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21-10115

SOLDERING STATION

Thermo-Control Anti-Static

User's Manual



Thank you for purchasing this Temna soldering station. Please read this manual carefully to get the most value and safety out of your device. Don't forget to hold on to this manual for future reference.

Warning:

The temperature of iron tip will quickly heat to 390°F ~ 750 °F when the unit is powered on. This high temperature can easily lead to injury or damage if the unit is used improperly. Please follow these precautions:

- Do not touch iron tip or surrounding metal area with your hands while unit is powered on
- Never operate near a flammable gas, chemical, paper or other flammable substance
- Disconnect from power source if the unit will not be used for longer periods; switch off the power when the unit is not being supervised
- Turn off the unit and allow to completely cool down before replacing any tips or accessories, or before storing
- Keep away from children

Safety Precautions:

Caution: Improper usage can cause serious injury to personnel and/or damage to equipment. For personnel safety, please follow these precautions

- Never use unit for work other than soldering
- Do not drop, jolt, or otherwise subject unit to physical shock
- Use only Tenma original accessories
- Keep unit away from water and heavy moisture; never use with wet hands
- Always store in a cool, dry environment
- When unplugging the unit, always grip the molded plug; never yank by the power cord
- Work in a well ventilated area; use a smoke absorber for safer environment
- This device was designed for users with soldering experience or sufficient understanding to safely use. This is not a toy or beginners learning device; please consult proper training if you lack these skills.

What's Included

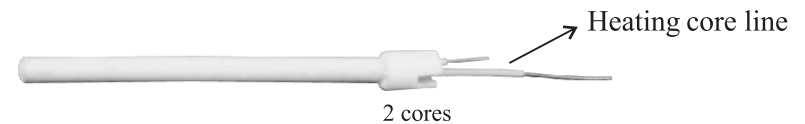
- Power Unit
- Soldering Iron
- Iron Holder
- Sponge
- Power Cord
- Manual

Specifications*:

	21-10115
Input voltage	110V AC ($\pm 10\%$) 60Hz
Power consumption	60 Watts (max)
Temperature controlling range	150°C ~ 450°C (302°F ~ 842°F)
Output voltage	28V AC
Temperature stability	± 1 °C (static)
Display	LCD
Max Operating Environment Temp	40°C (104°F)
Calibrating method	Digital
Temperature range for calibration	-50°C ~ 50°C (-58°F ~ 122°F)
Ground impedance	<2 ohm
Ground voltage	<2mV
Heating element	2 Cores

*Specifications are subject to change without prior notice.

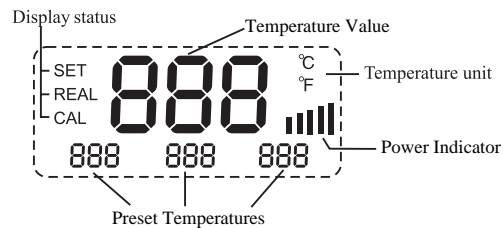
Heating element



Control Panel Guide:



Introduction for LCD display:



Display of status
 SET: Set Temperature
 REAL: Real Temperature
 CAL: Calibration Temperature

Features:

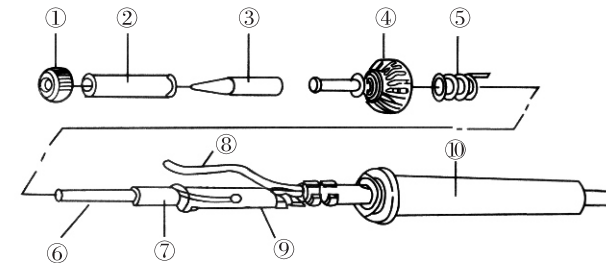
- Easy-to-read high contrast LCD screen
- Digital temperature readout leaves no guesswork when setting temperature
- PID power loop is controlled by a microprocessor unit for precise temperature accuracy
- Three programmable presets for quick temperature adjustment
- Displays temperature in Celsius or Fahrenheit
- Easy temperature calibration allows anyone to correct any discrepancy on the displayed temperature
- Heating element malfunction alert identifies any failure in the heating system

Care and Maintenance

- Keep the soldering station dry; if it gets wet, dry it immediately.
- Use the soldering station only in normal temperature environments.
- Keep the soldering station away from dust and dirt.
- The soldering iron tip should be cleaned after use by wiping it on the damp sponge found in the soldering iron stand. This is to get rid of burnt solder or fluxes that cause oxidation on the tip.

