MakerHawk N10 USB Multifunctional Tester



# MakerHawk N10 USB Multifunctional Tester Instruction Manual

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MakerHawk N10 USB Multifunctional Tester



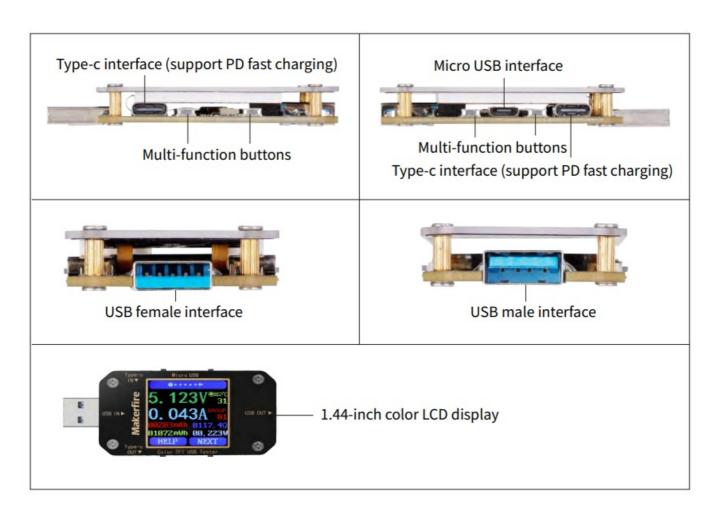
# Dear user:

In order to let you know all the functions of this product faster, get a better user experience, and avoid misoperation, please read this manual carefully before use and keep it for future reference.

# **Product Parameters**

Model: N10	Product weight: 20.5g (net weight)
Input voltage: 3.8V-30V	Voltage measurement resolution: 0.01V
Input current: 0-3.000A	Current measurement resolution: 0.001A
Capacity measurement range: 0-99999Ah	Voltage measurement accuracy: ±1%
Energy measurement range: 0-99999Wh	Current measurement accuracy: ±1%
Load impedance measurement range: 1.5	Time measurement range: 0-99 hos 59 mics 59 seds
Ω-9999.9Ω	
Temperature measurement range:	Temperature measurement error: ±2°C/ ±3.6°F
-20°C~80°C/4°F~176°F	
Screen brightness setting: 0-5 a total of 6 levels	Delay off screen time: 0-9 minutes
Voltage curve range: 3.8V-30V	Current curve range: 0.00A-3.00A
Product size: 73mm*35mm*10mm	Fast charge recognition mode: QC2.0 QC3.0
Display screen: 1.44-inch color LCD screen	Refresh rate: 50Hz

# **Function Interface**



#### Instructions

#### Main interface 1 (main measurement interface)



- 1. Voltage measurement value
- 2. Current measurement value
- 3. Historical cumulative capacity value
- 4. Historical cumulative energy value
- 5. Temperature display
- 6. Data group number
- 7. Load Equivalent Impedance
- 8. Power measurement

## Short press the "Help" button, the interface will display as above:

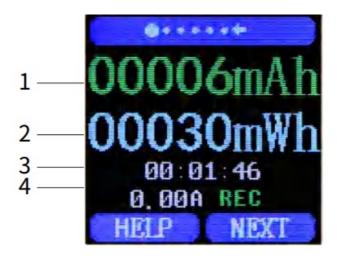
- Long press the "Next" button to switch the data group, the measuring instrument can save and view 10 groups of data from 1 to 10.
- When the data group is group 1-10, the current capacity is stored when the power is turned off, and the accumulation will continue when the power is turned on next time.
- When the data group number is selected, long press the "Help" button to clear the accumulated capacity value and accumulated energy value in this group of data groups.
- Short press the "Next" button to switch to the main interface 2 (fast charging identification interface)

#### Main interface 2 (quick charging identification interface)



- 1. D+: DP, data positive signal
- 2. D-: DM, data negative signal
- 3. Mode display: QC2.0, QC3.0 mode Short press the "Next" button to switch to the main 3 (data recording interface)

## Main interface 3 (data recording interface)



- 1. Accumulated capacity after this boot
- 2. Accumulated energy value after this boot
- 3. Time display: accumulated record time of the current load
- 4. Stop the current setting REC: Recording status indicator, red REC means stop, green REC means recording.

After power on, when the current is greater than the stop current, the system starts to record the capacity and energy, the time increases, and the REC changes from red to green. Long press the "Next" button to select the stop current, and short press the button to adjust the value in turn.

The stop current of this product can be set between 0.01-0.30A.

Short press the "Next" button to switch to the main interface 4 (line resistance measurement interface)

## Main interface 4 (line resistance measurement interface)



- The voltage and current value when the tester is directly connected to the power supply (recommended to connect to a fixed voltage and current; only support the power input from the USB-A male terminal, and the output terminal is USB-A female)
- 2. The voltage and current value when the tester is connected to the power supply through the chargeing cable to be tested (the power supply is connected to the same voltage and current as the previous step)

### R: Charging cable resistance

This interface of this product can be used to measure the line resistance of the charging cable.

## The operation steps are as follows:

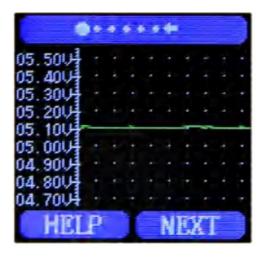
- 1. **Step 1:** The tester is connected directly to the power supply, adjust the appropriate load current (recommended to connect to a fixed voltage and current), long press the "Next" button to record the data, and the indicator icon on the right stops flashing.
- 2. **Step 2:** Unplug the tester, connect the tester to the power supply through the Micro USB data cable, adjust the load current to the same current as the first step (recommended to connect to the same fixed voltage and current as the first step), long press "Next" button to record data, the right indicator icon stops flashing, the line resistance test is completed, and the line resistance value of the data cable is displayed.

