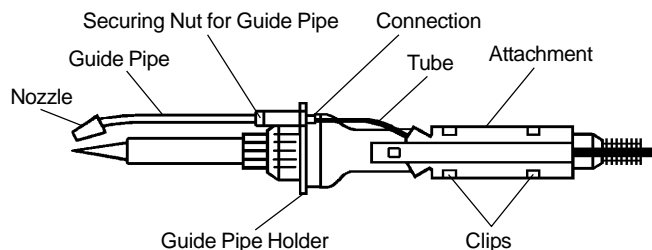
Insert the feeding nozzle into the feeding unit on the top of the station, and secure it with screw.

NOTE Securing the screw excessively may break the feeding nozzle.

5. Connect the Mini-plug

Insert the mini-plug branching from the tube unit into the jack of the station.

NOTE Connect the mini-plug of foot switch to the station if you use HAKKO MACH-I

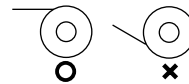


Setting Up the HAKKO 373

6. Setting the Solder

Set a new solder after pull the old solder out when the old one left in tube.

- (a) Remove the tension gear guide shaft. And attach the solder dia. adjustment ring according to the diameter of your desired solder.
- (b) Insert the solder bobbin shaft in the solder bobbin and mount it on rear of the station. Solder should be fed over the bobbin as the following figure.



- (c) Insert the solder from the supply nozzle.
- (d) With pressing release lever, put the inserted solder of approx. 10 mm/0.4 in. into the feeding nozzle through between tension gears.
- (e) Power switch on, and set MODE to **MANUAL**.
- (f) Press the trigger switch, and feed the solder.

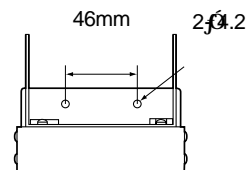
7. Changing the Solder Diameter

Replace the solder dia. adjustment ring, when using the soldering iron continuously but desire to change the diameter of solder. The guide pipe asse'y should change according to the diameter of solder. Refer to the section "Replacement of Parts".

- (a) Power switch off. Open the release lever and roll back the left solder to the bobbin.
- (b) Remove the tension gear guide shaft, and replace the solder dia. adjustment ring according to desired solder dia. Remove the tension gear guide shaft turning with a spanner or pliers.
- (c) Replace the guide pipe asse'y if it's necessary.

8. Use in Vertical

Vertical use is available. Fixing in vertical is as following figure.



Operation

Solder will be fed by pressing the feed switch (or foot switch).

-MODE

-Setting for Feeding Time and Speed

-Adjustment for the Amount of Solder Return

-Adjustment of Tension

-AUTO MODE

If you press the feed switch, solder will be fed with set time and speed independently of length of pressing time.

-MANUAL MODE

Solder will be fed with set speed during pressing the feed switch.

Set the speed before the time. For the setting speed, both **AUTO** & **MANUAL** are effective, but only **AUTO** is effective for setting time.

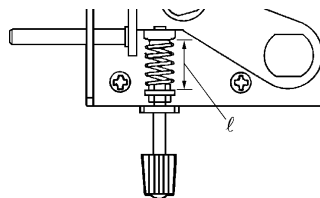
After feed solder, specific length of solder can be returned. This solder return function permits use for simple robots. Amount of solder return is adjustable within 0~13 mm (0~0.51 in.). Solder should be rolled back if the amount of solder return is bigger than the amount of solder feed. Please set the amount of solder return as small as possible. If the tip of the returning solder reaches to the guide pipe, flux will easily accumulate at this point. Be sure that it will not happen.

Insert a driver into a adjustment hall on the side of the station. Turn left for smaller and turn right for bigger amount.

When adjust the tension, be sure that not the gear to be slipped during feed solder, or do not force to feed solder slipping gear when solder clog.