Changing Soldering Tip

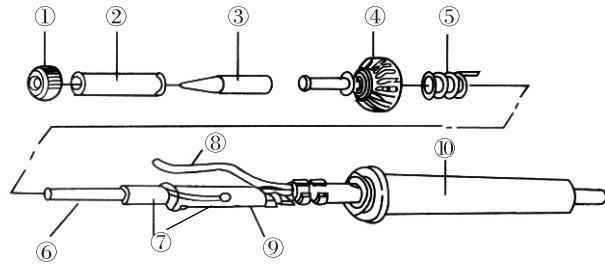
- Always turn the power OFF when removing or inserting a tip
- Let the tip to cool down to room temperature
- Unscrew the metal cap nut ①.
- Pull out the shaft of the soldering iron ②.
- Replace it with a new soldering tip ③.
- Put back the shaft and securely lock with the metal cap nut



Replacing the heating element

Note: diagram ⑦ is soldering station 21-10115; heating element resistance: 8~10Ω

1. Power off and unplug the unit. Wait for the heating element to cool down, at least 10 minutes.
2. Loosen the nut ①
3. Remove the tip retainer ② and soldering tip ③
4. Unscrew the heating contact ④
5. Remove the grouping spring ⑤
6. Carefully slide the heating element group ⑥ from the handle sleeve ⑩
7. Unscrew the tension screw and use a separate soldering or desoldering device to remove the wires from the board contacts ⑨
8. Replace element, and reverse the process to reassemble the iron (Note, the black wire ⑧ is the temperature probe; make sure this is close to the element when reassembling iron)



Operating Guidelines

Please refer to the "Control Panel Guide" section for buttons and display panel details

1. Connection:

1. Align and insert the iron's plug to the socket on the station; finger-tighten the nut on the plug, and place the iron in the iron holder.
2. Plug the station's power cord into a reliable 110V power outlet

2. Power on:

1. Use the power switch on the right side of the station to power it on.
2. The LCD display will initially display the current set temperature (SET). After a few seconds, the actual operating temperature is displayed (REAL).



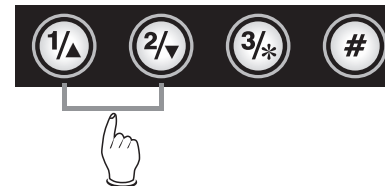
(diagram 1)



(diagram 2)

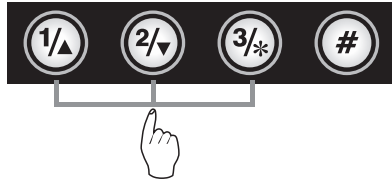
3. Adjusting temperature:

1. Make sure unit is powered on (REAL temperature will be displayed)
2. Press and hold the ▲ " or ▼ " until the temperature flashes, then press again to increase or decrease to your desired temperature; momentary pressing will increase temperature incrementally, and holding the button will increase the temperature quickly.

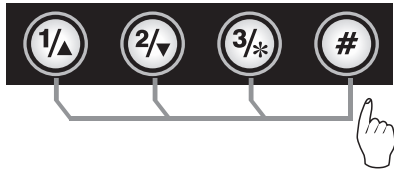


4. Programming temperature presets

1. While the unit is powered on, you can set the operating temperature quickly by using the preset buttons. Press the button once to set the temperature to that preset.



2. To program a new temperature, manually set the station to the desired temperature (see “Adjusting Temperature on page 5); then press and hold the “#” button and the desired preset location of “1, 2, 3”. The new temperature will display in the appropriate preset slot once stored successfully.

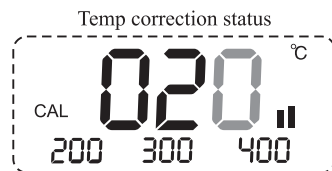
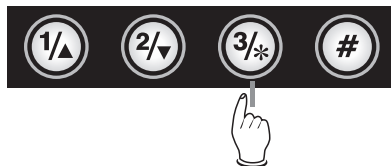


3. Preset temperature tips: Preset #1 is usually a standby temperature (less than 400°F); Preset #2 is usually the common soldering temperature (usually 625°F~700°F); and Preset #3 is usually a high temperature (700°F~850°F) for lead-free soldering or welding (frequent welding or brazing is not recommended for this product).

5. Temperature calibration

Calibration is recommended whenever you replace the tip or heating element, though proper calibration requires a soldering tip thermometer (not included) for maximum accuracy.

1. While the unit is power on, enter the calibration settings by holding the “✱” for 3 seconds; “CAL” will display and a temperature variance will flash.
2. Use the “▲” or “▼” buttons to adjust the temperature variance correction; the variance range is -50°C ~+50°C (-58°F ~ +122°F)
3. Press the “✱” once to store the calibration variance.



(diagram 4)

6. Setting temperature scale type

This station can be set to read in both the Celsius or Fahrenheit temperature scales.

This is denoted by the “°C” and “°F” on the LCD. To change from one scale to the other:

1. From the power OFF state, press and hold the “#” button
2. When unit powers on, it will be in opposite scale as it was during its previous session. This scale will be stored until this process is repeated.



7. Error alert

If “H-E” or “S-E” is displayed on the LCD, there is an error with the heating element, or the sensor circuit. Turn off the unit, check all iron connections, and replace the heating element if need be.

