

M4 Pocket

Manual V1.0

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www.toolkitrc.com

ToolkitRC Technology (Shenzhen) Co., Ltd

Introduction

Thank you for purchasing the M4 Pocket balance charger, please read this manual carefully before use.

Key Points



Tips



Important



Information

Further information

To ensure you have the best experience with this product, please scan the QR code below to stay up to date with news, information and firmware updates for your charger; this information could be found at www.toolkitrc.com/M4Pocket



Safety

1. M4 Pocket allows input voltage of DC 7.0-25.0V. Ensure the charger is only connected to a suitable AC power outlet.
2. Do not use this product in hot, humid, flammable or explosive environments.
3. Please do not use this charger without supervision. Never leave charging batteries unattended.
4. When not using this product, please unplug the input power.
5. When using the charging function, please set a current that matches the battery. Do not set an excessive current for charging to avoid damage to the battery. Check the guidelines of your battery's manufacturer for correct charging instructions.

Contents

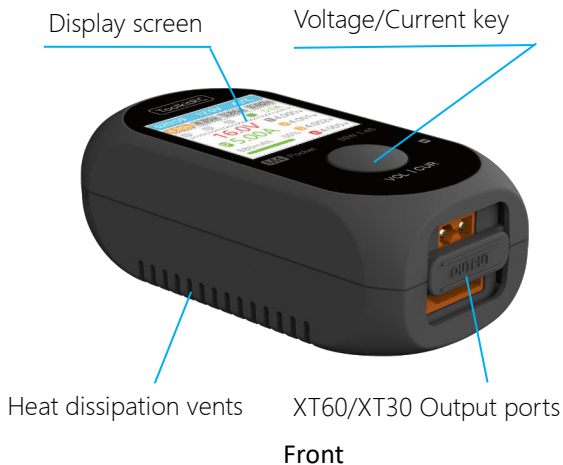
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Product description

The M4 Pocket is a ultra-compact balance charger; despite the small size, the M4 pocket has a maximum output of 80W! Featuring an intuitive user interface and a color IPS full viewing angle display, the M4 Pocket is a capable, bring-anywhere charger!

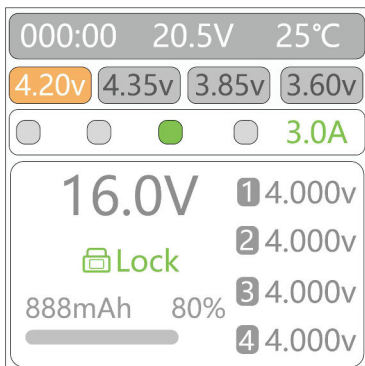
- Charge and balance management of LiPo, LiHV, LiFe & Lion 1-4S batteries.
- Voltage input DC 7.0-25.0V.
- Charging current: Maximum 5.0A @MAX 80W.
- User-defined Lithium battery cut-off voltage (TVC function).
- Battery voltage can be manually calibrated.
- Charging accuracy: <0.005V.
- Balance current: 400mA.
- 1.54 inch, IPS full viewing angle display.
- High resolution 240*240 pixels.

M4 Pocket Layout



Quick start

- 1, Connect the M4 Pocket to a suitable DC 7.0-25.0V to power outlet.
- 2, The display shows the boot logo for 2 seconds.
- 3, After booting up, the screen enters the main interface as shown below:



- 4, Short press [Voltage/Current] key to unlock the system and start adjusting parameters.
- 5, Long press [Voltage/Current] key to set the charging cut-off voltage.
- 6, Short press [Voltage/Current] key to select the charging current.
- 7, When the output main port and the balance port voltage match, the M4 pocket will automatically start charging.



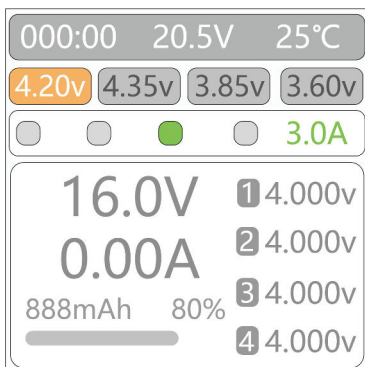
Tips:

Every time you turn on the charger, you need to press the button once to unlock the system. This is a safety feature designed to prevent incorrect selection of battery type and current.

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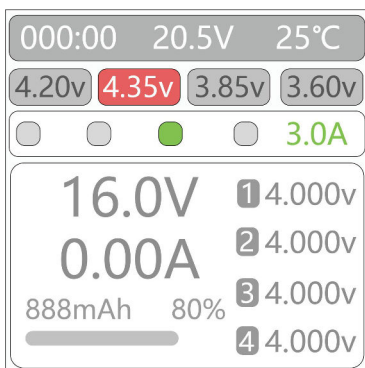
Charging settings

After the power is turned on and the charger unlocked, the screen will display the following.