Set the tension gear loosely for fine solder (ϕ 0.6mm, 0.8mm/0.024 in., 0.031 in.). Refer to the following chart.

| Solder Dia. | ϕ 0.6mm | ϕ 1.0mm | ϕ 1.6mm |
|-------------|--------------|--------------|--------------|
| l | maximum | 14mm | 10mm |

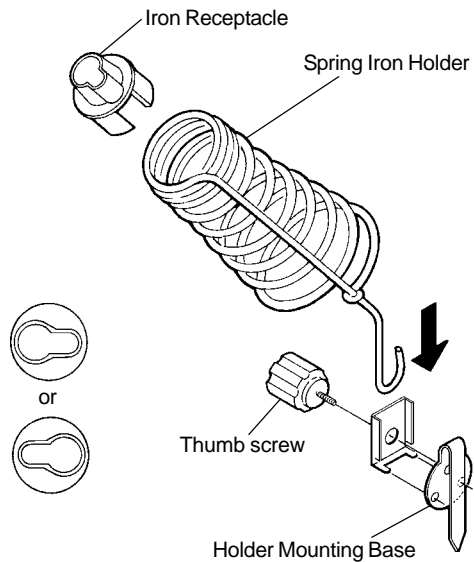


Operation

-Usage of Iron Holder

- HAKKO 926

If you use HAKKO 926, refer to the following figure to set the iron holder. (As for the HAKKO 926, the setting is available only on it's left.)



Set the iron receptacle in the spring iron holder keeping the iron tip and the guide pipe horizontally.

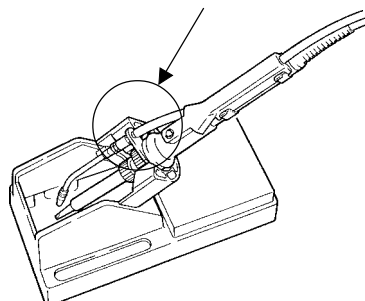
- HAKKO 631

Simply replace the iron holder if you use with iron holder HAKKO 631 for except HAKKO 926.

- HAKKO 907, 908

Place the soldering iron in the iron holder so that the right side of the guide pipe holder fits to the right side of the iron receptacle.

When you want to fit it to the left side of the iron receptacle, remove the securing nut for the guide pipe and the connection; then reattach them in the opposite side.



Replacement of Parts

1. When you change the Solder Diameter

Please replace the parts indicated on the following chart when you change solder diameter.

| Changing matter | Solder Dia. Adjustment Ring | Nozzle | Guide Pipe | Tube Unit |
|---|-----------------------------|---------|------------|-----------|
| From the range of 0.6~1.0mm to the range of 0.6~1.0mm | replace | replace | same | same |
| From the range of 1.2~1.6mm to the range of 1.2~1.6mm | replace | replace | same | same |
| From the range of 0.6~1.0mm to the range of 1.2~1.6mm | replace | replace | replace | replace |
| From the range of 1.2~1.6mm to the range of 0.6~1.0mm | replace | replace | replace | replace |

2. When you change the Soldering Iron

Please replace the tube unit and guide pipe asse'y, when you change the soldering iron. It is not necessary to replace the parts if the items are in the same frame in the following chart. Foot switch is necessary if you use the HAKKO MACH-Ⅰ

| | | | | |
|-------------------|------------------------------|---------------|---------------------|---------------------------|
| Tube Unit | 900M, 900L, N452, N453, N454 | 902, 903, 904 | 918, 920, 921, 922 | 907, 908 |
| Guide Pipe Asse'y | N452, N453, 900M | N454, 900L | 920, 921, 922 918 | 902, 903, 904 907 908 |

