

# USER MANUAL

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## AF-KIT AUTO SOLDER FEEDER KIT

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## WARRANTY

All equipment and accessories are warranted by Thermaltronics to be free from defects in materials and workmanship as follows:

<b>Part Number</b>	<b>Description</b>	<b>Warranty Period</b>
TMT-AF100	Auto Solder Feeder	1 Year
AF-HPK-1, AF-HPK-2, AF-HPK-3	Guide Pipe Assembly	30 Days
AF-HDL-1, AF-HDL-2, AF-HDL-3	Hand Piece Holder	1 Year
AF-NOZ-1	Nozzle Pack	30 Days
AF-PEDAL-1	Auto Feeder Switch	1 Year
AF-POWER-1	AC Power Adapter	1 Year

This warranty does not apply to equipment or goods which have been tampered with, misused, damaged through improper installation or used in a manner contrary to supplier instructions. Normal "wear and tear" of equipment or goods is not covered by this warranty. If the product should become defective within the warranty period, Thermaltronics will repair or replace it free of charge at its sole option. Warranty period is from the date of purchase by the original owner. If the date of purchase cannot be substantiated the date of manufacture will be used as the start of the warranty period.

### **WARNING:**

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

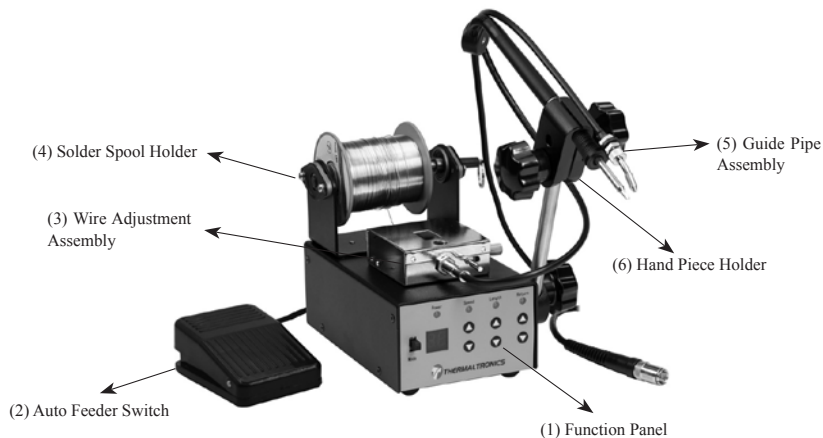
## AF-KIT SPECIFICATIONS

Input Line Voltage:	100-240 VAC
Output Line Voltage:	18VDC, 2A
Solder Feed Time:	0 - 3 seconds
Solder Feed Speed:	4.6 - 46mm/sec
Solder Feed Quantity:	0 - 14mm
Solder Return Quantity:	0 - 14mm
Solder Feeder Mode:	Single / Continuous
Usable Solder Diameter:	Φ0.5, Φ0.6, Φ0.8, Φ1.0, Φ1.2
Size (W x H x D):	150mm x 165mm x 130mm
Weight:	1.5 KG
Input Line Frequency:	50/60 Hz
Certification Marks:	CE

## INTRODUCTION

Congratulations on your purchase of the AF-KIT auto feeder kit. This unit has been tested and inspected by Thermaltronics prior to shipment, and with proper maintenance will give you years of reliable performance.

