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QooPow™ Tool Series

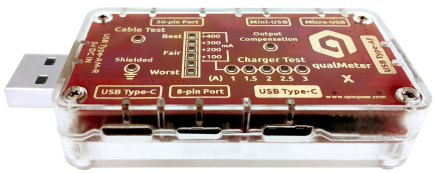
EN

Smarter & Better Charging

World's First Smart & Portable
USB Cable & Charger Tester

Over 1700% funded with KICK STARTER

qualMeter Basic



qualMeter X

miniLoad

Make Life
Simpler & Easier

INTELLIPLUS

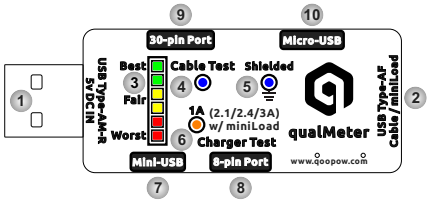
Designed & Manufactured by Intelliplus in Chengdu
www.qoopow.com

MEET qualMeter Basic, qualMeter X and miniLoad

① Reversible USB 2.0 Type A male connector

② USB 2.0 Type A female connector

③ Quality Indicators (Green/Yellow/Red)



④ Cable Test indicator (Blue)

⑤ Shielded Cable indicator (Blue)

⑥ Charger Test and Current indicator (Orange)

⑦ Mini-USB female connector

⑧ 8-pin female connector

⑨ 30-pin female connector

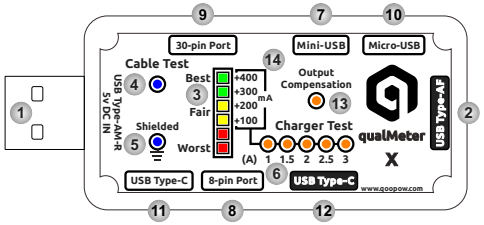
⑩ Micro-USB female connector

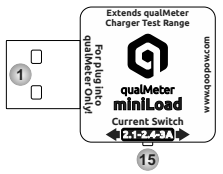
⑪ USB Type C female connector

⑫ USB Type C female connector (Main)

⑬ Output Compensation Indicator (Orange)

⑭ Small Current Indicators (Green/Yellow)





⑮ Loading Current Switch (2.1/2.4/3A)

Introduction

qualMeter is a smart quality detection tool made for people's household toolbox. Thanks to its simple and intuitive concepts, qualMeter is designed for non-tech people to easily find out the quality of the USB cables and chargers in a glance without any technical background and professional equipments.

qualMeter helps to address some common issues with USB cables and chargers such as slow charging, cable/charger gets hot, shorted cables, slow data transferring and so on. It also prevents you from unsafe charging by detecting defective cables and chargers.

Currently, **QooPow™ Tool Series** offer two type of qualMeters. **qualMeter Basic** and **qualMeter X**. An electrical **miniLoad** is also available for **qualMeter Basic** to extend its charger testing range.

qualMeter Basic is fully designed for non-tech people who have no idea about electrical stuff but only know how to plug cables.

qualMeter X is more for geeks and technicians as it has more advanced features which would require some basic electrical knowledge.

For more information, please visit our website www.qoopow.com

Indicators Guide

Quality Indicators

qualMeter has 6 LED indicators to light up different status of tested cable or charger in sequence. The Indicators are grouped by (2)**Green**, (2)**Yellow**, and (2)**Red** LEDs, which are corresponding to **Good**, **Fair (OK)** and **Bad** qualities in general.

› For **qualMeter Basic**, the indicators work with both Cable Test and Charger Test mode.

› For **qualMeter X**, the indicators work with Cable Test mode and are partially shared with the Charger Output Capability Testing.

Cable Test Indicators

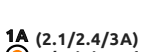
Cable Test The LED indicators for Cable Test and Shielded cable are Blue.

Shielded Applies to both **qualMeter Basic** and **qualMeter X** .

