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QUECOO T85

QUECOO T85 Smart Portable Soldering Iron Kit User Manual

Model: T85

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1. INTRODUCTION

The QUECOO T85 is a smart, portable digital soldering iron designed for precision electronic work. It features rapid heating, an adjustable temperature range, an OLED display for clear information, and automatic sleep functions for safety and energy efficiency. Its compact design and dual power input options (DC/PD) make it suitable for various applications, from hobbyist projects to professional field repairs.



Image 1.1: The QUECOO T85 Smart Portable Soldering Iron. This image shows the compact design of the soldering iron with its digital display and interchangeable tip.

2. SAFETY INFORMATION

Please read all safety instructions carefully before using the QUECOO T85 Soldering Iron. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **High Temperatures:** The soldering iron tip reaches very high temperatures (up to 480°C / 890°F). Avoid direct contact with the tip to prevent burns.
- **Ventilation:** Use the soldering iron in a well-ventilated area to avoid inhaling solder fumes, which can be harmful.
- **Power Source:** Ensure the power source (adapter or power bank) meets the specified voltage and current requirements (9-20V DC, 1.5A-3.25A depending on voltage) to prevent damage to the device or power supply.
- **Unplug When Not in Use:** Always unplug the soldering iron when not in use or before changing tips.
- **Proper Storage:** Allow the iron to cool completely before storing it. Store it in a safe place, away from flammable materials and out of reach of children.

- **Use Only Approved Tips:** Only use QUECOO T85 or compatible TS100 soldering tips.
- **Avoid Water:** Do not expose the soldering iron to water or use it in damp conditions.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- QUECOO T85 Smart Portable Soldering Iron
- T85-B2 Soldering Tip (or other specified tip)
- User Manual (this document)
- *Note: Power adapter and power bank are not included and must be purchased separately.*

4. PRODUCT OVERVIEW

The QUECOO T85 soldering iron features a durable ABS handle, an OLED display, and intuitive control buttons. It supports both DC5521 and Type-C (PD/QC) power inputs.

Key Features:

- **Dual Power Input:** Supports PD (up to 65W) via Type-C and DC (up to 96W) via DC5521 port.
- **Fast Heating:** Reaches operating temperature in seconds.
- **Adjustable Temperature:** Range from 80°C to 480°C (180°F to 890°F).
- **OLED Display:** Clear 128x32 pixel monochrome display for temperature and settings.
- **Smart Functions:** Auto sleep, automatic power-off, and LED light.
- **Portable Design:** Lightweight (120g) and compact for easy transport.
- **BOOST Function:** Provides temporary power boost for larger solder joints.
- **Tip Compatibility:** Compatible with both T85 and TS100 soldering iron tips.

5. SETUP

5.1 Installing the Soldering Tip

The T85 soldering iron supports two types of tips: HS-01/T65/T85/SH72 type and TS type. The installation method varies slightly.

- **For HS-01/T65/T85/SH72 Iron Tips:** Remove the locking nut at the front of the iron, insert the tip, and then secure it by tightening the locking nut.
- **For TS Tips:** Remove the screw nut, then insert the tip directly into the iron. No need for the locking nut with TS tips.

How to install iron tip?



Image 5.1: Guide for installing different types of soldering tips. This image illustrates the two methods for tip installation: one with a locking nut for HS-01/T65/T85/SH72 tips and direct insertion for TS tips.

5.2 Powering the Device

The T85 supports both USB Type-C (PD/QC) and DC5521 barrel jack inputs. Ensure your power source meets the minimum requirements for stable operation.

- **Type-C (PD/QC):** Connect a compatible USB-C power adapter or power bank. Supports PD and QC 3.0 protocols.
- **DC5521 Barrel Jack:** Connect a DC power adapter (12V-21V DC, 3A recommended).

Refer to the table below for power requirements and heating performance:

Voltage	Current	Power	Melt Time (Tin)
24V	$\geq 4A$	96W	6s
20V	$\geq 3.25A$	65W	8s

Voltage	Current	Power	Melt Time (Tin)
15V	≥2.5A	37.5W	12s
12V	≥2A	24W	17s
9V	≥1.5A	13.5W	30s

Note: The above data are test results with an iron tip resistance of 6 ohms. If the tip resistance is greater than 6 ohms, tin melting time will be longer. The soldering iron may not work normally if the input voltage is lower than 9V.

PD+DC Dual Power Inputs

Maximum DC power up to 96W , PD power up to 65W
Fast to melt in, fast heating, 6s rapidly heating up.

Voltage	Current	Power	Melt Time
24V	≥4A	96W	6s
20V	≥3.25A	65W	8s
15V	≥2.5A	37.5W	12s
12V	≥2A	24W	17s
9V	≥1.5A	13.5W	30s

Note: The above data are the test results when the resistance of iron tip is 6 ohms. If resistance of iron tip is greater than 6 ohms, tin melting time will be longer. When input voltage is lower than 9V, the soldering iron can not work normally!



Universal type-c interface

Support PD/QC Protocol
Various power sources to meet multiple applications



DC Power Adapter



Charger Plug



Lipo Battery



Power bank

Image 5.2: The QUECOO T85 showing its Type-C and DC5521 power input ports. This image highlights the versatility of the soldering iron's power options, including compatibility with various power sources like DC adapters, charger plugs, Lipo batteries, and power banks.

