

XTAR MP1S

XTAR MP1S Intelligent USB Battery Charger User Manual

Model: MP1S

1. INTRODUCTION

The XTAR MP1S Intelligent USB Battery Charger is designed for charging various 3.7V Li-ion batteries, including 14650, 17670, 18650, 18700, and with the use of spacers, also 10440, 14500, 15270, 16340, and 18350 types. It features an advanced TC.CC.CV (Trickle Current, Constant Current, Constant Voltage) charging algorithm that continuously monitors battery status for safe and automatic charging. The charger is equipped with a protection circuit and intelligent temperature monitoring to ensure optimal performance and safety.

2. SAFETY PRECAUTIONS

Please read and understand all safety warnings before using the charger.

- **Indoor Use Only:** Keep the unit away from water and moisture.
- **Battery Compatibility:** Only charge 3.7V Li-ion batteries. Charging other battery types may cause damage or injury.
- **No Disassembly:** Disassembly or modification of the charger is strictly prohibited.
- **Avoid Short Circuits:** Short circuits are strictly prohibited and can cause severe damage to the charger and battery.
- **Operating Temperature:** Ensure the charger is used within the recommended operating temperature range of 0~40°C.

3. PRODUCT FEATURES

- **Intelligent Charging Algorithm:** Utilizes TC.CC.CV charging system for efficient and safe charging.
- **Automatic Monitoring:** Monitors battery status continuously throughout the charging process.
- **Low Current Standby:** Automatically enters a low current status (below 4uA) when the input voltage is removed, minimizing battery discharge.
- **Charge Maintenance:** Continuously monitors the battery after charging is complete and restarts charging if the battery's voltage drops to 4.0V or below, maintaining a full charge.

- **Temperature Control:** The charging management chip monitors its own temperature. If the detected temperature is too high, the charge current will automatically lower to protect the charger.
- **Protection Circuit:** Incorporates a robust protection circuit for enhanced safety.

4. GETTING STARTED (SETUP)

Follow these steps to set up your XTAR MP1S charger:

1. **Connect Power:** Connect the USB cable to the charger's USB input port and then to a 5V USB power source (e.g., computer USB port, USB wall adapter, or car charger).
2. **Insert Battery:** Carefully insert the 3.7V Li-ion battery into the charging slot, ensuring the correct polarity (+ and - ends) aligns with the markings on the charger. The positive (+) end of the battery should align with the positive contact on the charger, and the negative (-) end with the negative spring contact.
3. **Charging Indication:** The charger will automatically begin charging. Refer to the operating section for details on charging status.



Figure 1: Front view of the XTAR MP1S Charger, showing the battery slot and USB input.

5. OPERATION

The XTAR MP1S charger operates automatically once a compatible battery is inserted and power is connected.

- **Charging Process:** The charger employs a multi-stage TC.CC.CV charging method. It starts with a trickle current, then moves to constant current, and finally constant voltage to safely and efficiently charge your battery.
- **Battery Compatibility:** This charger is designed for 3.7V Li-ion batteries. It supports 14650, 17670, 18650, 18700, and with the use of spacers, also 10440, 14500, 15270, 16340, 18350 battery sizes.
- **Automatic Recharge:** To ensure your battery remains fully charged, the charger will automatically restart charging if the battery voltage drops below 4.0V after a full charge.



Figure 2: Bottom and side views of the XTAR MP1S Charger, showing ventilation and USB port.

6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your charger:

- **Keep Dry:** Always keep the charger in a dry environment. Avoid exposure to water or high humidity.
- **Clean Contacts:** Periodically clean the charging contacts on the charger and your batteries with a dry, soft cloth to ensure good electrical connection.
- **Storage:** When not in use, store the charger in a cool, dry place away from direct sunlight and extreme temperatures.
- **Avoid Impact:** Do not drop or subject the charger to heavy impact.

7. TROUBLESHOOTING

If you encounter issues with your XTAR MP1S charger, consider the following:

- **Charger Not Powering On:**
 - Ensure the USB cable is securely connected to both the charger and the power source.
 - Verify that the USB power source (e.g., wall adapter, computer port) is functional and providing 5V output.
- **Battery Not Charging:**
 - Check that the battery is a 3.7V Li-ion type and is compatible with the charger (refer to compatible battery list).
 - Ensure the battery is inserted with the correct polarity.
 - Inspect the battery and charger contacts for dirt or damage. Clean if necessary.

- Check for any signs of short circuit on the battery or within the charger slot.
- **Charging is Slow or Stops Prematurely:**
 - The charger's internal temperature control may reduce charging current if it detects overheating. Allow the charger to cool down in a well-ventilated area.
 - Ensure the USB power source can provide sufficient current (500mA recommended).

8. SPECIFICATIONS


Specification	Value
Model Number	MP1S
Input Voltage / Current	DC 5V / 500mA
Output Voltage / Current	DC 4.2V $\pm 0.05\%$ 500mA $\pm 10\%$
Operation Temperature	0~40°C
Product Dimensions	7.09 x 9.84 x 1.97 inches
Item Weight	2.82 ounces (80 Grams)
Manufacturer	XTAR
Date First Available	July 3, 2013

9. WARRANTY AND SUPPORT

For warranty information and technical support, please contact XTAR customer service or visit the official XTAR website. Keep your purchase receipt as proof of purchase.
You can visit the official XTAR store on Amazon for more information:[XTAR Official Store](#)

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Related Documents - MP1S

	<p>XTAR MC2 Portable Li-ion Battery Charger - User Manual & Specifications</p> <p>Comprehensive guide to the XTAR MC2 portable Li-ion battery charger, covering features, technical specifications, operation, supported batteries, LED indicators, customer service, and safety notices.</p>
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Cross Reference Chart 2018 xtar cross reference chart master instruments au files battery information |||

TORCH RANGE COMPARISON CHART EVCEORMYPDAACYT DIVING SPORT

TACTICAL HEADLAMP Model WK007 Lumens C ... IPX8 100m 1.5m Press-Type

Magnetic 1 x 18500, 1 x 18560, Induction Switch 1 x 18700, 1 x 26650 **MP1S**

Charger, AC Adaptor, DC Adaptor, 18700 Battery, Lanyard, O-Ring, Soft Carry Case
D08 Set 2000...

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