Portable Digital Oscilloscope

User Manual v1.0.7

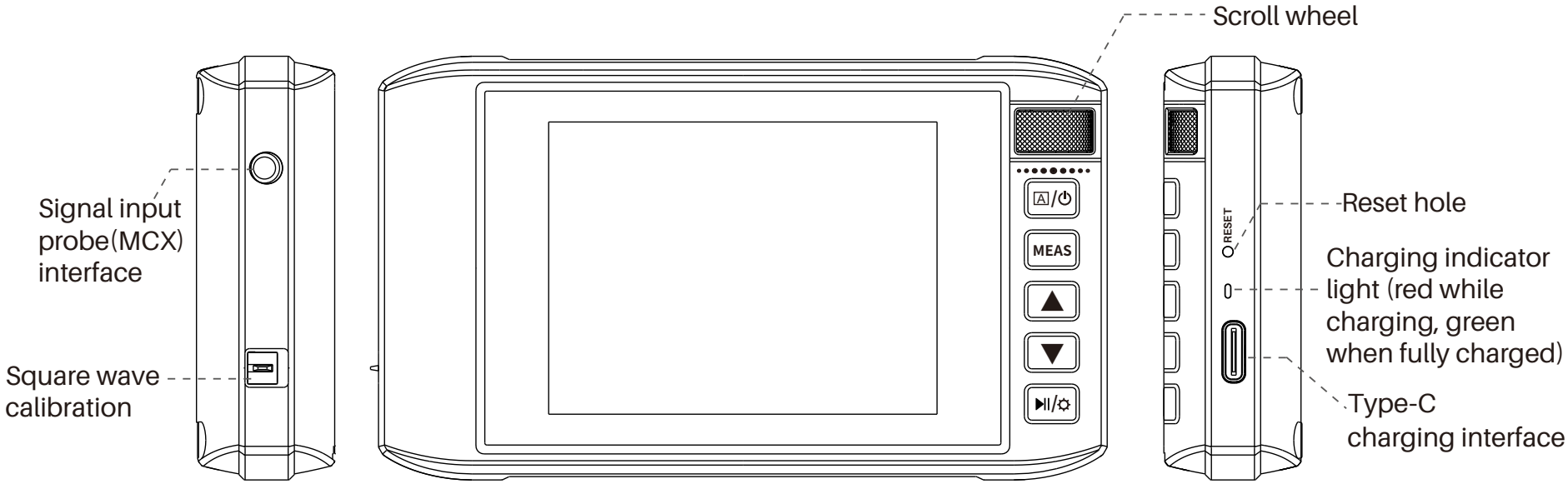
1. User Instructions

- Before using the product, please read the manual carefully in order to give full play to the best performance of the product.
- Do not use the device in a flammable or explosive environment.
- After receiving the device, please charge it fully before use.
- Please use the voltage within the specification range of the manual for charging.
- During calibration, remove the BNC probe or short-circuit its positive and negative terminals.
- Try not to perform a high voltage test while charging.
- When using the oscilloscope, pay attention to range selection; the oscilloscope range shall match the probe range.
- When measuring high voltage, do not touch any metal parts of the oscilloscope to avoid electric shock risks.
- Waste batteries removed from the instrument and scrapped instruments must not be disposed of together with household waste. Please dispose of them in accordance with relevant national or local laws and regulations.

2. Introduction

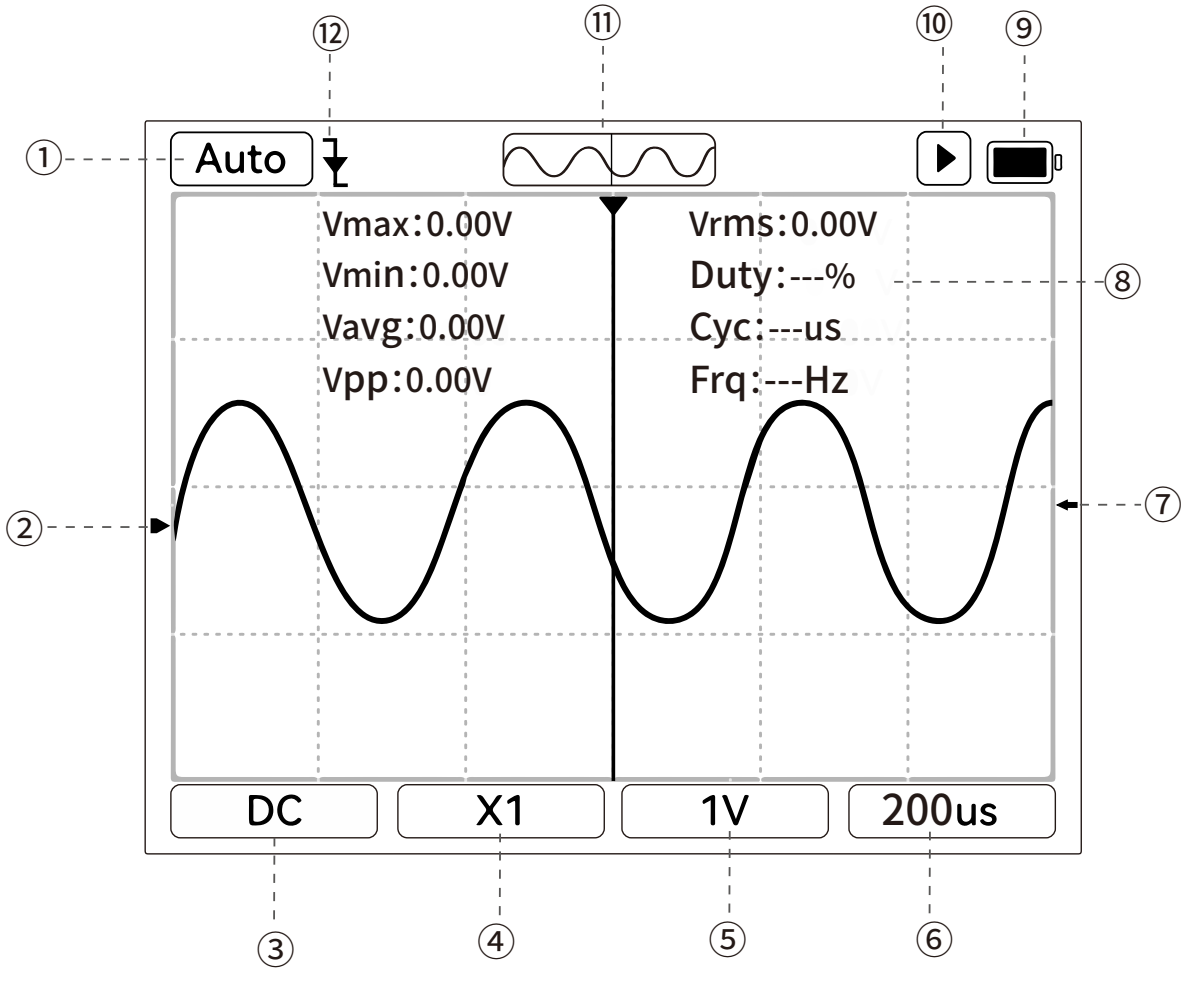
This product is a cost-effective handheld oscilloscope for personnel engaged in maintenance, R&D and education industries. It boasts a real-time sampling rate of 5MS/s and a bandwidth of 500kHz, with full trigger functions (Auto, Normal, Single). It is perfectly applicable to various practical scenarios including home appliance maintenance, industrial control troubleshooting, hardware development and debugging, as well as hands-on classroom teaching.

