

[Manuals.plus](#) /

› [ALIENTEK](#) /

› ALIENTEK T80/T80P Smart Soldering Iron User Manual

ALIENTEK T80/T80P

ALIENTEK T80/T80P Smart Soldering Iron User Manual

Comprehensive guide for the operation, maintenance, and troubleshooting of your ALIENTEK T80/T80P Smart Soldering Iron.

PRODUCT OVERVIEW

The ALIENTEK T80 and T80P are advanced, portable smart soldering irons designed for precision soldering tasks. They feature fast heating capabilities, a digital OLED screen display, and an auto-sleep function for energy efficiency and extended heating core life. These models support PD/QC fast charge protocols via a Type-C interface, offering adjustable heating power from 18W to 100W.

ALIENTEK®

T80/T80P Smart Soldering Iron

100W Power

PD/QC Protocol

CNC Aluminum Alloy

2S Molten Tin(T80)



Image: The ALIENTEK T80/T80P Smart Soldering Iron, showcasing its compact design and highlighted features such as 100W power, PD/QC protocol support, CNC aluminum alloy body, and rapid tin melting time.

KEY FEATURES

- **Smart Soldering Iron:** The T80 & T80P are ALIENTEK's latest multi-functional smart soldering irons.
- **Type-C Power Supply:** Features a Type-C interface supporting PD/QC fast charge protocols.
- **OLED Display:** Equipped with an OLED screen for clear display of working status.
- **Wide Voltage Range:** Supports 9V to 20V working voltage.
- **Adjustable Heating Power:** 18W to 100W adjustable heating power for versatile use.
- **Fast Heating:** Achieves tin melting in as little as 2 seconds (T80 at 100W).
- **Fast Return Temperature:** Maintains stable temperature even with large solder joints.
- **Precise Temperature Control:** Offers temperature control precision and stability within 2%.
- **Intelligent Induction & Auto Sleep:** Automatically enters sleep mode to save energy and prolong heating core life.
- **Portable & Ergonomic:** Small size, easy to carry, with an ergonomic handle for comfortable grip.

PACKAGE CONTENTS

Upon opening your ALIENTEK T80/T80P Smart Soldering Iron kit, please verify that all the following components are included:

- ALIENTEK T80/T80P Smart Soldering Iron Unit
- Soldering Iron Tip (specific type may vary based on kit)
- USB Type-C to Type-C Cable
- Soldering Iron Stand
- User Manual (this document)
- Additional tips or accessories as per your specific kit variant.



Image: A visual representation of the ALIENTEK T80/T80P soldering iron kit, including the soldering iron, various tips, USB-C cable, and soldering stand.

Shipping List As Standard



Image: The standard shipping list as packaged, showing the soldering iron, a tip, USB-C cable, and stand within its retail box.

TECHNICAL SPECIFICATIONS

Specification	Value
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 (176~842°F)
Power (Adjustable)	18~100W

Specification	Value
Screen	0.87' OLED (128*32 Pixel)
Handle Material	Aluminum
Item Weight	9.6 ounces (approx. 272g)
Item Length	3.15 Inches (approx. 80mm)

