

protech

Pocket Size Digital Oscilloscope

HOBBYIST



User Manual



Please read and save all instructions to ensure safe and effective use of this product.

QC9140

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GENERAL INFORMATION & SAFETY INSTRUCTIONS

- This manual provides detailed instructions on how to use the product, precautions, and related information. Please read the manual carefully before using the product to ensure optimal performance.
- Do not use the instrument in flammable or explosive environments.
- Used batteries and discarded instruments should not be disposed of with household waste. Please dispose of them in accordance with national or local regulations.

PRECAUTIONS

- Before use completely charge the oscilloscope till the indication light turns green.
- When using the oscilloscope, pay attention to the selection of the range. The oscilloscope's range should match the probe's range.
- When measuring high voltage, do not touch any metal parts of the oscilloscope to avoid the risk of electric shock.
- Try not to conduct high-voltage tests while charging.
- When calibrating, you need to unplug the BNC probe, or short-circuit the positive and negative poles of the probe.
- Please use the voltage within the specifications of the manual to charge.

WARNING: The manufacturer is not responsible for any potential injury from misuse.

PRODUCT OVERVIEW

This product is a highly practical and cost-effective handheld oscilloscope, designed for professionals in the repair industry as well as research and education sectors. The oscilloscope features a real-time sampling rate of 2.5MS/s, a bandwidth of 250kHz, and comprehensive trigger functions (single, normal, auto).

It is suitable for both periodic analog signals and non-periodic digital signals, capable of measuring voltages up to $\pm 40V$. Equipped with an efficient one-click AUTO measurement function, it displays the waveform without the need for complex adjustments. The oscilloscope features a 2.8-inch high-definition LCD screen with a resolution of 320×240, and a built-in 400mAh high-quality lithium battery, providing up to 3 hours of use when fully charged.

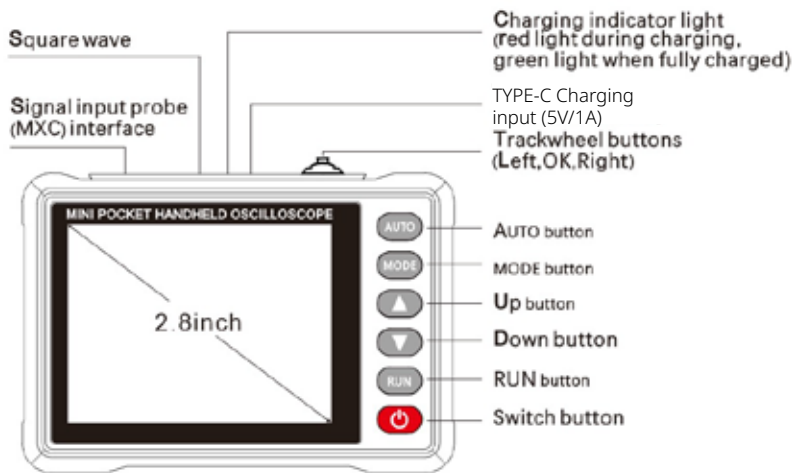
BEFORE FIRST USE

Prior to using your product, please read all the safety and operating instructions thoroughly. Please ensure you follow the steps below before using the product. We recommend you keep the original packaging for storing the product when not in use.







Please pay close attention to the section entitled Important Safety and General Instructions. Find a safe and convenient place to keep this instruction manual for future reference.

Unpack the product but keep all the packaging materials until you have made sure your new product is undamaged and in good working order. Ensure you have all accessories listed in this manual. Plastic wrapping can be a suffocation hazard for babies and children so ensure all packaging materials are out of their reach.

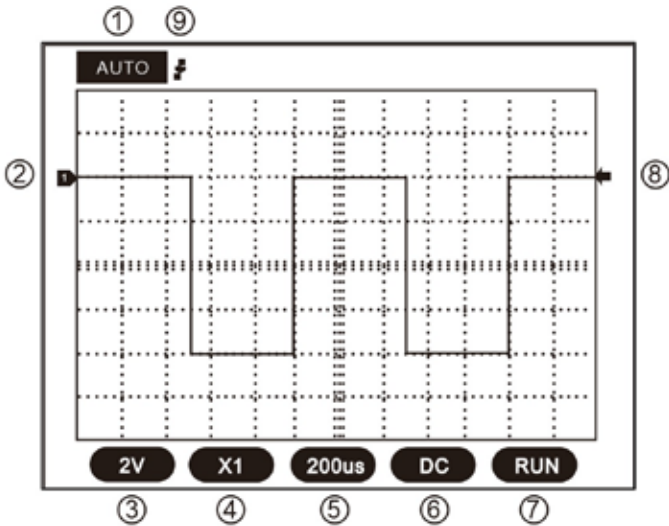
PRODUCT OVERVIEW



NOTE: The above product pictures and contents are for reference only. If there is any discrepancy or update, please refer to the physical object without prior notice.

