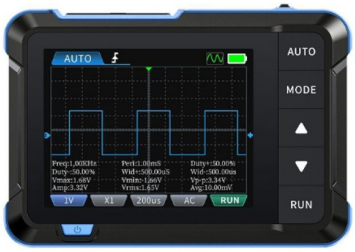
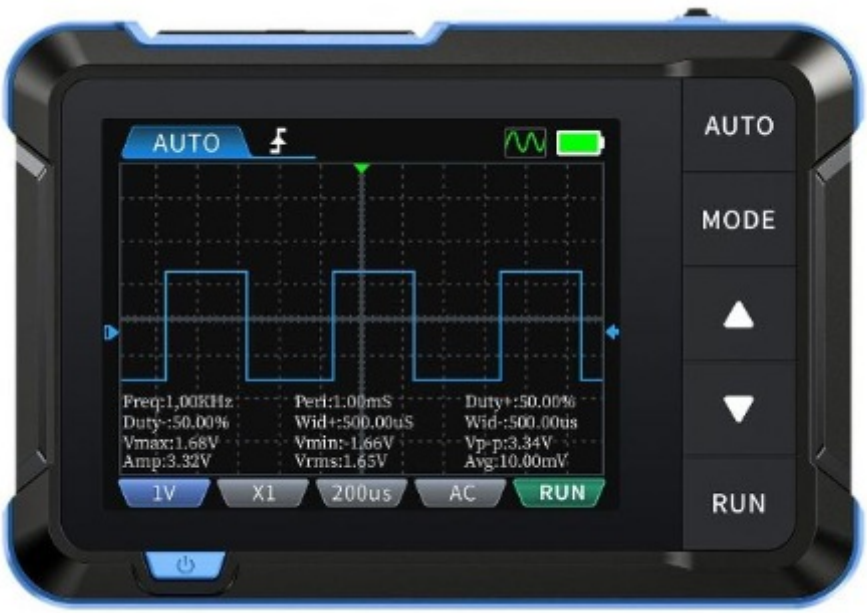


