

**T 2080 Specifications**

Input: .....	220-240Vac 50Hz
Output: .....	32Vac/100W
Fuse (Slow type): .....	(M205) T1A
Temperature Range: .....	200°-450°C
Temperature Correction Range: .....	+99°~ -99°C
Default Set: .....	200°C
Temperature Correction Value: .....	"00"
Heater: .....	Nichrome
Heat up time:.....	9 sec.to 400C
Leakage Voltage:.....	0.6mV
Dimension: .....	111 x 158 x 137mm(W x H x D)
Weight (Unit only): .....	2.5kg

**T 2080 100W Adjustable  
Temperature Controlled  
Soldering Station****Operating Instructions**

- Suitable for lead free soldering applications
  - Variable temperature control
- Zero switching circuitry for spike suppression
  - Energy Saver feature during idle times
- Interchangeable handles (single and tweezers)

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## Introduction

Thank you for purchasing the Micron T 2080 100W Adjustable Temperature Controlled Soldering Station – the best solution for your soldering equipment needs especially for lead free applications! We believe that you will be more than satisfied with many features and the versatility of your new soldering station. Please carefully read the instruction manual prior to operation to maximize the advantages of using your new soldering station.

**WARNING: This appliance is not intended for use by children or infirm persons without assistance or supervision if their physical, sensory or mental capabilities prevent them from using it safely. Children should be supervised to ensure that they do not play with the appliance. Failure to observe this safety regulation could result in a risk to life and limb. The manufacturer or supplier shall not be liable for damage resulting from misuse of the unit or unauthorized alterations.**

## Caution:

- Always place the soldering iron in its original holder when not being used.
- Keep the soldering tip and heating element away from the body, clothes and flammable material when in operation.
- The soldering tip and the heating element still remains hot for some time after being switched off. Ensure that you do not touch the soldering tip and the heating element until you can be sure they are cold.
- For your health, do not inhale solder fumes.
- You must not undertake work on live parts. Only a technician is recommended to undertake repairs. Use original replacement parts only.

## Key Features:

**ENERGY SAVER MODE:** To preserve the durability of the soldering iron tips, when the soldering station has been idle for 20 minutes, the energy saver feature will automatically decrease the temperature from its set operating level down to a steady 200°C

**Please Note: You have to press any button on the front panel or switch the unit off and then on again to regain heater temperature and recommence work once the unit has gone into energy saver 200° C.**

**HEATER/SENSOR FAILED DETECTION:** If the sensor circuit fails the display read “S--E” and will automatically cut off the heater power. If the heater circuit fails the display will read “H--E” and will automatically cut off the sensor power.

**TEMPERATURE “LOCK-OUT” FEATURE:** The temperature can be locked by “password” code that is convenient for production line management.

**ISOLATED IRON HOLDER WITH TIP CLEANER:** Made from low abrasive brass shavings instead of conventional sponges. This meets RoHS requirements and cleans better with no water necessary.

**LOW VOLTAGE OUTPUT FOR SAFE OPERATION:** The power unit is isolated from the A.C. line by a transformer and allows 32Vac to drive the heating element. The solder handle runs on 32 Volts for safety, and with a 100W high power ceramic heater, you get a super-fast heat-up and quick temperature recovery. The solder handle is attached with a heat resistant, non-burning, flexible 6-wire cord.

**ESD SAFE AND SPIKE FREE CIRCUITRY:** The “Zero Voltage” electronic switching design protects voltage and current sensitive components (CMOS devices, etc.) against damaging current and transient voltage spikes commonly produced by less efficient, mechanically switched stations.

**EARTH JACK:** A banana type grounding connector, is provided for grounding of an anti-static strap if required (sold separately).

The T 2081 uses the same interchangeable tips as the T 2080



## GENERAL CLEANING

The outer cover of the iron and station may be cleaned with a damp cloth using small amounts of liquid detergent. Never submerge the unit in liquid or allow any liquid to enter the case of the station. Never use any solvent to clean the case.