Button	Operate	Function
	Turn left	Control each parameter function to adjust the selection. When the required icon changes to brown, you can use the up and down keys to adjust the parameters.
	Turn right	
	Short press	Exit the automatic calibration (automatic calibration page) + baseline and trigger point back to the middle.
	Long press	Enter the automatic calibration page, and the word "Calib" will appear on the screen.
AUTO	Short press	Automatic setting, the word "AUTO" will appear on the screen, which will automatically identify the waveform type, adjust the waveform amplitude and time base, and accurately display the matching waveform on the screen (the frequency below 45Hz cannot be set correctly).
MODE	Short press	AUTO/Single/Normal toggle.
	Long press	Rising edge/Falling edge toggle.
	Short press	Parameter increase adjustment
	Short press	Parameter decrease adjustment
RUN	Short press	Run/Pause waveform (Other pages) Enter auto calibration (Auto calibration page)
	Long press	Show/Hide detailed parameters
	Short press	Power off
	Long press	Power on
Square wave output		3Vpp, 1kHz Approx.

SCREEN OVERVIEW



1. Trigger mode indicator icons: AUTO indicates auto trigger, Single indicates single trigger, and Normal indicates normal trigger.
2. Baseline indicator icon: This icon indicates that the current position is at zero voltage.
3. Vertical sensitivity indicates the voltage represented by one division in the vertical direction.
4. The $\times 1/\times 10$ mode indicator icon must match the $\times 1/\times 10$ switch setting on the probe handle. If the probe is set to the $\times 1$ range, the oscilloscope must also be set to $\times 1$. $\times 1$ measurement: $\pm 40V$, $\times 10$ measurement: $\pm 400V$.
5. Horizontal time base indicates the length of time represented by one major division in the horizontal direction.
6. Input coupling mode indicates the icon, AC indicates AC coupling, at which time the DC component of the measured signal will be blocked; DC represents DC coupling, at which time the DC component and AC component of the measured signal can be passed.
7. Run/Pause indicator icon: RUN indicates running, and STOP indicates pause.
8. Trigger voltage indicator icon.
9. Trigger voltage indicator icon.

SPECIFICATIONS

Sampling rate	2.5MS/s
Bandwidth	250kHz
Vertical sensitivity	10mV/Div-20V/Div (Progressive in the 1-2-5 way)
Time base range	10us/Div-50s/Div (Progressive in the 1-2-5 way)
Voltage range	X1:±40V (Vpp: 80V)
Trigger mode	Auto/Normal/Single
Coupling mode	AC/DC
Display	2.8 Inch PPI:320×240
USB charging	5V/1A
Lithium battery capacity	400mAh
Calibration square wave	Frequency: 1K; Duty cycle: 50%
Size	103×73×25mm
Weight	100g

WARRANTY

Our product is guaranteed to be free from quality and manufacturing defects for a period of 12 Months.

If your product becomes defective during this period, Electus Distribution will repair, replace, or refund where a product is faulty; or not fit for intended purpose.

This warranty will not cover modified product; misuse or abuse of the product contrary to user instructions or packaging label; change of mind and normal wear and tear.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and failure does not amount to a major failure.

To claim warranty, please contact the place of purchase. You will need to show receipt or other proof of purchase. Additional information may be required to process your claim. Should you not be able to provide proof of purchase with a receipt or bank statement, identification showing name, address and signature may be required to process your claim.

Any expenses relating to the return of your product to the store will normally have to be paid by you.

The benefits to the customer given by this warranty are in addition to other rights and remedies of the Australian Consumer Law in relation to the goods or services to which this warranty relates.

This warranty is provided by:

Electus Distribution
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Eastern Creek NSW 2766
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