## SYSTEM FEATURES



# SYSTEM FEATURES

## Functions & Features

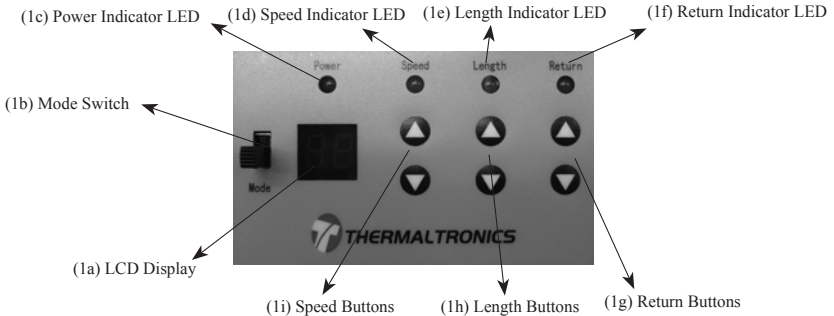
- (1) Function Panel - Allows operation of the auto solder feeder including feeder mode selection (single / continuous), solder feed speed, solder feed quantity and solder return quantity. (See: Control Panel - Function Buttons)
- (2) Auto Feeder Switch - Pressing the switch will feed solder to the tip based on the settings set on the Function Panel.
- (3) Wire Adjustment Assembly - Allows adjust of the solder wire feed and solder wire tension.
- (4) Solder Spool Holder - Utilizes a ball bearing movement system to easily change and hold solder wire spools.
- (5) Guide Pipe Assembly - Tube assembly for guiding the solder wire from the Solder Spool Holder to the solder tip.
- (6) Hand Piece Holder - Place the soldering hand piece into the holder. Use the knobs to loosen or secure the hand piece in place.

# SAFETY PRECAUTIONS

## Warning

1. Use this equipment in a well-ventilated area, away from combustible equipment.
2. Place handle in stand when not in use.
3. Do not damage the guide pipe by bending or twisting it.
4. Do not allow the solder tube to be bent at a severe angle. Otherwise, it will become clogged with solder.
5. Handle with care.
  - Never drop or sharply jolt the unit.
  - The unit contains delicate parts that can be damaged if subjected to physical force.
  - Do not spill any liquids into the unit.
6. Turn off the power when the unit is not in use.
7. Do not alter the unit in any manner.
8. Use only genuine replacement parts.
9. Do not work on electrically live parts.
10. Do not leave the appliance unattended when it is on.
11. Be careful with the fumes produced when soldering.
12. Do not apply excessive force when installing and removing nozzles.
13. Do not use pliers to pull the edges of the nozzle.
14. Do not use the units for any purpose other than soldering or rework. Incorrect use may cause fire.

## FUNCTION PANEL



### Function Panel

(1a) LCD Display - Displays the current value set in two digit form as follows:

- If Speed Indicator LED light is on, Speed display value can be between 0 and 9
- If Length Indicator LED light is on, Length display value can be between 00 and 99
- If Return Indicator LED light is on, Return display value can be between 00 and 99

(1b) Mode Switch

- Single Mode - Pushing the switch up will set the feeder to Single mode. In Single Mode, a predetermined amount of solder will be fed at the set speed, length and return feed when the (2) Auto Feeder Switch is activated.
- Continuous Mode - Pushing the switch down will set the feeder to Continuous mode. In Continuous Mode, solder will be fed continuously at the set speed as long as the (2) Auto Feeder Switch is activated.

(1c) Power Indicator LED - Indicates if the unit is turned on.

(1d) Speed Indicator LED - When indicator light is on, the LCD Display will display the Speed value.

(1e) Length Indicator LED - When indicator light is on, the LCD Display will display the Length value.

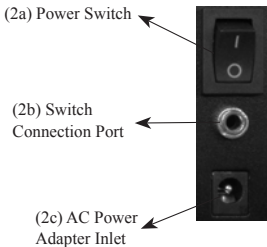
(1f) Return Indicator LED - When indicator light is on, the LCD Display will display the Return value.

(1g) Return Buttons - Increase or decrease the set return solder wire length. (Value can be between 00 and 99)

(1h) Length Buttons - Increase or decrease the set forward solder wire length. (Value can be between 00 and 99)

(1i) Speed Buttons - Increase or decrease the set speed. (Value can be between 0 and 9)

## BACK PANEL



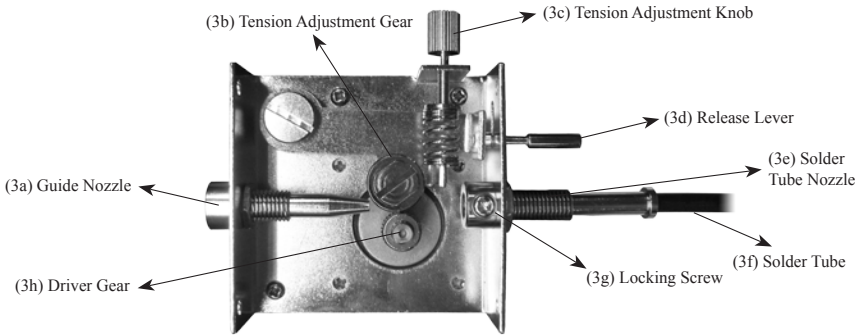
### Back Panel

(2a) Power Switch - Move up to switch ON, move down to switch OFF.