Appearance



Button	Operation	Function
A/⏻	Short press	Automatic measurement
	Long press	Power on / Power off
MEAS	Short press	Auto/Normal/Single switching
	Long press	Display/hide measurement parameters
▲	Short press	Cycle through setting items; selected items are highlighted in white, and values can be adjusted via the scroll wheel (oscilloscope interface) Select setting items upward (system settings interface)
▼	Short press	Cycle through setting items; the selected item is displayed in white, and its value can be adjusted with the scroll wheel (oscilloscope interface) Select setting items downward (system settings interface)
⏯/☼	Short press	Run/pause waveform (oscilloscope Interface); switch selection of setting items left/right and confirm (system settings interface)
	Long press	Switch between oscilloscope interface and system settings snterface
Scroll wheel	Swipe left or right	Control adjustment and selection of each setting item (oscilloscope interface only)

Oscilloscope Display Interface



Setting items on the oscilloscope interface include: ②, ③, ④, ⑤, ⑥, ⑦, ⑪, ⑫

①Trigger mode indicator icon, Auto for auto trigger, Normal for normal trigger, Single for single trigger.
②Baseline indicator icon, this icon indicates the current position is 0V voltage.
③Input coupling indicator icon, AC means AC coupling, DC means DC coupling.
④1X/10X mode indicator icon, this must be consistent with the 1X/10X switch on the probe handle. If the probe is in 1X mode, then the oscilloscope shuold also be set to 1X mode. 1X measures ±40V voltage, 10X measures ±400V voltage.
⑤Vertical sensitivity, Indicates the voltage value represented by one major vertical division.
⑥Horizontal time base, represents the time length of one major horizontal division.
⑦Trigger voltage indicator icon
⑧Measurement parameters
⑨Battery level icon
⑩Waveform run/pause indicator icon
⑪Thumbnail waveform
⑫Trigger edge indicator icon

3. Operation Instructions

3.1 Power on/power off

Power on: Long press the【 Ⓐ/⏻】key when the device is powered off; the oscilloscope interface will load automatically after startup.

Power off: Long press the【 Ⓐ/⏻】key under powered-on state to shut down the device.

3.2 System settings

On the oscilloscope interface, long press the【⏯/☼】key to enter the system settings page, which contains 6 configurable items as follows:

(1) Brightness: 5 adjustable brightness levels available.

Note: The backlight will automatically dim to the lowest level if no key operation is performed for 5 minutes. Short press any key to restore normal brightness.

(2) Calibrate: Follow on-screen prompts to complete the calibration procedure.

(3) Language: Supports multi-language interface switching.

(4) Auto Off: 4 selectable modes (off, 15mins, 30mins, 1hour), adjustable as required.

(5) About: View device model and firmware version details.

(6) Restore: Restore all device configurations to factory default values.

4. Technical Parameters

Sampling rate	5MS/s
Bandwidth	500kHz
Vertical sensitivity	10mV/Div-10V/Div (progress according to the 1-2-5 way)
Time base range	5μs/Div-10s/Div (progress according to the 1-2-5 way)
Voltage range	X1: ±40V (Vpp: 80V) X10: ±400V (Vpp: 800V)
Trigger method	Auto / Normal / Single
Coupling method	AC/DC
Display	2.8 inches / PPI: 320*240
USB charging	5V/1A
Square wave calibration	Frequency: 1kHz; Duty cycle: 50%