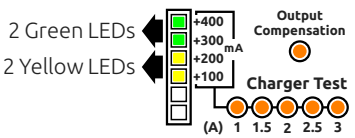
Charger Test Indicators

› **qualMeter Basic**

The Orange LED is used for Charger Test indication. It also indicates the testing current.



› **qualMeter X**



The Orange LEDs are used for Charger Test indication as well as the Output Compensation.

The indication of the charger output capability (current) testing result is combined by 2 groups, the 5 main current indicators (Orange) for 1/1.5/2/2.5/3A and the 4 small current indicators (Green and Yellow) for 100~400mA. The 4 small current indicators are shared with Quality Indicators when the Charger Test mode is on.

Compatibility

qualMeter is compatible with most of mainstream USB cables such as MicroUSB, MiniUSB, 8-pin, 30-pin and USB Type-C. And almost any 5v USB charger (port or power source) can be tested by qualMeter.

Specifications

Input Voltage: DC 4.5 ~ 5.5V
Input Port: Reversible USB Type-A Male
Testing Ports: USB Type-A female, MicroUSB, MiniUSB, 8-Pin, 30-Pin and USB Type-C female (X version only)
Cable Testing Current:
1A(qualMeter Basic),
1A or 2A(qualMeter X)
Charger Testing Current:
1A(qualMeter Basic)
1A/2.1A/2.4A/3A (qualMeter Basic + miniLoad)
1A~3.1A with 100mA per step (qualMeter X)
Main Material: Raw PCB (CCL FR-4) Pb free, Transparent PC (qualMeter X Enclosure)
Dimension:
52.8 x 23.8 x 11mm (qualMeter Basic)
62.8 x 32.8 x 15.8 mm (qualMeter X)
23.8 x 23.8 x 11mm (miniLoad)

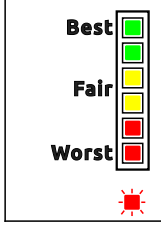
Charger Testing

Charger test mode will be enabled automatically when qualMeter has been plugged into a 5v USB power source.

qualMeter Basic uses Quality Indicators to show you the charger's quality directly. The charger output testing range is fixed with 1A current. However, with the help from **miniLoad**, the output testing range can be extended to 2.1A, 2.4A and 3A. This covers most of popular chargers in the market.

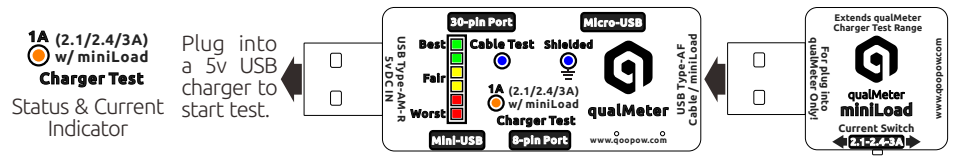
Important Notice: Please make sure the USB power source output is 5v . Otherwise, it could damage your qualMeter.

Charger Test with qualMeter Basic - 1A mode

Quality Indicators	Colors	Quality Levels
	Top Green	Excellent
	Second Green	Good
	Top Yellow	Fair
	Second Yellow	Less Fair
	Top Red	Poor
	Second Red	Very Poor
	Red Light Flashing	Broken

The orange charger test indicator lights up and it also confirms the testing current is 1A. You can find out the quality of this charger at 1A output by reading the color of the Quality Indicators. There are totally 7 levels available to help you determine the quality of your charger.

Refer to the table on the left hand to learn how to read the testing result.



Charger Test with qualMeter Basic - Extended testing mode with miniLoad

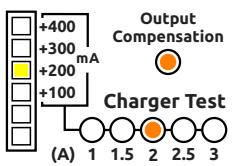
As shown in the above diagram, simply plug **miniLoad** into **qualMeter Basic** USB Type A female port, adjust the ***Current Switch*** on the **miniLoad** to the current you desired to test then you are ready to go. The orange charger test indicator will then indicate the current you have set on the miniLoad. You can then find out the quality of this charger at the setting output by reading the color of the Quality Indicators.