(2b) Switch Connection Port - Connect the AF-PEDAL-1 Auto Feeder Switch to this port.

(2c) AC Power Adapter Inlet - Connect the AF-POWER-1 AC Power Adapter to this inlet.

## WIRE ADJUSTMENT ASSEMBLY



### Wire Adjustment Assembly

(3a) Guide Nozzle - Solder wire is guided from the (4) Solder Spool Holder into the (3) Wire Adjustment Assembly through the Guide Nozzle.

(3b) Tension Adjustment Gear - Along with the (3h) Driver Gear, the two gears push solder wire through the (3) Wire Adjustment Assembly into the (5) Guide Pipe Assembly.

(3c) Tension Adjustment Knob - Adjusts the tension of the (3b) Tension Adjustment Gear. Note: Tension should be set lower for small diameter solder wires and higher for larger diameter solder wires.

(3d) Release Lever - Push back the release lever to release the (3b) Tension Adjustment Gear when switching solder wire.

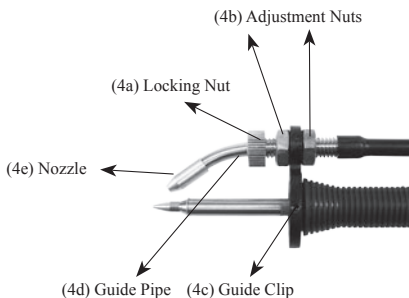
(3e) Solder Tube Nozzle - Along with the (3g) Locking Screw are used to lock the (3f) Solder Tube in place.

(3f) Solder Tube - A conduit to allow solder wire to pass from the (3) Wire Adjustment Assembly to the Guide Pipe.

(3g) Locking Screw - Used to secure the (3f) Solder Tube in place inside the (3e) Solder Tube Nozzle.

(3h) Driver Gear - Along with the (3b) Tension Adjustment Gear, the two gears push solder wire through the (3) Wire Adjustment Assembly into (5) Guide Pipe Assembly.

## GUIDE PIPE ASSEMBLY



### Guide Pipe Assembly

(4a) Locking Nut - Fasten securely to lock the (4d) Guide Pipe. Loosen to adjust the (4d) Guide Pipe length.

(4b) Adjustment Nuts - Used to adjust the (4d) Guide Pipe forward and backwards. Tighten to secure in place.

(4c) Guide Clip - Used to secure the Guide Pipe Assembly to the Soldering Hand Piece.

(4d) Guide Pipe - Feeds solder wire to the soldering tip.

(4e) Nozzle - Change the nozzle when using different solder wire diameters.

## UNPACKING/ASSEMBLY/OPERATION

Please read this manual and follow the directions before using the equipment.

The carton contains:

1. Instruction manual
2. TMT-AF100 Auto Solder Feeder
3. AF-HPK-X<sup>1</sup> Guide Pipe Assembly
4. AF-HDL-1<sup>2</sup> Hand Piece Holder
5. AF-NOZ-1 Nozzle Pack
6. AF-PEDAL-1 Auto Feeder Switch
7. AF-POWER-1 AC Power Adapter

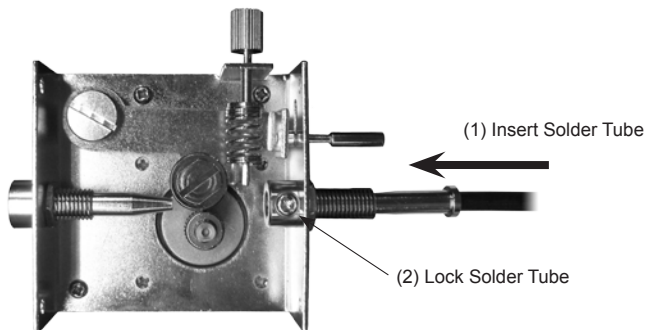
<sup>1</sup> AF-HPK-1 for use on TMT-9000S, AF-HPK-2 for use on TMT-5000S, AF-HPK-3 for use on TMT-2000S

