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ALIENTEK T80

ALIENTEK T80 Smart Soldering Iron User Manual

Model: T80

1. SAFETY INFORMATION

Please read all safety warnings and instructions carefully before using this product. Failure to follow the warnings and instructions may result in electric shock, fire, and/or serious injury.

- **High Temperature Hazard:** The soldering iron tip reaches very high temperatures (up to 450°C). Avoid direct contact with the tip to prevent burns. Allow the iron to cool completely before handling or storing.
- **Fume Inhalation:** Soldering produces fumes. Always work in a well-ventilated area or use a fume extractor to avoid inhaling harmful fumes.
- **Electrical Safety:** Ensure the power supply used is compatible with the soldering iron's voltage and wattage requirements (9-20V DC, 18-100W). Use only certified PD/QC power adapters. Do not use the soldering iron if the cable or plug is damaged.
- **Induced Electricity:** It is normal for fast charging heads to have induced electricity. If you are sensitive to induced electricity, it is recommended to use the soldering iron with a power bank.
- **Proper Use:** Use the soldering iron only for its intended purpose of soldering electronic components. Do not use it near flammable materials or liquids.
- **Children and Pets:** Keep the soldering iron out of reach of children and pets at all times.

2. PACKAGE CONTENTS

Verify that all items listed below are present in your package. If any items are missing or damaged, please contact ALIENTEK customer support.

Shipping List As Standard



Image: Standard package contents for the ALIENTEK T80 Smart Soldering Iron kit.

- ALIENTEK T80 Smart Soldering Iron Host
- Soldering Iron Tip (T80-xx series)
- USB Type-C to Type-C Cable
- Soldering Iron Stand
- User Manual (this document)

3. PRODUCT OVERVIEW

The ALIENTEK T80 Smart Soldering Iron is a portable, high-performance digital soldering tool designed for precision work. It features fast heating, an OLED display, and intelligent auto-sleep functionality.

ALIENTEK®

T80/T80P Smart Soldering Iron

| 100W Power

| IPD/QC Protocol

| ICNC Aluminum Alloy

| I2S Molten Tin(T80)

Image: Overview of the ALIENTEK T80/T80P Smart Soldering Iron, emphasizing its key features.

3.1 Basic Parameters

BASIC PARAMETERS

L175mm Ø14mm



Product name T80 / T80P Smart Soldering Iron

Power supply Type-C

Operating voltage DC 9~20V

Fast charging protocol PD2.0/3.0 QC2.0/3.0

Temperature range 80~450°C

Power (Adjustable) 18~100W

Screen 0.87' OLED (128*32 Pixel)

Image: Detailed basic parameters and specifications of the T80/T80P Smart Soldering Iron.

Parameter	Description
Product Name	T80 / T80P Smart Soldering Iron
Power Supply	Type-C
Operating Voltage	DC 9~20V
Fast Charging Protocol	PD2.0/3.0, QC2.0/3.0
Temperature Range	80~450°C
Power (Adjustable)	18~100W
Screen	0.87' OLED (128*32 Pixel)

3.2 Key Features

- Type-C interface power supply, supports PD/QC fast charge protocol.
- OLED display for clear working status.
- Supports 9~20V working voltage range.
- Supports 18~100W heating power adjustable.
- Fast heating: 2 seconds to melt tin (T80 @ 100W).
- Fast return temperature, suitable for large solder joints.
- Temperature control precision and stability: $\pm 2\%$.
- Intelligent induction for energy saving (auto-sleep).
- Small size, portable, ergonomic design.

3.3 Induced Dormancy (Auto Sleep)

The soldering iron features an intelligent induction design that automatically puts the device into hibernation mode when it is put down. This prolongs the life of the heating core and saves energy. Picking up the host will automatically wake it up.