Options & Replacement Parts

| Part No. | Part Name | Dia. of Solder | Soldering Iron |
|----------|-----------------------------|----------------|------------------|
| B1626 | Solder Dia. Adjustment Ring | 0.6, 0.65mm | - |
| B1627 | Solder Dia. Adjustment Ring | 0.8mm | - |
| B1628 | Solder Dia. Adjustment Ring | 1.0mm | - |
| B1629 | Solder Dia. Adjustment Ring | 1.2mm | - |
| B1630 | Solder Dia. Adjustment Ring | 1.6mm | - |
| B1631 | Tube Unit A/with Switch | 0.6~1.0mm | 900M, 900L, DASH |
| B1672 | Tube Unit B/with Switch | 1.2~1.6mm | |
| B1632 | Tube Unit C | 0.6~1.0mm | MACH-I |
| B1673 | Tube Unit D | 1.2~1.6mm | |
| B1957 | Tube Unit E/with Switch | 0.6~1.0mm | 902, 903, 904 |
| B1958 | Tube Unit F/with Switch | 1.2~1.6mm | |
| B2143 | Tube Unit J/with Switch | 0.6~1.0mm | 907, 908 |
| B2144 | Tube Unit K/with Switch | 1.2~1.6mm | |
| B1674 | Guide Pipe Asse'y | 0.6, 0.65mm | 900M, N452, N453 |
| B1675 | Guide Pipe Asse'y | 0.8mm | |
| B1676 | Guide Pipe Asse'y | 1.0mm | |
| B1677 | Guide Pipe Asse'y | 1.2mm | |
| B1678 | Guide Pipe Asse'y | 1.6mm | |
| B1679 | Guide Pipe Asse'y | 0.6, 0.65mm | |
| B1680 | Guide Pipe Asse'y | 0.8mm | 900L, N454 |
| B1681 | Guide Pipe Asse'y | 1.0mm | |
| B1682 | Guide Pipe Asse'y | 1.2mm | |
| B1683 | Guide Pipe Asse'y | 1.6mm | |
| B1684 | Guide Pipe Asse'y | 0.6, 0.65mm | |
| B1685 | Guide Pipe Asse'y | 0.8mm | |
| B1686 | Guide Pipe Asse'y | 1.0mm | 920, 921, 922 |
| B1687 | Guide Pipe Asse'y | 1.2mm | |
| B1688 | Guide Pipe Asse'y | 1.6mm | |
| B1689 | Guide Pipe Asse'y | 0.6, 0.65mm | |
| B1690 | Guide Pipe Asse'y | 0.8mm | |
| B1691 | Guide Pipe Asse'y | 1.0mm | |
| B1692 | Guide Pipe Asse'y | 1.2mm | 918 |
| B1693 | Guide Pipe Asse'y | 1.6mm | |

Options & Replacement Parts

| Part No. | Part Name | Dia. of Solder | Soldering Iron |
|----------|----------------------|----------------|-------------------------|
| B1694 | Guide Pipe Asse'y | 0.6, 0.65mm | 902, 903, 904 |
| B1695 | Guide Pipe Asse'y | 0.8mm | |
| B1696 | Guide Pipe Asse'y | 1.0mm | |
| B1697 | Guide Pipe Asse'y | 1.2mm | |
| B1698 | Guide Pipe Asse'y | 1.6mm | |
| B2146 | Guide Pipe Asse'y | 0.6, 0.65mm | 907 |
| B2147 | Guide Pipe Asse'y | 0.8mm | |
| B2148 | Guide Pipe Asse'y | 1.0mm | |
| B2149 | Guide Pipe Asse'y | 1.2mm | |
| B2150 | Guide Pipe Asse'y | 1.6mm | |
| B2151 | Guide Pipe Asse'y | 0.6, 0.65mm | 908 |
| B2152 | Guide Pipe Asse'y | 0.8mm | |
| B2153 | Guide Pipe Asse'y | 1.0mm | |
| B2154 | Guide Pipe Asse'y | 1.2mm | |
| B2155 | Guide Pipe Asse'y | 1.6mm | |
| B1699 | Nozzle | 0.6, 0.65mm | - |
| B1700 | Nozzle | 0.8mm | - |
| B1701 | Nozzle | 1.0mm | - |
| B1702 | Nozzle | 1.2mm | - |
| B1703 | Nozzle | 1.6mm | - |
| B1704 | Guide Pipe A | 0.6~1.0mm | 900M, 920, 921, 922 |
| B1705 | Guide Pipe B | 1.2~1.6mm | |
| B1706 | Guide Pipe C | 0.6~1.0mm | 900L, 918, N454, 908 |
| B1707 | Guide Pipe D | 1.2~1.6mm | |
| B1708 | Guide Pipe E | 0.6~1.0mm | 902, 903, 904 |
| B1709 | Guide Pipe F | 1.2~1.6mm | |
| B1647 | Spring Iron Holder A | - | 926 |
| B1648 | Spring Iron Holder B | - | 927, 928, 929, 931 |
| B1649 | Foot Switch | - | - |
| B1650 | Clip A/1 pc | - | 900M, 900L, DASH |
| B1956 | Clip B/1 pc | - | 902, 903, 904 |
| B2158 | Clip C/1 pc | - | 907, 908 |
| 631-07 | HAKKO631 Iron Holder | - | DASH, MACH-I |

·900M, 900L are Iron Parts for HAKKO 926, 927, 928.