BASIC PARAMETERS



Product name T80 / T80P Smart Soldering Iron

Power supply Type-C

Operating voltage DC 9~20V

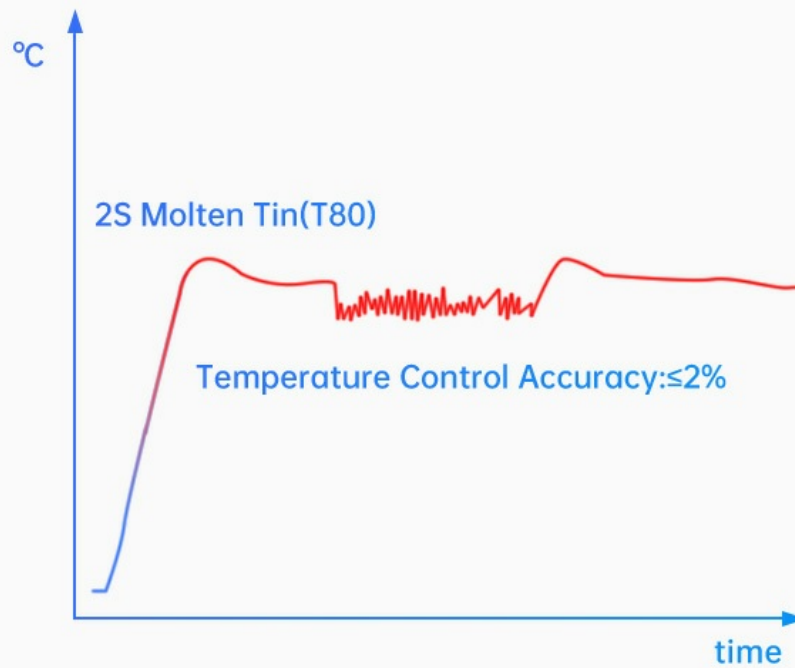
Fast charging protocol PD2.0/3.0 QC2.0/3.0

Temperature range 80~450°C

Power (Adjustable) 18~100W

Screen 0.87' OLED (128*32 Pixel)

Image: Detailed basic parameters and dimensions of the T80/T80P Smart Soldering Iron, including length, diameter, and screen resolution.



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

Image: A comparison table detailing the differences between the T80 and T80P models, specifically regarding heating core type, size, resistance value, machine weight, and tinning time.

SETUP GUIDE

1. **Insert Soldering Tip:** Carefully insert the desired soldering iron tip into the heating core receptacle of the soldering iron unit. Ensure it is fully seated.
2. **Connect Power Supply:** Connect the provided USB Type-C to Type-C cable to the soldering iron's Type-C port. Connect the other end of the cable to a compatible PD/QC fast charger.

Important Note on Power Supply: The ALIENTEK T80/T80P soldering iron does **not** include a power supply unit. A 100W PD/QC compatible power adapter is highly recommended to achieve optimal performance (e.g., 2-second tin melting). Using a lower wattage adapter will result in reduced heating power and slower performance. Some users have reported a sensation of "induced electricity" when using certain fast charging heads; if sensitive, consider using a power bank for power.

3. **Placement:** Place the soldering iron securely on the included soldering iron stand when not in use to prevent accidental burns or damage.



Image: A visual guide demonstrating the simple insertion process of the soldering tip into the main unit of the ALIENTEK T80/T80P soldering iron.

Your browser does not support the video tag.

Video: This video demonstrates the usage scenarios and functions of the ALIENTEK T80/T80P soldering iron, including the easy installation of the soldering tip and general operation.

OPERATING INSTRUCTIONS

- Power On:** Once connected to a power source, the OLED screen will illuminate, indicating the current temperature and status. The iron will begin heating to the last set temperature or default.
- Adjust Temperature:** Use the "Key A" and "Key B" buttons (refer to product diagram) to adjust the target temperature. Short press to increment/decrement, long press for faster adjustment. The OLED screen will display the set temperature.
- Power Adjustment (Fine-Tuning):** The soldering iron supports 18W to 100W adjustable power. You can fine-tune the current to match the maximum output potential of your adapter.
 - Enter the power fine-tuning interface.
 - Press A or B to select the adjustment item.
 - Long press B to select, short press to adjust, long press A to exit.
 - Select OK and press and hold B to save.

Note: The T80 may experience temperature fluctuations when using a new heating core initially. Stability will improve after several uses.
- Intelligent Induction & Auto Sleep:** The soldering iron features a built-in handheld detector. When placed on the stand or left idle, it will automatically enter hibernation mode (sleep) to conserve energy and prolong the life of the heating core. Picking up the iron will wake it up.
- Melting Tin:** Once the desired temperature is reached (indicated on the OLED screen), the iron is ready for use. Apply the tip to the solder joint. The T80 model can melt tin in as little as 2 seconds at 100W.