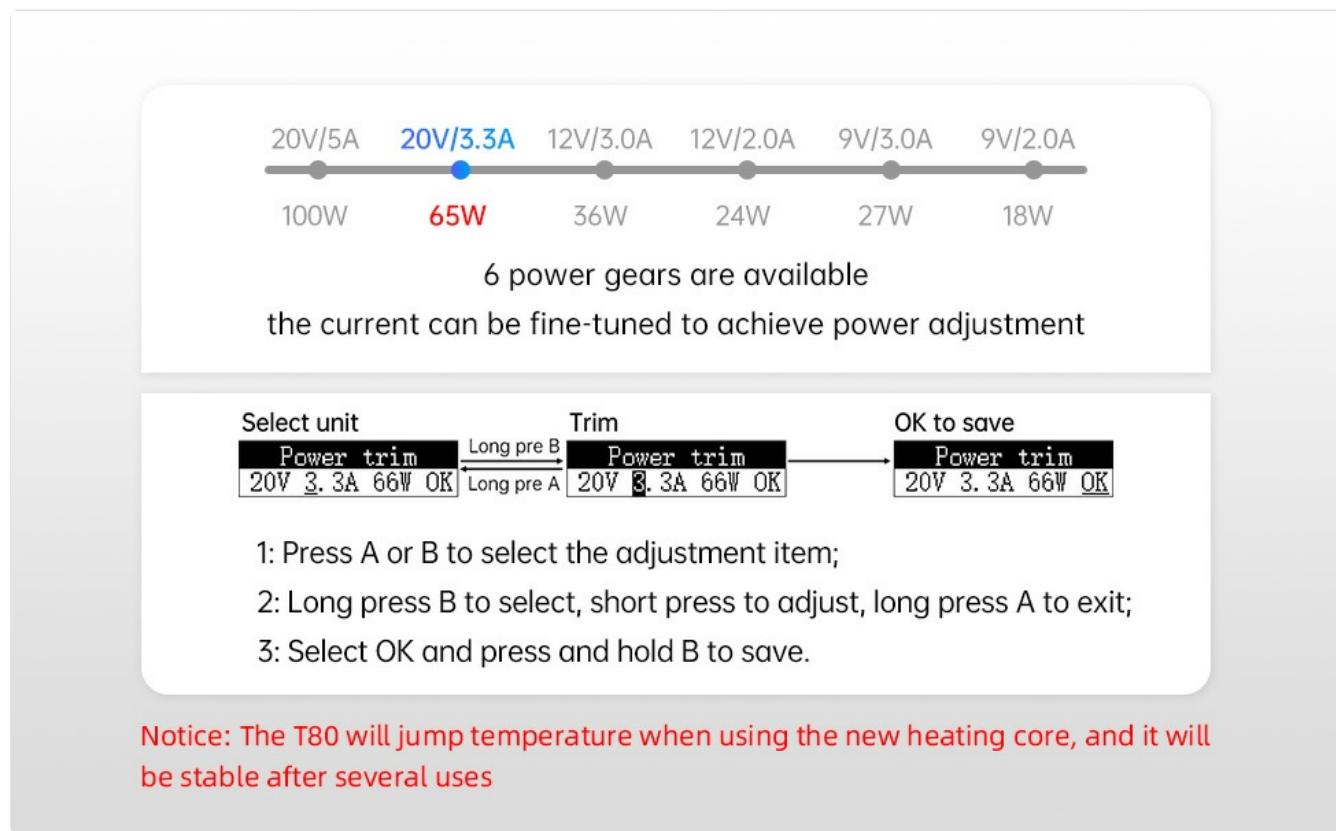
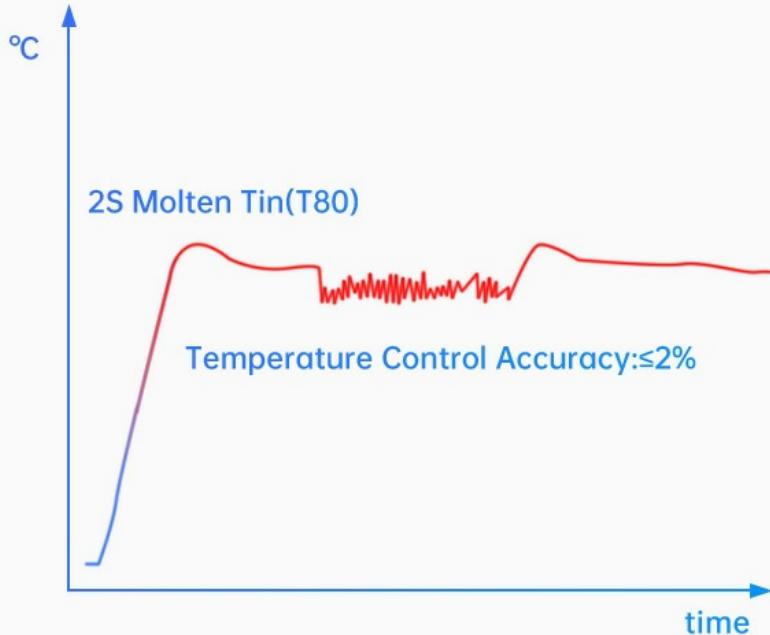


Image: Illustration of the induced dormancy feature, showing the soldering iron entering sleep mode when put down.