<sup>2</sup> AF-HDL-1 for use on TMT-9000S, AF-HDL-2 for use on TMT-5000S, AF-HDL-3 for use on TMT-2000S

**Important: Keep all shipping materials until satisfactory operation has been verified.**

### Assembly

1. Remove TMT-AF100 auto solder feeder from its box and place on a suitable work bench.
2. Remove the AF-HDL-X<sup>2</sup> Hand Piece Holder from the box and attach to the right side of the TMT-AF100 auto solder feeder.
3. Remove the AF-PEDAL-1 Auto Feeder Switch from the box. (See: Back Panel)
  - Connect to the (2b) Switch Connection Port on the back panel of the auto solder feeder.
4. Remove the AF-POWER-1 AC Power Adapter from the box. (See: Back Panel)
  - Connect the 3.5mm connector to the (2c) AC Power Adapter Inlet on the back of the auto solder feeder.
  - Connect the power plug to the AC Power Outlet.
5. Remove the AF-HPK-X<sup>1</sup> Guide Pipe Assembly from the box.
  - Insert the (3f) Solder Tube into the (3e) Solder Tube Nozzle.
  - Secure tightly by fastening the (3g) Locking Screw



6. Ensure the correct (4e) Nozzle is attached to the (4d) Guide Pipe. (See: Operation - Changing the Nozzle)



# UNPACKING/ASSEMBLY/OPERATION

## Assembly (Continued)

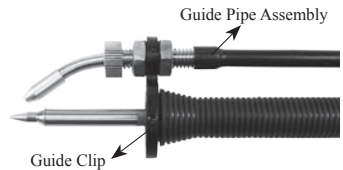
7. Attach the (5) Guide Pipe Assembly onto the soldering hand piece using the (4c) Guide Clip. (See: Guide Pipe Assembly)

- AF-KIT-1, AF-KIT-2 - The (4c) Guide Clip can be screwed onto the soldering hand piece by hand.

(1) Remove the hand piece top by rotating in counter clockwise motion.

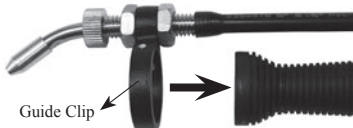


(2) Install the Guide Pipe Assembly to the hand piece.

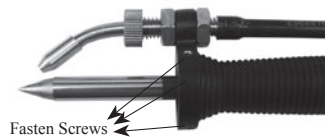


- AF-KIT-3 - Attach the (4c) Guide Clip to the soldering hand piece. Use a flat-blade screw driver to secure the (4C) Guide Clip to the soldering hand piece.

(1) Push the Guide Clip onto the hand piece

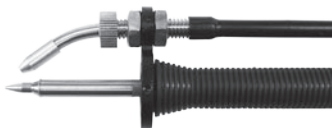


(2) Use a flat-blade screw driver to tighten the three screws on the Guide Clip.



- AF-KIT-1M, AF-KIT-2T, AF-KIT-3K, AF-KIT-3KM, AF-KIT-3P, AF-KIT-3PM, AF-KIT-3SM - No assembly of Guide Pipe is required, the Guide Pipe Assembly is already attached to the soldering hand piece by default.

No Assembly Required

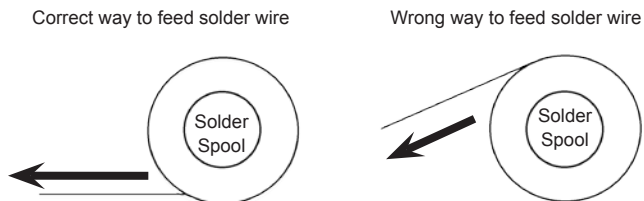


# UNPACKING/ASSEMBLY/OPERATION

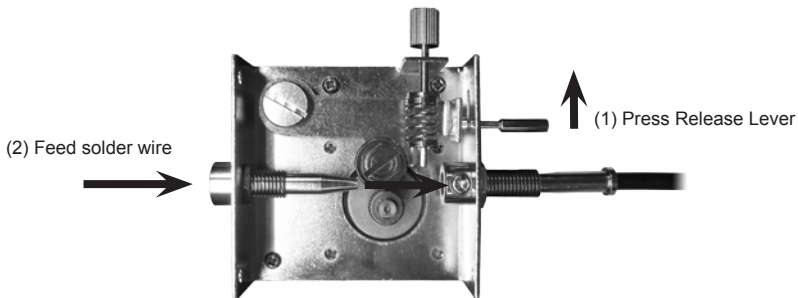
## Assembly (Continued)

