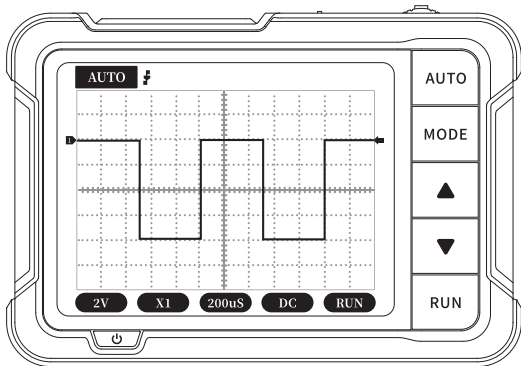


FNIRSI 菲尼瑞斯

DSO152

数字示波器使用说明书

DIGITAL OSCILLOSCOPE INSTRUCTION MANUAL



- 校准时, 需要拔掉BNC探头, 或者探头正负极短接。
- USB固件升级仅支持WIN10及以上, 禁止拖入除发布固件以外的文件, 否则极可能造成不可以恢复之后果。
- 请使用说明书规格范围内的电压进行充电。

八、生产信息

产品名称: DSO152数字示波器

品牌/型号: FNIRSI/DSO152

服务电话: 0755-28020752

生产商: 深圳市菲尼瑞斯科技有限公司

网址: www.fnirsi.cn

地址: 广东省深圳市龙华区大浪街道伟华达工业园C栋西边8楼

执行标准: GB/T 15289-2013

NOTICE TO USERS

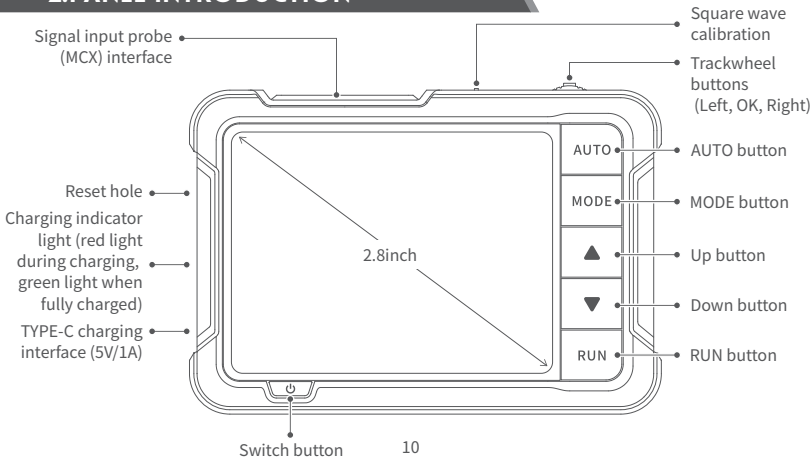
- This manual introduces the usage method, precautions and related matters of the product in detail. Before using the product, please read the manual carefully in order to give full play to the best performance of the product.
- Do not use the device in a flammable or explosive environment.
- The used batteries replaced by the device and the discarded device cannot be disposed of together with domestic waste. Please dispose of them according to relevant national or local laws and regulations.
- When there is any quality problem with the device or you have any questions about the use of the it, please contact the online customer service or the manufacturer of "FNIRSI", and we will solve it for you in the first time.

1.PRODUCT INTRODUCTION

"DSO152" is a highly practical and cost-effective handheld oscilloscope launched by our company, which is aimed at the maintenance industry and the research education industry. The oscilloscope has a real-time sampling rate of 2.5MS/s, a bandwidth of 200KHz, and complete trigger functions (single, normal, and automatic). It can be used freely for both periodic analog signals and non-periodic digital signals, and can measure voltages up to $\pm 400V$. Equipped with an efficient one-key AUTO, it can display the measured waveform without cumbersome adjustments. Equipped with a

2.8-inch 320*240 resolution high-definition LCD screen. Built-in 1000mAh high-quality lithium battery, can be used continuously for about 4 hours after fully charged.

2.PANEL INTRODUCTION



3.KEY FUNCTION

BUTTON	OPERATION	FUNCTION
	Short press	Control parameters function selection
	Short press	Exit auto calibration (Auto calibration page)
	Long press	Enter the automatic calibration page
	Short press	Control parameters function selection
AUTO	Short press	Automatic adjustment (frequency below 45Hz cannot be calibrated correctly)
MODE	Short press	AUTO/Single/Normal switching
	Long press	Rising edge/falling edge switching

BUTTON	OPERATION	FUNCTION
	Short press	Parameter addition adjustment
	Short press	Parameter subtraction adjustment
RUN	Short press	Run/pause waveforms (other pages) Enter auto calibration (Auto calibration page)
	Long press	Show/close detailed parameters
	Short press	OFF
	Long press	On

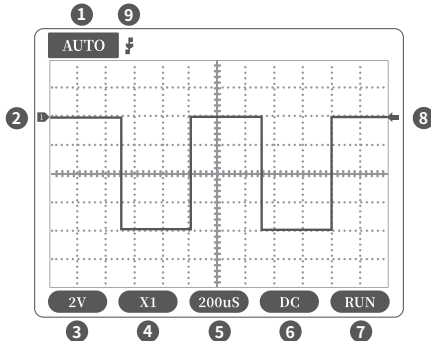
4.PARAMETER INDEX

Sampling rate	2.5MS/s
Bandwidth	200K
Vertical sensitivity	10mV/Div-10V/Div(Progress according to the 1-2-5 way)
Time base range	10 μ s/Div-50s/Div(Progress according to the 1-2-5 way)
Voltage range	X1: $\pm 40V$ (V_{pp} :80V)
	X10: $\pm 400V$ (V_{pp} :800V)
Trigger method	Auto/Normal/Single
Coupling method	AC/DC
Display	2.8 inches/PPI:320*240
USB charging	5V/1A

Lithium battery capacity	1000mAh
Square wave calibration	Frequency: 1K Duty cycle: 50%
Size	99x68.3x19.5mm
Weight	100g

*Size and weight are measured manually, there may be some errors, please refer to the actual product.