3.4 T80 vs T80P Comparison

The T80 and T80P models share many features but differ in heating core type, size, resistance, weight, and tinning time.



Note: The T80 will jump temperature when using the new heating core, and it will be stable after several uses

Image: Comparison of T80 and T80P models, including tip insertion diagrams.

Feature	T80	T80P
Heating Core Type	T80-xx	T80P-xx
Heating Core Size	L80mm Ø3.5mm	L98mm Ø4.5mm
Resistance Value	2.1Ω	2.5Ω
Machine Weight	38.5g	42.8g
Tinning Time	2S (@100W)	5S (@100W)

4. SETUP

Follow these steps to set up your ALIENTEK T80 Smart Soldering Iron for first use.

- 1. Insert Soldering Tip:** Carefully insert the desired soldering tip into the front end of the soldering iron handle. Ensure it is fully seated and secure.
- 2. Connect Power Supply:** Connect a compatible USB Type-C power supply (PD/QC protocol, 9-20V DC, 18-100W) to the Type-C port on the soldering iron. A 100W+ charger is recommended for optimal performance.
- 3. Place on Stand:** Always place the soldering iron on its included stand when not actively in use to prevent accidental burns or damage to surfaces.

5. OPERATION

5.1 Power On/Off

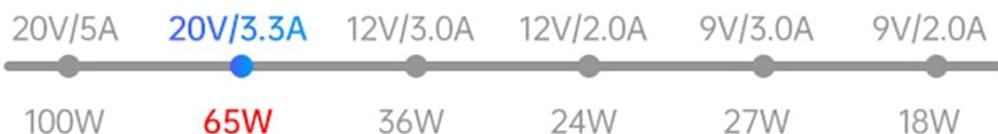
The soldering iron powers on automatically when connected to a compatible power supply. To power off, simply disconnect the power supply. The device will enter auto-sleep mode when idle.

5.2 Temperature Adjustment and Power Fine-Tuning

The T80/T80P supports adjustable heating power from 18W to 100W, with 6 predefined power gears. The current can be fine-tuned for precise power adjustment.

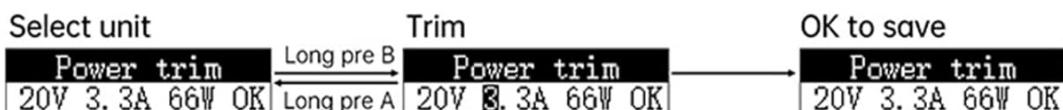
18~100W Power Adjustable

Default Gear



6 power gears are available
the current can be fine-tuned to achieve power adjustment

Power Fine-Tuning



After entering the power fine-tuning interface:

- 1: Press A or B to select the adjustment item;
- 2: Long press B to select, short press to adjust, long press A to exit;
- 3: Select OK and press and hold B to save.

Note: The T80 will jump temperature when using the new heating core, and it will be stable after several uses

Image: Power adjustment gears and instructions for fine-tuning power settings.

To Fine-Tune Power:

1. Press button A or B to select the adjustment item on the OLED screen.
2. Long press button B to select, short press to adjust the value.
3. Long press button A to exit the adjustment interface.
4. Select 'OK' and press and hold button B to save your settings.

Note: The T80 may experience a temporary temperature jump when using a new heating core. The temperature will stabilize after several uses.

5.3 OLED Screen Display

The OLED screen provides real-time information about the soldering iron's status and allows access to various settings.



Image: Examples of information displayed on the OLED screen, including temperature, settings, and status.

The screen can display:

- Current Set Temperature and Actual Temperature
- Power Level (e.g., 100%)
- Voltage Information (Vol Info)
- Temperature Step (Temp Step) for fine adjustments
- Sleep Mode Indicator (Sleep)
- Standby Temperature (Stdb)
- Upgrade Mode
- Language Selection (e.g., English)

6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your soldering iron.

- **Tip Cleaning:** Regularly clean the soldering tip using a damp sponge or brass wool to remove excess solder and oxidation. This helps maintain good heat transfer and extends tip life.
- **Tip Tinning:** After cleaning and before storing, always tin the tip with a small amount of fresh solder. This prevents oxidation and corrosion.

- **Cool Down:** Always allow the soldering iron to cool down completely before storing it.
- **Storage:** Store the soldering iron in a dry, safe place, away from dust and moisture.
- **Body Cleaning:** Wipe the body of the soldering iron with a soft, dry cloth. Do not use abrasive cleaners or solvents.