6. OPERATING INSTRUCTIONS

6.1 Power On/Off and Basic Controls

Once powered, the OLED screen will display the current temperature and settings. Use the control buttons (typically '+' and '-' or A/B) to navigate menus and adjust values.

6.2 Temperature Adjustment

The temperature can be adjusted between 80°C and 480°C (180°F and 890°F). Use the designated buttons to increase or decrease the target temperature. The OLED screen will show the set temperature and the current tip temperature.



Image 6.1: The multi-function menu of the QUECOO T85. This image displays various settings accessible through the menu, including sleep temperature, sleep time, LED switch, tip adjustment, temperature grading, BOOST mode, and unit switching between Celsius and Fahrenheit.

6.3 Using the BOOST Function

The built-in BOOST function provides a temporary increase in power to quickly heat the tip for larger solder joints or when more heat is required. To activate:

1. From the main interface, long press the 'A' key to enter BOOST mode.
2. Short press the 'A' or 'B' key to exit the BOOST temperature and return to the normal operating temperature.

Built-in BOOST function

Don't be afraid of big soldering point,
BOOST powerful mode, high energy soldering!



Image 6.2: Demonstrating the BOOST function of the QUECOO T85. This image shows the soldering iron being used on a circuit board, with an overlay explaining how to activate and exit the BOOST mode for high-energy soldering.

6.4 LED Lighting

The T85 includes integrated LED lighting to illuminate the work area, improving visibility for precision soldering. To turn on the LED, navigate to the settings menu and activate the LED light switch option.

Integrated LED Lighting Precision Soldering

LED lighting, the element backlight area is also clearly visible



Enter the setting menu to turn on the LED

Suitable for precision maintenance of military and aerospace, Quartz watch
Fingerprint lock, Notebook, Mobile phone,
SLR camera, etc!

Image 6.3: The QUECOO T85 with integrated LED lighting. This image shows the soldering iron illuminating a circuit board, highlighting how the LED light enhances visibility for detailed soldering tasks.

6.5 Auto Sleep and Automatic Power-off

For safety and energy saving, the T85 features intelligent sleep and automatic power-off modes. These can typically be configured within the device's menu settings (refer to Image 6.1).

- **Sleep Mode:** After a period of inactivity, the iron will enter sleep mode, reducing the tip temperature to a preset lower value.
- **Automatic Power-off:** If left in sleep mode for an extended period, the iron will automatically power off.

7. MAINTENANCE

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

- **Tip Cleaning:** Always clean the soldering tip before and after use. Use a damp sponge or brass wool to remove excess solder and oxidation.

- **Tip Tinning:** After cleaning, re-tin the tip with a small amount of fresh solder to prevent oxidation and extend its life.
- **Storage:** Store the soldering iron with a tinned tip. Ensure the iron is completely cool before storing.
- **Handle Cleaning:** Wipe the handle with a soft, dry cloth. Do not use harsh chemicals or solvents.
- **Tip Replacement:** Replace tips when they become excessively worn or corroded, as this can affect heat transfer and soldering quality.

8. TROUBLESHOOTING

If you encounter issues with your QUECOO T85, refer to the following common problems and solutions:

- **Iron restarts after heating:** This indicates that the output power of your adapter or power bank is insufficient for normal operation. Select a lower working voltage or use a power source with higher output current.
 - For 20V operation, current $\geq 3.25\text{A}$.
 - For 15V operation, current $\geq 2.5\text{A}$.
 - For 12V operation, current $\geq 2\text{A}$.
 - For 9V operation, current $\geq 1.5\text{A}$.
- **Tip not heating or heating slowly:**
 - Check if the tip is correctly installed and secured.
 - Ensure the power source meets the minimum voltage and current requirements.
 - The tip may be worn out or heavily oxidized; try cleaning or replacing it.
- **OLED display not working:**
 - Ensure the iron is properly powered.
 - If the issue persists, contact customer support.

9. SPECIFICATIONS

Feature	Specification
Model	T85
Brand	QUECOO
Working Voltage	PD: 9-20V, DC: 12-24V
Heating Power	PD: 65W, DC: 96W
Temperature Range	80°C - 480°C (180°F - 890°F)
Input Interface	Type-C / DC5.5*2.1
Fast Charging Protocol	PD/QC General protocol, PD/QC2.0, PD/QC3.0, PD/QC4.0, AFC
Display	OLED (128*32 Pixel)
Handle Material	Acrylonitrile Butadiene Styrene (ABS)
Item Weight	120 Grams
Dimensions (approx.)	Total Length: 164mm (6.45 inches), Handle Length: 114mm (4.49 inches)

Product Size



Working Voltage:

PD9-20V/DC12-24V

Heating Power

PD:65W DC:96W

Temperature range

80-480°C

Input Interface

Type-C / DC5.5*2.1

Fast charging protocol

PD/QC General protocol

PD/QC2.0 PD/QC3.0 PD/QC4.0 AFC

Screen

OLED(128*32Pixel)

Image 9.1: Detailed dimensions and key specifications of the QUECOO T85 soldering iron. This image provides a visual representation of the product's size along with a summary of its technical specifications.

10. WARRANTY AND SUPPORT

The QUECOO T85 Soldering Iron Kit comes with a **30-day warranty** from the date of purchase. This warranty covers manufacturing defects and malfunctions under normal use.

For technical support, warranty claims, or any questions regarding your product, please contact QUECOO customer service through your retailer or the official QUECOO website.

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.

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Details

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