Induced Dormancy

Induction sleep automatic shutdown
prolong the life of the heating core
save energy

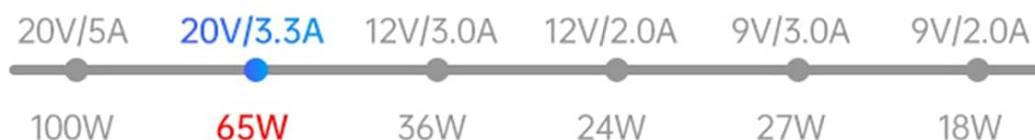


Special induction design
Put down the host and enter hibernation mode
Pick up the host and wake up

Image: The soldering iron's OLED screen displaying "Sleep" mode at 200°C, illustrating the intelligent induction feature that puts the device into hibernation when idle.

18~100W Power Adjustable

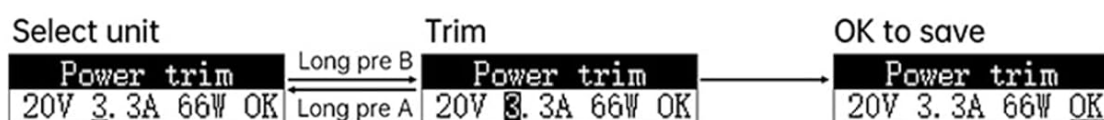
Default Gear



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: The power fine-tuning interface on the OLED screen, showing various power gears (18W to 100W) and instructions for adjusting and saving power settings.

MAINTENANCE AND CARE

- **Tip Cleaning:** Regularly clean the soldering tip using a damp sponge or brass wool to remove excess solder and oxidation. This ensures efficient heat transfer and prolongs tip life.
- **Tinning the Tip:** After cleaning and before storing, always tin the tip with a small amount of fresh solder. This prevents oxidation and corrosion.
- **Storage:** Store the soldering iron in a dry, cool place. Ensure the tip is tinned before storage.
- **Handle Cleaning:** Wipe the handle with a soft, dry cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Cable Care:** Avoid sharp bends or kinks in the Type-C cable to prevent internal wire damage.

TROUBLESHOOTING COMMON ISSUES

- **Iron Not Heating / Low Power:**

- Ensure you are using a PD/QC compatible power adapter.
- Verify the power adapter's wattage. For 100W performance, a 100W adapter is required. Lower wattage adapters will result in lower heating power.
- Check the Type-C cable for damage and ensure it is securely connected at both ends.

- **"Induced Electricity" Sensation:**

- This can occur with certain fast charging heads. If you are sensitive to this, consider using a power bank as your power source.

- **Temperature Fluctuations (T80 model, initial use):**

- It is normal for the T80 to experience slight temperature jumps when using a new heating core. The temperature control will stabilize after several uses.

- **Iron Not Waking from Sleep:**

- Ensure the iron is picked up firmly. If the issue persists, disconnect and reconnect the power.

- **OLED Screen Not Displaying:**

- Check power connection.
- Try a different Type-C cable or power adapter.

WARRANTY AND CUSTOMER SUPPORT

ALIENTEK products are manufactured to high-quality standards and are backed by a limited warranty against manufacturing defects. For specific warranty terms, duration, and conditions, please refer to the warranty card included with your product or visit the official ALIENTEK website.

If you encounter any issues or have questions regarding your ALIENTEK T80/T80P Smart Soldering Iron that are not covered in this manual, please contact ALIENTEK customer support through the following channels:

- **ALIENTEK Store on Amazon:** [Visit the ALIENTEK Store](#)
- Refer to your product packaging for additional contact information.

© 2024 ALIENTEK. All rights reserved. Model: T80/T80P.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question