**Note**: If the screen of the tester turns black after inserting the data cable in the second step, it indicates that the voltage difference is too large, and the tester enters the 4.5V power-off state, the load current needs to be reduced, and the measurement starts from the first step again.

After the line resistance measurement is completed, restart the measurement after the tester is powered on next time. Short press the "Next" button to switch to the main interface 5 (voltage curve interface).

# Main interface 5 (voltage curve interface)

This interface is the waveform diagram of the measured voltage, which automatically changes the range within the measurement range of 3.8-30.0V, and displays the voltage fluctuation in real time. Short press the "Next" button to switch to the main interface 6 (current curve interface).



# Main interface 6 (current curve interface)

This interface is the current measurement waveform diagram, which automatically changes the range within the measurement range of 0.00A-3.00A, and displays the current fluctuation in real time. Short press the "Next" button to switch to the main interface 7 (setting interface).



# Main interface 7 (setting interface)



- 1. Delay off screen time
- 2. Screen brightness
- 3. Temperature unit switching
- Long press the "Next" button to select the delay screen off time, brightness level, and temperature unit

switching in turn. Long press the "Next" button to enter the screen off time setting, select the corresponding number and display it in reverse, and short press to cyclically modify the value, , the values are changed in a sequence of 10 values from 0 to 9, where 0 is always on

- Long press the "Next" button to enter the screen brightness setting, select the corresponding number and
  display it inversely, short press to change the size of the number, the larger the number, the brighter the screen,
  there are 6 levels of settings.
- Long press the "Next" button to enter the temperature unit switching, the corresponding number is selected and displayed inversely, and a short press can switch between 0 and 1, 0 is Celsius, 1 is Fahrenheit.
- Long press the "Next" button to exit modifying settings. (The above settings must be entered into the first interface from this interface to save).

## Warm tips

This product supports forward and reverse input and output detection, current flow direction indication, and alarm reminder functions.

**Temperature alarm**: exceeds 45°C, the temperature display will flash; voltage alarm: less than 3.8V or greater than 30V, the voltage display will flash; current alarm: greater than 3A, the current display will flash.

## **FAQs**

What is the product weight of the MakerHawk N10 USB Multifunctional Tester?

The product weight of the MakerHawk N10 USB Multifunctional Tester is 20.5g.

What is the input voltage range for the MakerHawk N10 USB Multifunctional Tester?

The input voltage range for the MakerHawk N10 USB Multifunctional Tester is 3.8V-30V.

What is the resolution for voltage measurement on the MakerHawk N10 USB Multifunctional Tester?

The voltage measurement resolution on the MakerHawk N10 USB Multifunctional Tester is 0.01V.

What is the capacity measurement range of the MakerHawk N10 USB Multifunctional Tester?

The capacity measurement range of the MakerHawk N10 USB Multifunctional Tester is 0-99999Ah.

What are the accuracy levels for voltage and current measurements on the MakerHawk N10 USB Multifunctional Tester?

The voltage and current measurement accuracy on the MakerHawk N10 USB Multifunctional Tester is ±1%.

What is the energy measurement range of the MakerHawk N10 USB Multifunctional Tester?

The energy measurement range of the MakerHawk N10 USB Multifunctional Tester is 0-99999Wh.

What is the load impedance measurement range of the MakerHawk N10 USB Multifunctional Tester?

The load impedance measurement range of the MakerHawk N10 USB Multifunctional Tester is  $1.5\Omega$ - 9999.9 $\Omega$ .

What are the functions supported by the MakerHawk N10 USB Multifunctional Tester?

The MakerHawk N10 USB Multifunctional Tester supports forward and reverse input and output detection, current flow direction indication, and alarm reminder functions.

What are the main interfaces available on the MakerHawk N10 USB Multifunctional Tester?

The main interfaces on the MakerHawk N10 USB Multifunctional Tester include Type-C interface, Micro USB interface, and multi-function buttons.

What are the features of the main measurement interface on the MakerHawk N10 USB Multifunctional Tester?

The main measurement interface on the MakerHawk N10 USB Multifunctional Tester displays voltage measurement value, current measurement value, historical cumulative capacity value, historical cumulative energy value, temperature display, data group number, load equivalent impedance, and power measurement.

How does the MakerHawk N10 USB Multifunctional Tester handle fast charge identification?

The MakerHawk N10 USB Multifunctional Tester has a quick charging identification interface that displays D+ and D- signals and mode information.

What are the settings available on the setting interface of the MakerHawk N10 USB Multifunctional Tester?

The setting interface on the MakerHawk N10 USB Multifunctional Tester allows for adjusting delay off screen time, screen brightness, and temperature unit switching.

What are the temperature alarm and voltage alarm thresholds on the MakerHawk N10 USB Multifunctional Tester?

The MakerHawk N10 USB Multifunctional Tester has temperature and voltage alarms set at 45°C and specific voltage levels respectively.

How does the MakerHawk N10 USB Multifunctional Tester handle data recording?

The MakerHawk N10 USB Multifunctional Tester has a data recording interface that allows storing and viewing up to 10 data groups.

# Video-MakerHawk N10 USB Multifunctional Tester



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#### **Reference Link**

MakerHawk N10 USB Multifunctional Tester Instruction Manual-Device. report

#### References

User Manual

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