·902 is Iron Part for HAKKO 931.

·903 is Iron Part for HAKKO 929 (120V), 939.

·904 is Iron Part for HAKKO 929 (100, 110, 220, 230, 240V).

·918, 920, 921, 922 are Parts No. of HAKKO MACH-I series. MACH-I means applicable for all items of HAKKO MACH-I series.

·N452, N453, N454 are Parts No. of HAKKO DASH series. DASH means applicable for all items of HAKKO DASH series.

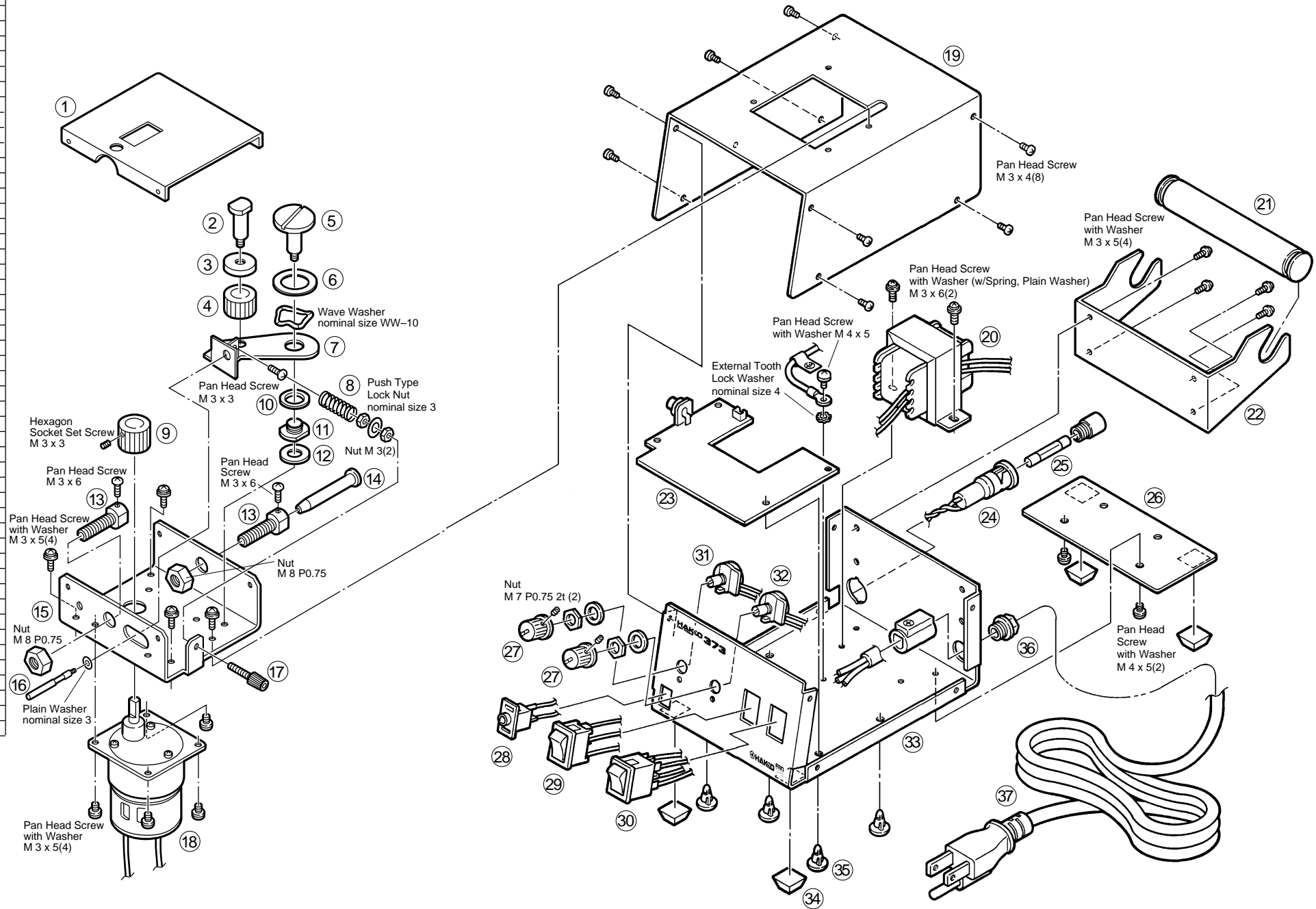
·907, 908 are Iron Parts for HAKKO 936, 937.

