FNIRSI 菲尼瑞斯

DST-210

多功能示波器万用表说明书 V1.2

MULTIFUNCTIONAL OSCILLOSCOPE MULTIMETER USER MANUAL

※使用产品前请仔细阅读本说明书，并妥善保管。

※Please read this instruction manual carefully before using the product and keep it properly.

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一、安全要求

1.1 环境要求

注意事项

●避免高温、明火、腐蚀性气体、潮湿或多尘环境，以防设备故障。

●防止错误使用仪表方面的安全规程为保证您的人身安全，请使用随表提供的测试笔。在使用前,检查并确保它们是完好的。

●必须使用正确的输入端、功能、量程来进行测量。输入值切勿超过每个 量程所规定的输入极限值,以防损坏仪表。

远离以下物品

●加热器：避免过热或火灾风险。

●水源、化学品：溶剂：泄漏可能损坏设备或引发火灾。

●强磁性设备：防止磁场干扰设备正常运行。

请勿随生活垃圾丢弃废旧电池或设备，应按国家或当地法规处理。

二、产品概览

2.1 产品简介

DST-210是一款由 FNIRSI 推出的功能全面、实用性强的多功能示波器万用表，专为维修和研发行业设计。它集 示波器、信号发生器、万用表于一体，具备以下特点。

产品主要特点有：

示波器功能：

- 采样率：48MSa/s
- 模拟带宽：10MHz
- 电压保护：±400V
- 波形存储：支持截图保存与查看，便于数据分析

信号发生器功能：

- 支持 13 种波形输出，频率范围 0-50KHz，输出电压可调3V。
- 输出参数（频率、幅值、占空比）可调，灵活适配多种需求。

万用表功能：

•功能齐全：具备记录模式、自动测量、交直流电压、交直流电流、电阻、电容、二极管/通断、频率、温度、数据保持、LIVE零火线等功能，具有过载保护和电池欠压指示等功能。

便携设计：

•配备 2.8英寸 TFT彩屏，画面清晰直观。

•内置高容量可充电锂电池（3000mAh），支持长时间待机（10小时）。

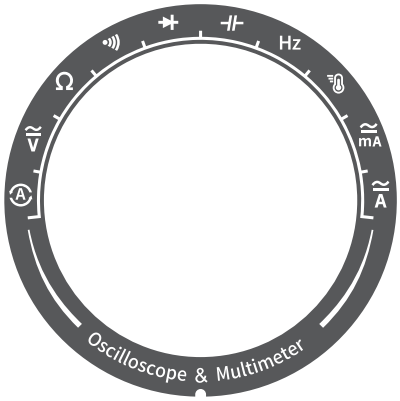
•小巧轻便，适合移动使用。

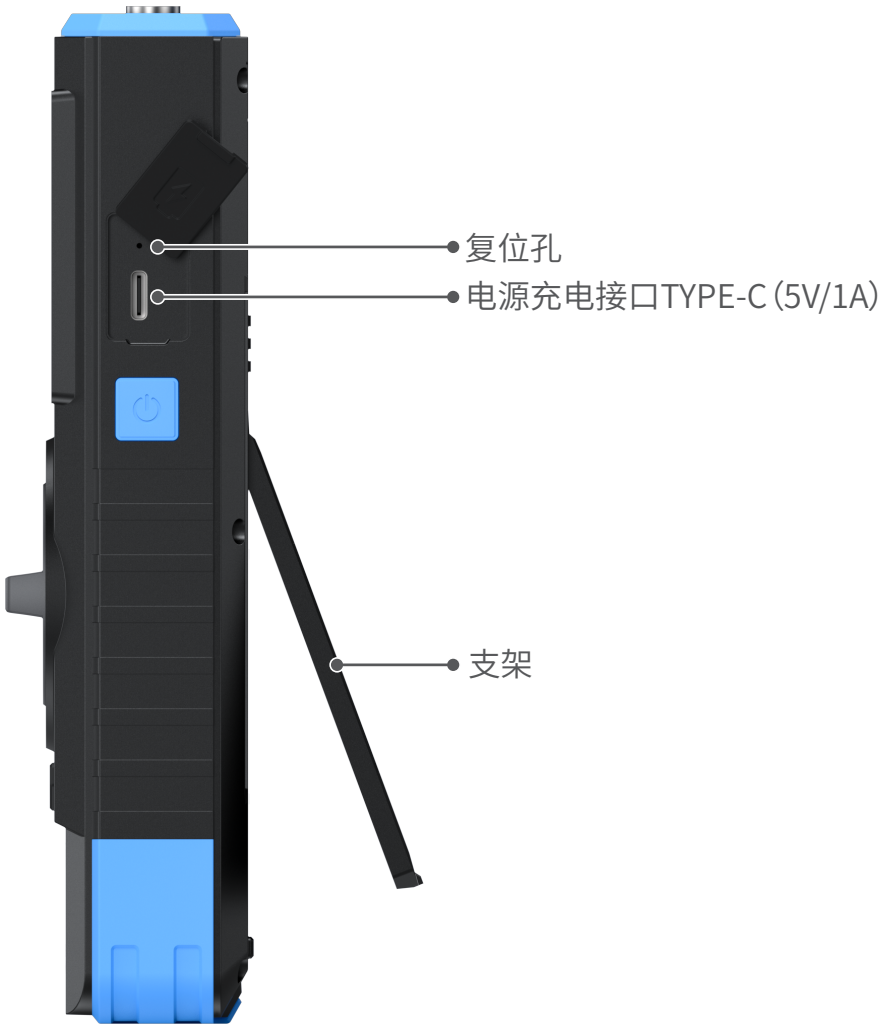
FNIRSI-DST-210致力于为用户提供强大、灵活的功能与便携的操作体验，无论专业人员、工厂、学校、爱好者或家庭使用，均为一台理想的多功能仪表。