## IMPORTANT SERVICE NOTE:

There are no user serviceable parts inside the unit. Do not open the unit. If the fuse blows, only replace with an equivalent fuse. 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 they do not play with the appliance.

Follow these steps for optimum tip life:-

1. Turn the main power switch to the “ON” position.
2. Set temperature to 250°.
3. Coat the tinned surfaces with rosin-core solder after reaching 250°.
4. Set to desired temperature after allowing the unit to idle at 250° for 3 minutes.
5. The iron will be ready for use once it reaches the preset temperature.

**IMPORTANT:** Remove and clean the tip daily. If a new tip is installed, remove any loose build up in the barrel assembly, otherwise the tip may fuse to the heating element or retaining barrel.

**CARE OF TIPS**

**Caution:** The soldering iron can reach very high temperatures. Be sure to turn the unit off prior to carrying out any maintenance or trouble shooting steps listed below.

**IMPORTANT:** Remove the tip and clean after moderate to heavy use or at least daily for light usage. Remove any loose build up in the tip retaining assembly to prevent tip freezing. The solder tips supplied are iron clad copper and if used properly, they should maintain optimum life.

1. Always tin the tip before returning it to the holder, turning off the station, or storing it for long periods of time. Wipe the tip on a brass cleaner prior to use.
2. Keeping the iron set at high temperatures (more than 400° or 750°) will shorten tip life.
3. Do not use excessive pressure on the tip or rub the solder joint with the tip while soldering; this does not improve the heat transfer and may damage the tip.
4. Apply solder to the joint, not the tip when soldering. The flux is naturally caustic and will eat away the tip.
5. Never clean the tip with a file or abrasive material.
6. Do not use fluxes which contain chloride or acid. Use only rosin or rosin activated fluxes.
7. If an oxide film forms on the tip, it can be removed by careful buffing with a 600-800 grit emery cloth, isopropyl alcohol or equivalent and then wrapping rosin core solder around the newly exposed surfaces. Coat the tinned areas with rosin-core solder after the resin-core has melted.

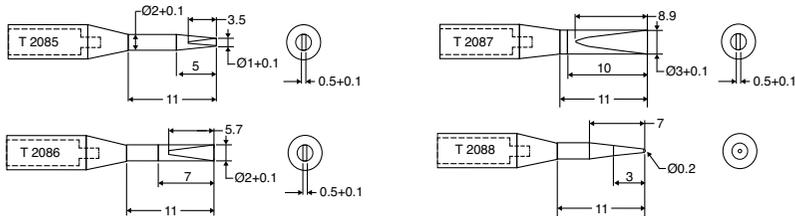
**NEW INTERCHANGEABLE TIPS**

The T 2080 and T 2081 handles uses the following interchangeable tips:

- |                           |                            |
|---------------------------|----------------------------|
| <b>T 2085:</b> 1mm chisel | <b>T 2087:</b> 3mm chisel  |
| <b>T 2086:</b> 2mm chisel | <b>T 2088:</b> 0.2mm round |

**T 2081 SMD TWEEZERS OPERATION (OPTIONAL WITH T 2080)**

1. Disconnect the mains power from the station and change to T 2081 tweezers. Be sure the main power switch is "OFF" before preceding this operation to avoid any damage.
2. Use only the approximate designed tips for the job to avoid unnecessary component damage.
3. Gently pick up & remove components while ensuring that a vertical pick up & pull out motion is maintained.
4. Use the same procedure when reconnecting the handle eg: disconnect the mains power from the station. Please note that the tweezers temperature will be lower about 50° than the soldering iron temperature.



**Maintenance**

**TIP MAINTENANCE AND DRESSING**

Tips can be changed or replaced simply by pulling or extracting from the handle. The station must be switched off and allowed to cool before this operation as damage may result if the system is left on without the tip in place!

After removing the tip, blow out any oxide dust that may have formed in the tip retaining area of the barrel. Be careful to avoid getting this dust in your eyes. Replace the tip.

**OPTIONAL SMD TWEEZERS (T 2081):** This additional accessory is specially designed for work on SMD chips, SOT, Flat pack ICs' etc. The T 2081 tweezers are equipped with 2 x 32V/50W heater elements. Be sure to switch the mains power off before swapping the iron with the tweezers to avoid any damage to the unit.