Parts List

Parts List

| Item No. | Part No. | Part Name | Description |
|----------|----------|--------------------------------------|--------------------------------|
| 1 | B1897 | Cover for Feeding Unit | |
| 2 | B1882 | Tension Gear Guide Shaft | |
| 3 | B1626 | Solder Dia. Adjustment Ring | for 0.6, 0.65mm |
| | B1627 | Solder Dia. Adjustment Ring | for 0.8mm |
| | B1628 | Solder Dia. Adjustment Ring | for 1.0mm |
| | B1629 | Solder Dia. Adjustment Ring | for 1.2mm |
| | B1630 | Solder Dia. Adjustment Ring | for 1.6mm |
| 4 | B1885 | Tension Gear | |
| 5 | B1886 | Tension Lever Fixing Shaft | |
| 6 | B1908 | Washer | for Wave Washer |
| 7 | B1894 | Tension Lever | w/Screw |
| 8 | B1883 | Tension Spring | |
| 9 | B1881 | Feed Gear | w/Screw |
| 10 | B1887 | Washer | for Tension Lever Fixing Guide |
| 11 | B1888 | Tension Lever Fixing Guide | |
| 12 | B1889 | Tension Lever Fixing Washer | |
| 13 | B1890 | Nozzle Support | w/Nut, Screw |
| 14 | B1892 | Supply Nozzle | |
| 15 | B1891 | Motor Fixing Plate | |
| 16 | B1893 | Release Lever | w/Washer |
| 17 | B1884 | Tension Adjustment Knob | w/Nuts |
| 18 | B1880 | Motor | |
| 19 | B1898 | Cover | |
| 20 | B1900 | Transformer | 100V-24V |
| | B1909 | Transformer | 110V-24V |
| | B1910 | Transformer | 120V-24V |
| | B1911 | Transformer | 220, 230V-24V |
| | B1912 | Transformer | 240V-24V |
| 21 | B1901 | Solder Bobbin Shaft | |
| 22 | B1902 | Solder Bobbin Support | |
| 23 | B1899 | P.W.B. | w/Potentiometers |
| 24 | B1041 | Fuse Holder | w/o Fuse |
| | B1134 | Fuse Holder (S) | w/o Fuse |
| 25 | B1907 | Fuse | 125V-1A/100,110,120V |
| | B1138 | Fuse | 250V-1A/220,230,240V |
| | B1139 | Fuse | 250V-1A (S) /220,230V |
| 26 | B1895 | Chassis Support Plate | w/Rubber Stoppers |
| 27 | B1904 | Knob | |
| 28 | B1903 | Mini Jack | |
| 29 | B1906 | Switch | |
| 30 | B1487 | Power Switch | |
| 31 | B1197 | Potentiometer for Feed Speed Control | 5KΩ, w/Nut |
| 32 | B1905 | Potentiometer for Feed Time Control | 1MΩ, w/Nut |
| 33 | B1896 | Chassis | w/Rubber Stoppers |
| 34 | B1037 | Rubber Stopper | Set of 4 |
| 35 | B1114 | Locking Spacer | Set of 4 |
| 36 | B1208 | Cord Stopper | |
| 37 | B1163 | Power Cord | 3 Core & American Plug, 100V |
| | B1007 | Power Cord | 3 Core But No Plug |
| | B1168 | Power Cord | 3 Core & American Plug |
| | B1169 | Power Cord | 3 Core & European Plug |
| | B1214 | Power Cord | 3 Core & Australian Plug |
| | B1964 | Power Cord | 3 Core & BS Plug |
| | B2087 | Power Cord | 3 Wire & BS Plug (CE) |

Note: Spare or repair parts do not include mounting screws, if they are not listed on the description. Screws must be ordered separately.



Troubleshooting Guide

If the solder can not be fed smoothly, please check following points.

- Are you using proper parts according to the diameter of solder?
- Did you adjust the tension properly?
- Isn't the tube bent or transformed?
- Isn't solder adhered at the feed gear or the tension gear?
- Isn't the nozzle clogged with flux?
- Is the mini-plug correctly connected?
- Isn't the fuse blown?
- Is the power cord correctly connected?