F-NIRSi DSO153 Mini Oscilloscope and Signal Generator Instruction Manual

DSO153
Digital Oscilloscope Instruction Manual



Contents

DSO153 Mini Oscilloscope and Signal Generator

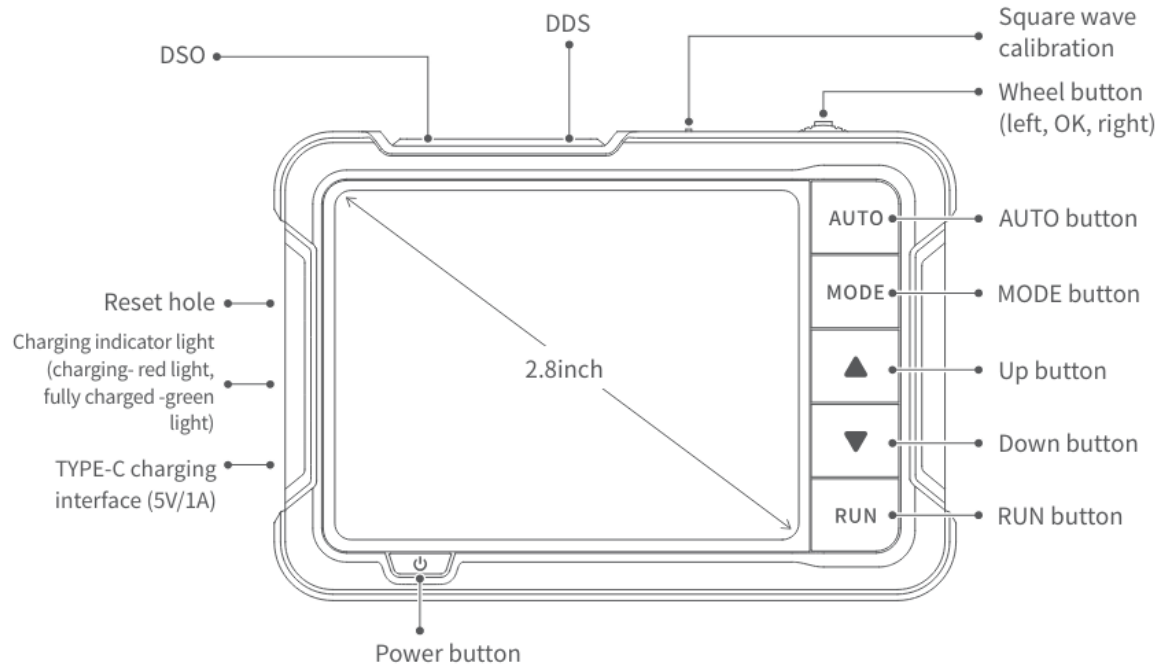
Notice to users

- This manual provides detailed introductions to the product. Please read this manual carefully ensure obtain the best state of the product.
- Please keep this manual properly .
- Do not use the instrument in flammable and explosive environments.
- Waste batteries and instruments cannot be disposed of together with household waste. Please dispose of them in accordance with relevant national or local laws and regulations.
- If there are any quality issues with the device or if you have any questions about using the device, please contact “FNIRSI” online customer service and we will solve it for you in the first time.

Product Introduction

DSO-153 is a highly practical and cost-effective handheld oscilloscope launched by our company, targeting the maintenance industry and development education industry. This oscilloscope has a real-time sampling rate of 5MS/s, 1MHz bandwidth, and complete triggering function (single, normal, auto). It can be used freely for both periodic analog signals and non periodic digital signals, and can measure up to ± 400V voltage with an efficient one click AUTO, which can display the measured waveform without complicated adjustments. In addition, it also comes with multiple functions signal generator (10KHz). Equipped with a 2.8-inch 320 * 240 resolution HD LCD screen and a built-in 1000mAh high-quality lithium battery, it can be used for about 4 hours when fully charged.

Panel Introduction



Buttons Functions

Button	Operation	Main menu	Oscilloscope	Signal generator	Setting
	Short press	Select Up	Control the function adjusting of various parameters	Not enter value settings: waveform select	Setting select
				Enter value settings : value bit select	
	press Short	Enter menu	50%	enter/exit values	enter/exit values settings inthe sound and light values. In restoring factory settings, restore.
	Long press	Return to main menu			
	Short press	Select down	Control the function adjusting of various parameters	Not enter value Settings: waveform select	Setting select
				Enter value settings : value bit select	

Button	Operation	Man m enu	Oscilloscope	Signal generator	Setting
AUTO	Short press	/	Auto measurement	/	/
	Long press		/		
MODE	Short press	/	Auto/Single /Normal switch	/	/
	Long press	/	Rising and falling edges switch	/	/
▲	Short press	/	parameter adjustment		
▼	Short press	/			
RUN	Short press	/	Run/Pause waveform Display/dis able	Turn on/off output	/
	Long press		measurement parameters	/	
⏻	Short press	Power off			
	Long press	Power on			

Product Parameters

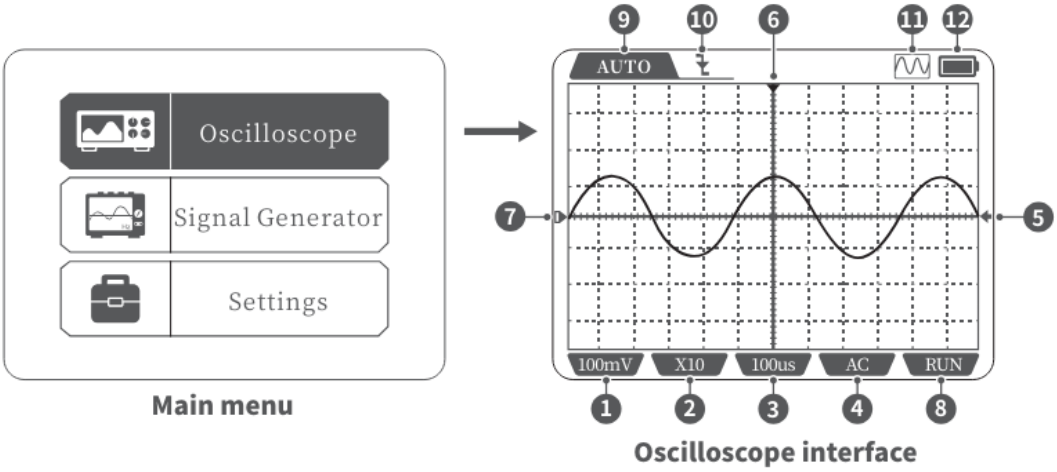
Sampling rate	5MS/s
Bandwidth	1M
Vertical sensitivity	10mV/Div-10V/Div
Time Base Range	500ns-20S
Voltage range	X1:±40V Vpp:80V
	X10:±400V Vpp:800V
Trigger Mode	Automatic/Normal/Single
Trigger Edge	Rising edge /falling edge
Coupling	AC/DC
Square wave calibration	Frequency: 1K; Duty cycle: 50%; Amplitude: 3.3V

※The size and weight are both manually measured, with slight errors, please refer to the actual product for accuracy.