**Product Description:**

The high power electronically temperature controlled T 2080 soldering station has a specially designed intelligent microcomputer control chip. It was developed to meet the present and future needs of the Lead-free soldering expectations of the electronic production industry. This 100W station is suitable for work on professional SMD electronics. It is the ideal tool for service and repair technicians as well as production line soldering operations. The ergonomic handle, with a short distance between heating element and tip, provides a rapid temperature increase and quick heat dispersion via the thinner tips.

High-quality sensor and heat transfer mechanisms ensure precise temperature regulation, which is essential for making consistent, reliable soldering connections. The aluminium alloy housing provides a strong structure, good heat sinking, and effective resistance to electro-magnetic interference.

The T 2080 incorporates electronic circuitry which enables the user to vary tip temperatures between 200°C to 450°C without changing tips or heating elements. The temperature is maintained within +/-3°C(+/-6°F) of its set level by a thermocouple sensor placed in the head of the heating element, allowing the tip to rest against the sensor. The large size digital display readout and keys on the front panel make the station easy to see and comfortable to operate.

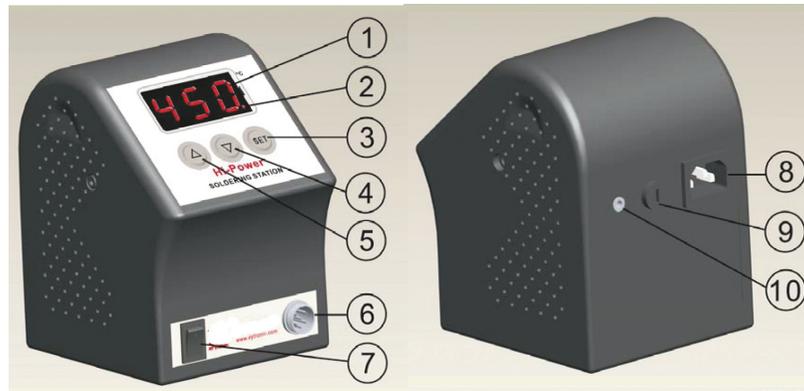
**Working Temperature**

If you are manufacturing to RoHS requirements, the 60/40 solder alloys are not allowed in the production process. For lead free solder alloys, a working temperature of 30° higher than leaded electrical soldering is required. The working temperature of lead-free solder is detailed below, but can vary from manufacturer to manufacturer.

- Melting point 227°
- Normal operation 300-360°
- Production line operation 360-410°

When the iron's working temperature is set within the parameters suitable for the type of solder being used, a good joint is assured. Too low a temperature will slow the rate of solder flow while a high temperature setting might burn the flux in the solder and emit a heavy white smoke resulting in a dry joint or permanent damage to the printed circuit board (P.C.B). This may also shorten the tip life.

**IMPORTANT:** The temperature above 410° is not recommended for normal soldering functions, but can be used for short periods of time when high temperatures are required. Please note that the lead free solder alloys require a higher soldering temperature which shortens tip life.

**Front panel**

1. Temperature display readout
2. Heat indicator light
3. "SET": Function key
4. ▾: Down key
5. ▲: Up key
6. Solder handle / Tweezer socket
7. Mains power switch

**Rear panel**

8. AC Power cord in-let
9. Fuse
10. Earth Jack

## Operating Instructions

Ensure that the mains input voltage is between 220-240V before beginning use. Check carefully for any damage during transportation.

This unit contains:

1. Solder handle.
2. Iron holder with brass tip cleaner.
3. AC power cord with plug.

## Operating Procedures:

1. Ensure that the base unit power switch is in the "OFF" position.
2. Plug in solder handle and connect AC power cord.
3. Turn mains power switch to "ON" position.
4. Press the ▲ key up until the temperature reaches 250°. Then tin the surface of the tip by applying a new covering of solder after being warmed to protect tip and extend its life.
5. When the temperature reaches the desired setting, the heating indicator light will flash on and off and maintain the set temperature. The unit is now ready for use.