5.SCREEN INSTRUCTIONS



①Trigger mode indicator icon, Auto means automatic trigger, Single means single trigger, Normal means normal trigger.

②Baseline indicator icon, this icon indicates the current position is 0V voltage.

③Vertical sensitivity, which means the voltage represented by a large grid in the vertical direction.

④1X/10X mode indicator icon, this must be consistent with the 1X/10X switch setting on the probe handle, if the probe is in 1X mode, then the oscilloscope should also be set to 1X

mode, 1X measures $\pm 40V$ voltage, 10X measures $\pm 400V$ voltage.

⑤Horizontal time base, indicating the length of time represented by a large grid in the horizontal direction.

⑥Input coupling indicator icon, AC means AC coupling, DC means DC coupling.

⑦Pause running indicator icon, RUN means running, STOP means pause.

⑧Trigger voltage indicator icon

⑨Trigger edge indicator icon

6.FIRMWARE UPGRADE

The device currently uses a USB analog U disk for firmware upgrade, and the upgrade steps are as follows:

- ① Press the "OK" button after pressing the power button so that to enter the U disk upgrade mode.
- ② Use the Type-C cable to connect the Type-C port on the board to the computer. At this time, the computer will pop up a U disk named "DSO BOOT".
- ③ Pull the firmware into the U disk, and the firmware upgrade will complete.



The firmware upgrade is only supported on the computer Windows 10 system.

7.PRECAUTIONS

- After receiving the device, please use it after fully charged.
- When using the oscilloscope, pay attention to the selection of the gear, the gear of the oscilloscope should be consistent with the gear of the probe.
- When measuring high voltage, it is forbidden to touch any metal part of the oscilloscope to avoid the risk of electric shock.
- Try not to perform a high voltage test while charging.

- When calibrating, need to unplug the BNC probe, or short the positive and negative poles of the probe.
- The USB firmware upgrade only supports WIN10 or above, and it is forbidden to drag in files other than the released firmware, otherwise it may cause unrecoverable consequences.
- Please use the voltage within the specification range of the manual for charging.

8.CONTACT US

Any FNIRSI'users with any questions who comes to contact us will have our promise to get a satisfactory solution + an Extra 6-Month Warranty to thanks for your support!

By the way, we have created an interesting community, welcome to contact FNIRSI staff to join our community.

Shenzhen FNIRSI Technology Co.,LTD.

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E-mail: fnirsiofficial@gmail.com (Business)/ fnirsiofficialcs@gmail.com(Equipment service)

Tel: 0755-28020752 / +8613536884686

Web:www.fnirsi.cn

Warnings and safety information

For all information on handling and use, please refer to the instruction manual or product label. Before using the products, read its contents and follow the instructions contained therein.

Also read the following information before use:

Safety of use

1. Use measuring tools for their intended purpose. Do not use measuring tools for tasks for which they were not designed to avoid damage or erroneous measurement results.
2. Always make sure a tool is in good working condition before using it. Damaged tools, such as cracked cases or damaged displays, can lead to incorrect measurements or risk of accidents.
3. Calibrate measuring tools regularly to ensure accuracy and reliability of measurements. Incorrectly calibrated devices can lead to erroneous results.

Precautions

1. Use appropriate eye protection, especially when working with measuring tools that may emit radiation.
2. Keep measuring tools away from children and untrained people to prevent accidental damage or misuse.
3. Avoid using measuring tools in extreme conditions of temperature, humidity or in an atmosphere with a high concentration of dust, which can affect their accuracy and functionality.
4. Be careful not to damage delicate measuring components (e.g., sensors, probes) when working with measuring tools. Safe use

1. Always make sure that the measuring tool is properly aligned and fixed to avoid measurement errors or damage.
2. Use measuring tools only in designated areas that provide adequate stability and minimize the risk of accidents, such as slippery or uneven surfaces.
3. Never take measurements on live components or in conditions that may pose a safety hazard.

Rules for use in appropriate conditions

1. Store measuring tools in a dry, cool place, away from moisture and direct sunlight, which can damage the devices or affect their accuracy.
2. When using measuring tools, make sure they are well seated and will not be subjected to shocks or impacts that can damage them.
3. Avoid using measuring tools in areas with extreme conditions, such as high vibration, hot surfaces, dust, or moisture, unless the tool is rated for this by the manufacturer.

Maintenance instructions

1. Regularly check the condition of measuring tools, especially measuring components (e.g., sensors, probes, displays) and batteries.
2. Follow the cleaning instructions provided by the manufacturer. Use appropriate cleaning materials (e.g., soft cloths) to avoid damaging delicate components.
3. Calibrate measuring tools regularly, according to the manufacturer's recommendations, to maintain measurement accuracy.

Safe disposal

Dispose of used or damaged measuring tools in accordance with current environmental and electronics recycling regulations.

Do not dispose of measuring tools in regular waste containers, as they may contain elements harmful to the environment.

Contact local authorities or recycling companies for information on proper disposal of used measuring tools. Statement of compliance

The products have been designed in accordance with the safety requirements of Regulation (EU) 2023/988 on general product safety, ensuring their compliance with applicable standards for the safety and health protection of users.



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