For example, the charger test indicator will now indicate 2.4A testing current if you have put the current switch at 2.4A. And the qualMeter will be testing your charger's output quality at 2.4A.

Important Notice: 1. Always unplug the qualMeter from charger first before adjusting the current switch on miniLoad; 2. miniLoad is designed for using with qualMeter Basic only.

Charger Test with qualMeter X

qualMeter X uses a different mechanism to test the quality of chargers. Instead of directly showing quality by the LED indicators, it tells you how much output current the charger can provide @5v. The testing result can be read directly from the combination of the charger test indicators from 1A to 3.1A in 100mA each step. You can then find out the quality of the charger by comparing the result with the nominal output current @5v marked on it.



Plug the **qualMeter X** into the charger you wanted to test. The charger test indicators will light up and start moving. When the indicators stopped moving, simply add the indicators' reading together.

For example, if you get both 200mA and 2A light up (as shown in the left diagram) that means the output capability of your charger is 2.2A. Add "0"- zero, if there is no light on the small current indicator side.

The Output Compensation Indicator gives you the ability to find out whether your charger has the capability of compensating the output power. Normally, a charger with output compensation would have better charging quality as it can compensate part of the dissipated power (voltage drop) which corresponds to the raising of the output current while charging.

Cable Testing

Cable testing with qualMeter is very straight forward. Simply plug both ends of your cable into corresponding ports on qualMeter. Then plug the qualMeter into any 5v USB power source. qualMeter will automatically start the testing and shows you the result in few seconds.

qualMeter Basic will test cable at fixed 1A current. While **qualMeter X** has the ability to test cable at 1A or 2A current. It will automatically determine how much current should be using to test the cable. And it always uses 2A for testing if the input USB power source is capable for 2A.

Quality Indicators	Colors	Quality Levels
	Top Green	Excellent
	Second Green	Good
	Top Yellow	Fair
	Second Yellow	Less Fair
	Top Red	Poor
	Second Red	Very Poor
	Red Light Flashing	Shorted or Broken

The blue Cable Test indicator will light up. The orange charger test indicator lights up to confirm the testing current is 1A or 2A. You can find out the quality of your cable by reading the color of the Quality Indicators. There are totally 7 levels available to help you determine the quality of your cable.

Refer to the table on the left hand to learn how to read the testing result.

The blue Shielded Indicator will light up if your cable is shielded. Normally, a shielded cable would have better quality and faster data transferring in general.

CAUTION: PLEASE MAKE SURE THAT YOU HAVE CONNECTED BOTH ENDS OF YOUR CABLE INTO QUALMETER BEFORE TESTING!!!

DONOT CONNECT THE OTHER END OF YOUR USB CABLE TO AN USB POWER SOURCE AS THIS MAY CAUSE DAMAGE ON QUALMETER!!!

Visit http://forum.qoopow.com to gain more details about the testing methods and tips.

qualMeter Basic v.s. qualMeter X

Functions & Specs	qualMeter Basic	qualMeter X
Easy LED Indicators	Y	Y
Supports MicroUSB, MiniUSB, 8-pin, 30-pin	Y	Y
Reversible USB Type A male input port	Y	Y
Cable Testing @5v 1A	Y	Y
Cable Shielded Test	Y	Y
Cable Short Circuits Test	Y	Y
Charger Testing @5v 1A	Y	Y
Plug n Play	Y	Y
Advanced Charger Testing @5v 1~3.1A	Partial, 4 stops w/ miniLoad	Full Range, 100mA each step
MCU (Micro-Processor)	8-bit, 8MHz	32-bit, 48MHz
Support USB Type-C	N	Y, 2 ports
Advanced Cable Testing @5v 2A	N	Y
Adjustable Electronic Load	N	Y
Charger Output Compensation Test	N	Y
Flash Memory	N	Y
Enclosure	N	Y
Extension Port for Future Functions	N	Y
Firmware Upgradeable	N	Y