1, Battery type setting

Long press [Voltage/Current] key to select battery cut-off voltage (battery type), displayed as follows.



Different battery chemistries have different cutoff voltages. Please refer to the following table as reference,

and verify with your battery manual:

4.20V	Lipo
4.35V	LiHv
3.85V	Lipo-Storage
3.60V	LiFe



Important:

1, Ensure the correct battery type has been selected prior to charging. An incorrect choice may damage the battery and/or become a fire hazard. Please use caution.

2, Do not use this product to charge non-compatible battery chemistries.

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Nomenclature:

1, Lipo: Often referred to as a lithium polymer battery, a battery with a nominal voltage of 3.70V and 4.20V when fully charged.

2, LiHV: Often referred to as a high-voltage lithium battery, a battery with a nominal voltage of 3.85V and 4.35V when fully charged.

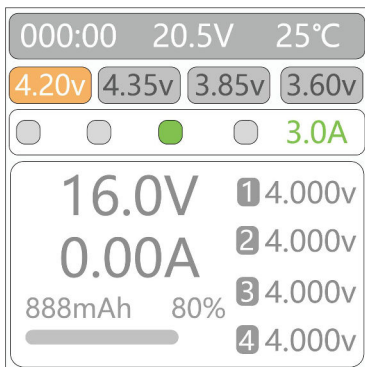
3, LiFe: Often referred to as an iron-lithium battery, a battery with a nominal voltage of 3.30V and 3.60V when fully charged.

4, Lion: Often called a lithium-ion battery, a battery with a nominal voltage of 3.60V and 4.10V when fully charged.

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2, Current setting

Short press [Voltage/Current] key to select the charging current, the current can be selected from 4 values, 1.0A, 2.0A, 3.0A, 5.0A. The display is as follows.



Tips:

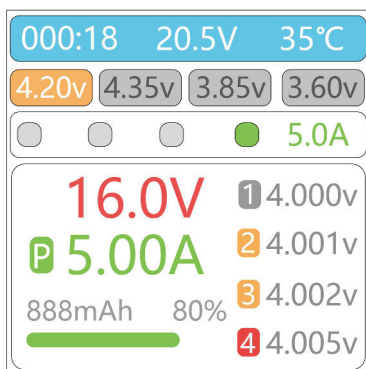
When selecting the current, it is recommended to use a charging rate of 1C-2C. For example: 1000mAh battery, use 1.0A-2.0A for charging; This effectively improves the cycle life of the battery. Always check the battery manufacturers guidelines and charging instructions before charging.

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Start charging

After setting the battery voltage and current, connect the battery. After the charger detects that the voltage between the main port and the balance port matches, it will automatically start charging.

Display as follows:



Display content description:

000:18: Charging time.

20.5V: Input voltage.

35°C: Charger temperature.

4.20v: The selected cell type cutoff voltage

4.35v **3.85v** **3.60v**: Other cell cutoff voltages (not selected).

16.0V: Current battery voltage.

5.00A: Current charging current.

C: Current limit sign. **P**: Power current limit,

T: temperature limit, **F**: The battery or one of the cells is

full.

888mAh: Accumulated capacity that has been charged.

1 4.000V: The first cell voltage, this cell is not balancing

2 4.001V: The second cell voltage, this cell is slowly balancing

3 4.002V: The third cell voltage, this cell is slowly balancing

4 4.005V: The fourth cell voltage, this cell is quickly balancing

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Tips:

When charging a 1S battery, the battery voltage needs to be provided to the balance port at the same time, so that the charger can recognize and start charging.

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Terminal voltage setting and manual calibration

Before connecting to the power supply, press and hold [Voltage/Current] key to enter the calibration mode, as shown below:

```
Terminal voltage:
4.20v 4.35v 3.85v 3.60v
Calibration voltage:
IN: 12.00v    4 4.200v
OT: 16.00v    3 4.200v
0           2 4.200v
DEFAULT      1 4.200v
```

Terminal volte: The terminal voltage after the battery is fully charged. Accurate to +/- 10mV.

Calibration voltage: Battery calibration voltage, if the cell voltage readings appear to be incorrect, use a high-quality voltage meter to measure the actual voltage, then set this value to be the same as the meter.

DEFAULT: Restore to factory default.

Specification

Charge	Input	XT60 7.0-25.0V MAX 5A
		USB-C 5.0-20.0V@QC,PD,AFC,FCP
	Battery type	LiPo LiHv LiFe LipoStorage 1-4S
	Charging power	1.0-5.0A @ 80W
	Balance current	MAX 400mA @4.20V
	Charging accuracy	<0.005V @4.20V
	USB-C Output	1.0A@5.0V
Display	LCD	IPS 1.54" 240*240 Pixels
Product	Size	80*40*30mm
	Weight	75g
Individual packing	Size	82*42*32 mm
	Weight	85g