**CAUTION: REMEMBER, THE TIP IS HOT. The tip of the handpiece will cause serious burns if they are allowed to contact the skin. Always return the solder handle to the safety holder after each use. Soldering irons operate at high temperatures and can easily burn people or objects. Do not touch the tip and heater at any time and keep it a safe distance from flammable materials while the unit is on or while it's cooling. Please allow a sufficient time for the unit to cool before changing tips or handles!**

**DO NOT WORK ON LIVE CIRCUITS. Before working on any mains powered equipment, make sure that it is turned off, and the mains plug is removed from the power point.**

**DO NOT USE IF DAMAGED. If the power lead becomes damaged or the soldering station becomes faulty, discontinue use immediately.**

### TEMPERATURE SETTING: (No password set)

1. Increasing temperature: By pressing ▲ key one time, the digital readout will increase "1" numeral. If pressing ▲ key over 2 seconds, the digital readout numerals will forward continuously until you reach the desired setting.
2. Decreasing temperature: By pressing ▾ key, in the same procedure as above.

### PARAMETER SETTING:

1. To enter set up mode, press and hold the "SET" key for at least 4 seconds. "—" now displays ready for the password to be entered. Press ▲ key to select the password "010" (please note this password is fixed and can not be changed, so please keep this number secret). Then press "SET" to enter this password. "F-0" will now be displayed. At this stage you will only have 3 seconds to press either ▲ or ▾ keys for a function selection, otherwise the unit will revert back to standard operation.
2. Function "F-1" is to activate (or deactivate) the password function. This is done by selecting "F-1" and then pressing "SET". "000" should now display allowing you to select "100" (Password on) or "000" (password off) with the ▲ or ▾ keys. Press "SET" to confirm selection. You will now be back at function select and again have only 3 seconds to select another function if required (otherwise the unit will revert back to standard operation).
3. Function "F-2" is to adjust the "Temperature Correction Setting". This allows the user to "fine tune" the temperature at the tip eg: you may find that if the unit is set to say 250°, but measures say 240°. You can then adjust the unit up 10° to accurately show the real temperature depending upon the tip used or the normal ambient temperature.

For example, this is done by selecting "F-2" and then pressing "SET". "00" should now display allowing you to either, increase the temperature (max 99° increase) or decrease the temperature (max -99° decrease) by using the ▲ or ▾ keys. Press "SET" to confirm selection. You will now be back at function select and again have only 3 seconds to select another function if required (otherwise the unit will revert back to standard operation).

4. Function "F-3" is to activate (or deactivate) the sleep function. This is done by selecting "F-3" and then pressing "SET". "000" should now display allowing you to select "100" (sleep mode on) or "000" (sleep mode off) with the ▲ or ▾ keys. Press "SET" to confirm selection. You will now be back at function select and again have only 3 seconds to select another function if required (otherwise the unit will revert back to standard operation).

**ENERGY SAVER WAKE-UP METHOD:** If the station has been idle for 20 minutes, the energy saver feature will automatically engage. The temperature decreases from its set operating level down to a steady 200° C. This heater suspend function is intended to preserve the durability of the soldering iron tips.

The two ways to reactivate the wand and restore the temperature to its previous level (1) Press any button on the front panel. (2) switch the unit off and on again. If the unit is left inactive for 40 minutes, the soldering iron temperature will drop from 200° C to zero. This means the heater power will be cut off and the screen displays a flashing "—" symbol.

This "deep sleep" energy saver mode reduces power consumption and extends tip life. To wake the unit up from this state turn the unit off and on again.

### COMMON CAUSES OF TIP UNWETTING

1. Tip temperature higher than 410°.
2. Tip has not been tinned before extended periods of idling.
3. Lack of flux in soldering, wicking, repairing, and touch-up operations.
4. Wiping the tip on a high sulphur content, dirty or dry sponges and rags.
5. Use with organic substances such as plastic, resin, silicone, grease or other chemicals.
6. Impurities in solder and/or low tin content.