Signal generator	
Frequency	0-10KHz
Duty cycle	0-100% (rectangular and sawtooth waves)
Amplitude	0.1-3.3V
Waveforms	Sine wave, rectangular wave, sawtooth wave, half wave, full wave, step wave, anti step wave, noise wave, exponential rise, exponential drop, DC signal , multi tone, Sink pulse, Lorentz wave.

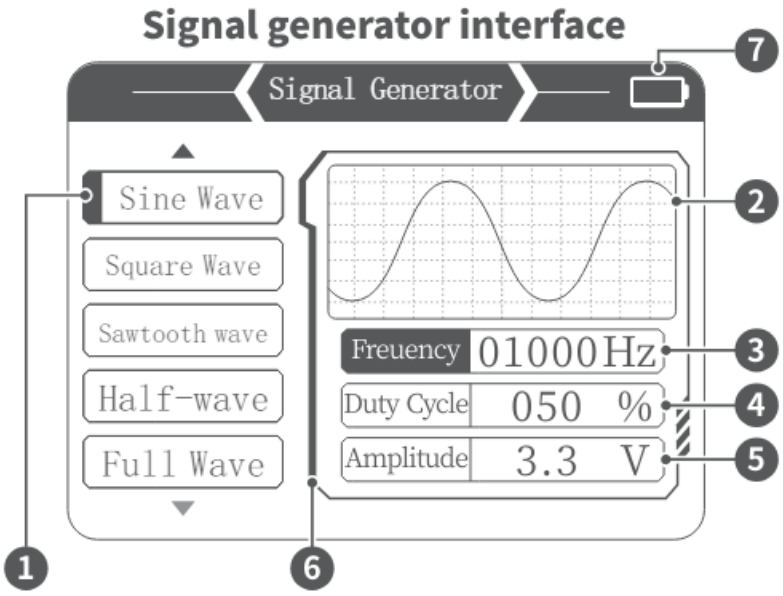
Others	
Display	2.8 inches/PPI:320*240
USB charging	5V/1A
Lithium battery capacity	1000mAh
Size	99×68.3×19.5mm
Weight	100g

Screen Indication



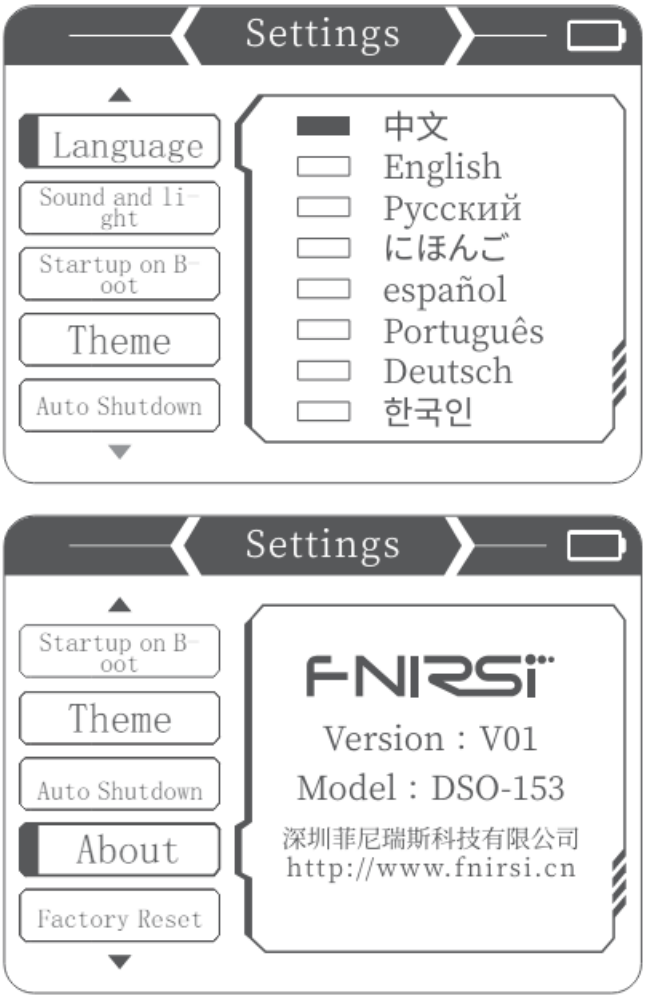
1. Vertical unit: represents the voltage represented by a large grid in the vertical direction
2. Probe ratio: This must be consistent with the setting of the 1X/10X switch on the probe handle. If the probe is in 1X mode, then the oscilloscope should also be set to 1X mode, where 1X measures 40V voltage and 10X measures 400V voltage
3. Horizontal time base, representing the length of time represented by a large grid in the horizontal direction
4. Input coupling method indicator icon, AC represents AC coupling, DC represents DC coupling
5. Trigger voltage indicator icon
6. Trigger position indicator icon
7. Baseline indicator icon, this icon indicates the current position as 0V voltage