7. TROUBLESHOOTING

If you encounter issues with your ALIENTEK T80 Smart Soldering Iron, refer to the following common problems and solutions.

Problem	Possible Cause	Solution
Soldering iron does not heat up.	Incompatible or insufficient power supply; loose tip connection; faulty heating element.	Ensure power supply meets 9-20V DC and 18-100W (PD/QC). Check Type-C cable connection. Re-insert tip firmly. If problem persists, contact support.
Temperature is unstable or fluctuates.	Insufficient power supply; new heating core (initial use); poor tip contact.	Use a higher wattage power supply (e.g., 100W). Allow for several uses for new tips to stabilize. Ensure tip is fully seated.
OLED screen is blank or not displaying correctly.	No power; device in sleep mode; internal error.	Check power connection. Pick up the iron to wake from sleep. Disconnect and reconnect power. If issue persists, contact support.
Soldering tip does not melt solder effectively.	Tip is oxidized or dirty; incorrect temperature setting; worn out tip.	Clean and re-tin the tip. Increase temperature setting. Replace the soldering tip if worn.

8. SPECIFICATIONS

Detailed technical specifications for the ALIENTEK T80 Smart Soldering Iron.

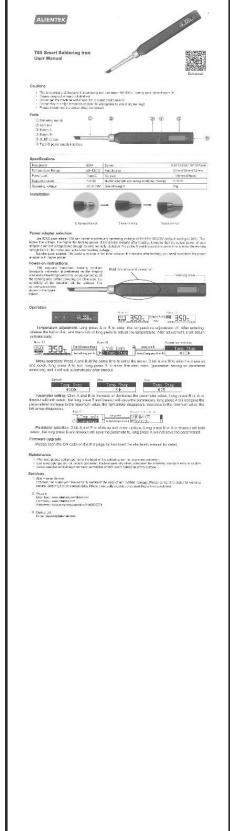
Specification	Value
Brand	ALIENTEK
Model Number	T80
Power Source	PD/DC (Type-C)
Wattage	18 - 100 watts (adjustable)
Operating Voltage	9 - 20 Volts (DC)
Temperature Range	80 - 450 Degrees Celsius
Special Feature	Portable, Digital OLED Screen, Auto Sleep

Specification	Value
Handle Material	Aluminum
Item Weight	9.6 ounces (approx. 272g)
UPC	717225381134

9. WARRANTY AND SUPPORT

ALIENTEK products are manufactured to high-quality standards. For warranty information or technical support, please contact ALIENTEK customer service through the official ALIENTEK store on Amazon or their official website. Please have your product model number (T80) and purchase details ready when contacting support. For the latest information and support resources, visit the [ALIENTEK Store on Amazon](#).

Related Documents - T80

	<p>ALIENTEK T80/T80P Smart Soldering Iron User Manual</p> <p>User manual for the ALIENTEK T80/T80P Smart Soldering Iron, a pocket-sized, multi-functional soldering iron with Type-C power, OLED display, and adjustable heating power.</p>
	<p>ALIENTEK T65 Smart Soldering Iron User Manual</p> <p>Comprehensive user manual for the ALIENTEK T65 Smart Soldering Iron. Learn about its specifications, installation, power adapter selection, operation, temperature adjustment, firmware upgrades, maintenance, and after-sales service.</p>

	<p><u>ALIENTEK T100 Smart Soldering Station User Manual - Features, Specs, Operation</u></p> <p>Comprehensive user manual for the ALIENTEK T100 Smart Soldering Station. Covers specifications, parts, operation, settings, firmware upgrade, maintenance, precautions, and warranty information.</p>
	<p><u>ALIENTEK DM40 Multimeter User Manual: Features, Specifications, and Operation</u></p> <p>Comprehensive user manual for the ALIENTEK DM40 Touchable Multimeter 3-IN-1. Covers safety instructions, product introduction, quick start guide, measurement methods, technical specifications for multimeter, oscilloscope, and signal generator functions, system settings, firmware updates, and after-sales service.</p>
	<p><u>ALIENTEK DM40 Multimeter User Manual: Comprehensive Guide to Features and Operation</u></p> <p>Detailed user manual for the ALIENTEK DM40, a 3-in-1 digital multimeter, oscilloscope, and signal generator. Covers safety instructions, quick start guide, measurement methods, settings, system functions, and troubleshooting.</p>
	<p><u>DS100 Mini Digital Oscilloscope User Manual - Alientek</u></p> <p>Comprehensive user manual for the Alientek DS100 Mini Digital Oscilloscope. Learn about its features, operation, settings, and troubleshooting for effective use.</p>