8. Mount the solder wire spool onto the (4) Solder Spool Holder

- Ensure that the solder wire is fed from the bottom of the solder wire spool



- Feed the solder wire into the (3a) Guide Nozzle
- While pulling on the (3d) Release Lever, feed the solder wire through the (3b) Tension Adjustment Gear and (3h) Driver Gear and into the (3e) Solder Tube Nozzle



9. Switch the (2a) Power Switch to the "on" position. The auto feeder is now ready use.

## Operation - Selecting the correct Nozzle Size

The nozzle (AF-NOZ-1) must be changed based on the solder wire diameter used as follows:

Solder Wire	Nozzle
Φ 0.5mm	Nozzle Φ0.5-0.6mm
Φ 0.6mm	Nozzle Φ0.5-0.6mm
Φ 0.8mm	Nozzle Φ0.8mm
Φ 1.0mm	Nozzle Φ1.0mm
Φ 1.2mm	Nozzle Φ1.2mm

For solder wire diameters not mentioned above please contact Thermaltronics or your supplier to check for compatibility.

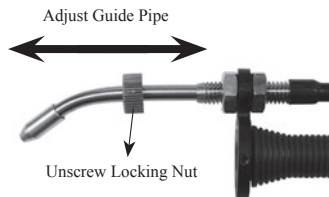
# UNPACKING/ASSEMBLY/OPERATION

## Operation - Changing the Nozzle



- (1) To remove the Nozzle
  - Twist in a circular motion to loosen the nozzle
  - Pull outward to remove the nozzle from the Guide Pipe
- (2) Place the replacement nozzle onto the guide pipe and push inward to secure.

## Operation - Adjustment of Nozzle Position



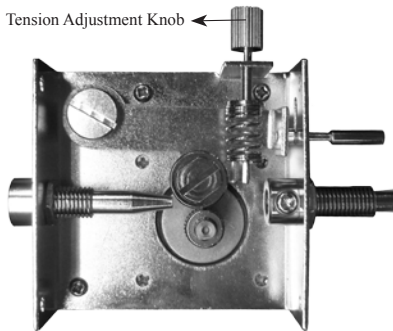
- (1) Unscrew the Locking Nut
- (2) To adjust the length, push inward or push outward on the Guide Pipe
- (3) Tighten the Locking Nut to secure the Guide Pipe in place

## Operation - Adjustment of Tension

### Tension Adjustment Knob

- Tension should be set lower for small diameter solder wires and higher for larger diameter solder wires.
- Setting the wrong tension level may cause the solder wire to break.

Tension Adjustment Knob



## Operation - Mode Selection

### Mode Switch

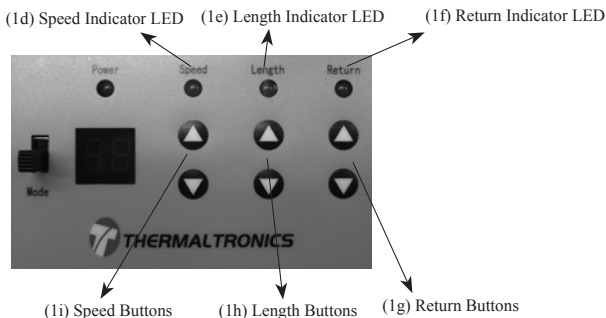
- Single Mode - Pushing the switch up will set the feeder to Single mode. In Single Mode, a predetermined amount of solder will be fed at the set speed, length and return feed when the (2) Auto Feeder Switch is activated.
- Continuous Mode - Pushing the switch down will set the feeder to Continuous mode. In Continuous Mode, solder will be fed continuously at the set speed as long as the (2) Auto Feeder Switch is activated.