8. Run pause indicator icon, RUN represents run, STOP represents pause
9. Trigger mode indicator icon, Auto represents automatic triggering, Single represents single triggering, Normal represents normal triggering
10. Trigger edge indicator icon
11. Signal generator on/off indicator icon
12. Battery level



1. Waveforms selection
2. Display of waveforms
3. Frequency setting
4. Duty cycle setting
5. Amplitude setting
6. Opening and closing of signal generator (graying out when closed)
7. Battery level

Settings interface



1. Set single item selection:
   Language, sound and light settings, startup, theme settings, automatic Shutdown, About, Restore Factory Settings
2. Specific settings details:
   ①Language: Chinese, English, Russian ,Japanese, Spanish,Portuguese, German, Korean.
   ②Sound and light settings: Brightness: 25-100; Sound: 0-10.
   ③Start up: turn off, oscilloscope, signal generator. This setting is used to set which function mode will be automatically started upon startup.
   ④Theme settings: blue, yellow.
   ⑤Automatic shutdown: off, 15 minutes, 30 minutes, 1 hour.
   ⑥About: Brand information, version number
   ⑦Restore factory settings.

Firmware Update

1. In the case of shutting down, press and hold the  first and then press power button.
2. Use a Type-C cable to connect the Type-C port on the board to the computer, and a USB drive named “IAP” will pop up on the computer.
3. Pull the firmware into the USB drive, and if the firmware upgrade is completed, it will automatically jump to the

APP.

⚠ Notice

- Firmware upgrade only supports use on computer Windows 10 and above systems.
- During the upgrade process, you need to keep pressing the power button until the file transfer is complete.

Points for Attention

- After receiving the device, please use it when fully charged.
- When using oscilloscope, pay attention to the selection of gear, and the gear of the oscilloscope should be consistent with the gear of the probe.
- When measuring high voltage, do not touch any metal parts of the oscilloscope to avoid the risk of electric shock.
- Try not to conduct a high-voltage test during charging.
- When calibrating, it is necessary to unplug the BNC probe or short circuit the positive and negative terminals of the probe.
- USB firmware upgrade only supports WIN10 and above. It is prohibited to drag files other than the released firmware, otherwise it may cause irreparable consequences.
- Please charge using the voltage within the specifications in the instruction manual.

Contact Us

Any FNIRSI's users with any questions who comes to contact us will have our promise to get a satisfactory solution +an extra 6 months 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.
Add. West of Building C,Weida Industrial Park,Dalang Street,Longhua District,Shenzhen,Guangdong
E-mail fnirsiofficial@gmail.com (Business)/ fnirsioffcialcs@gmail.com (Equipment service)
Tel 0755-28020752 / +8613536884686
Web www.fnirsi.cn

Download User manual&APP&Software
http://www.fnirsi.cn/
www.fnirsi.cn

Documents / Resources

	**F-NIRSi DSO153 Mini Oscilloscope and Signal Generator** [pdf] Instruction Manual DSO153 Mini Oscilloscope and Signal Generator, DSO153, Mini Oscilloscope and Signal Generator, Oscilloscope and Signal Generator, Signal Generator, Generator

References

- **User Manual**