Mode Selection

# UNPACKING/ASSEMBLY/OPERATION

## Operation - Adjusting the Speed, Length and Return



Speed Buttons - Increase or decrease the speed at which solder wire is fed.

- The value can be set between 0 and 9 for a total of 10 units. (Each unit is 4.6mm/sec)
  - (1) Minimum Speed 0 = slowest (4.6mm/sec)
  - (2) Maximum Speed 9 = fastest (46mm/sec)

Length Buttons - Increase or decrease the forward solder wire length.

- The value can be set between 00 and 99 for a total of 100 units. (Each unit is 0.14mm)
  - (1) Minimum Length 00 = shortest (0.14mm)
  - (2) Maximum Length 99 = longest (14mm)

Return Buttons - Increase or decrease the return solder wire length.

- The value can be set between 00 and 99 for a total of 100 units. (Each unit is 0.14mm)
  - (1) Switched Off 00 = no return (0.00mm)
  - (2) Minimum Length 00 = shortest (0.14mm)
  - (3) Maximum Length 99 = longest (13.86mm)

**Note:** To prevent solder wire from clogging inside the (5) Guide Pipe Assembly and (3) Wire Adjustment Assembly, never set the Return length to be higher than the Forward Length.

## ORDERING GUIDE

### AF-KIT-1 for use with TMT-9000S

PART#	DESCRIPTION
AF-KIT-1	Auto Solder Feeder Kit for TMT-9000S
AF-KIT-1M	Auto Solder Feeder Kit w/SHP-1 Soldering Handle for TMT-9000S
TMT-AF100	Auto Solder Feeder (Control Unit Only)
AF-HPK-1	Guide Pipe Assembly for TMT-9000S
AF-HDL-1	Hand Piece Holder for TMT-9000S
AF-NOZ-1	Nozzle Pack (Φ0.5, Φ0.6, Φ0.8, Φ1.0, Φ1.2)
AF-PEDAL-1	Auto Feeder Switch
AF-POWER-1	AC Power Adapter (18V2A)

### AF-KIT-2 for use with TMT-5000S

PART#	DESCRIPTION
AF-KIT-2	Auto Solder Feeder Kit for TMT-5000S
AF-KIT-2T	Auto Solder Feeder Kit w/SHP-T Soldering Handle for TMT-5000S
TMT-AF100	Auto Solder Feeder (Control Unit Only)
AF-HPK-2	Guide Pipe Assembly for TMT-5000S
AF-HDL-2	Hand Piece Holder for TMT-5000S
AF-NOZ-1	Nozzle Pack (Φ0.5, Φ0.6, Φ0.8, Φ1.0, Φ1.2)
AF-PEDAL-1	Auto Feeder Switch
AF-POWER-1	AC Power Adapter (18V2A)

### AF-KIT-3 for use with TMT-2000S

PART#	DESCRIPTION
AF-KIT-3	Auto Solder Feeder Kit for TMT-2000S
AF-KIT-3K	Auto Solder Feeder Kit w/SHP-K Soldering Handle for TMT-2000S
AF-KIT-3KM	Auto Solder Feeder Kit w/SHP-KM Soldering Handle for TMT-2000S
AF-KIT-3P	Auto Solder Feeder Kit w/SHP-P Soldering Handle for TMT-2000S
AF-KIT-3PM	Auto Solder Feeder Kit w/SHP-PM Soldering Handle for TMT-2000S
AF-KIT-3SM	Auto Solder Feeder Kit w/SHP-SM Soldering Handle for TMT-2000S
TMT-AF100	Auto Solder Feeder (Control Unit Only)
AF-HPK-2	Guide Pipe Assembly for TMT-5000S
AF-HDL-2	Hand Piece Holder for TMT-5000S
AF-NOZ-1	Nozzle Pack (Φ0.5, Φ0.6, Φ0.8, Φ1.0, Φ1.2)
AF-PEDAL-1	Auto Feeder Switch
AF-POWER-1	AC Power Adapter (18V2A)







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Support Email: [support@thermaltronics.com](mailto:support@thermaltronics.com)

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