2.2 产品操作示意图

旋钮档位键：

- Ⓐ ：自动档
- Ω ：电阻
- ⊣ ：二极管
- Hz ：频率
- ≂ mA ：交直流毫安电流
- ≂ V ：交直流电压
-))) ：蜂鸣档
- ⊣⊢ ：电容
- ：温度测量
- ≂ A ：交直流电流





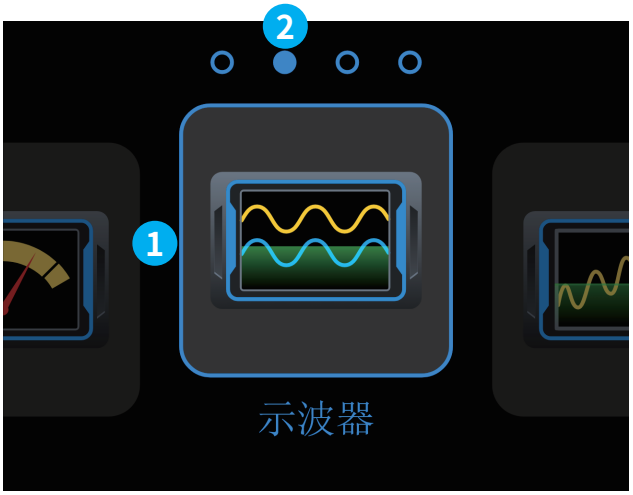
2.3 功能模式页面示意图

①**功能页面显示:**此区域显示此刻选择的功能名称。

②**模式切换:**点击左右键或者上下键，实现功能选择，共4个板块:

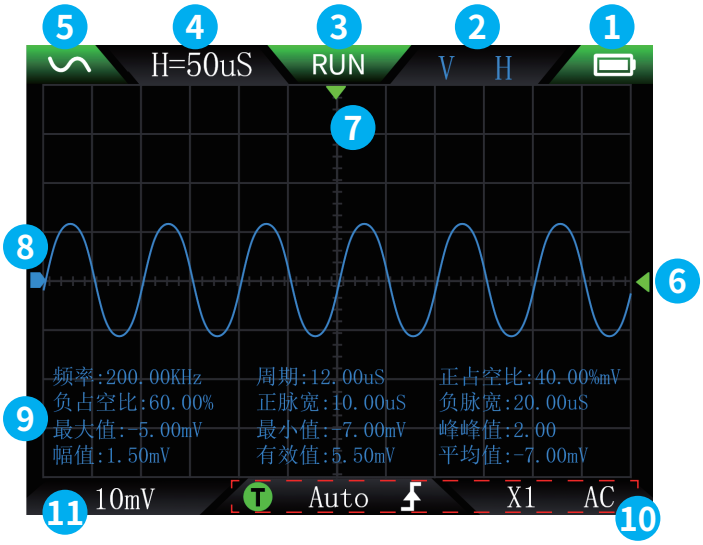
万用表 **示波器**

信号发生器 **设置**



按键	操作	功能
⏻	长按	切换开机/关机
	短按	菜单键
◀ ▶ / ▲ ▼	短按	进入切换模式功能板块页面，选择模式
ENTER ⇋ 5Hz%	短按	ENTER确认键，确认进入当前选择的模式
MODE	短按	MODE模式切换键，快速切换模式。
旋钮档位键	拨动	快速跳转到对应的万用表功能，测量档位。

2.4 示波器页面示意图



①**电量显示:**此区域显示电量剩余。

②**模式切换:**短按ENTER确认键,可切换水平垂直单位、水平触发移动、通道波形上下移动、触发电平上下移动。

③**运行/暂停指示:**短按运行/暂停按键,RUN为运行,STOP为停止。

④**系统时基:**指水平方向一大格代表时间长度,由采样速率决定。

⑤**函数信号发生器指示:**绿色代表开启函数信号发生器,红色代表未开启,展示的图形代表设置的波形类别。

⑥**触发电压指示图标:**即触发阈值。

⑦**触发X位置指示箭头:**指此处为触发点。

⑧**通道波形:**通道采集的波形信号。

⑨**测量数据:**可长按运行/暂停键开启/关闭测量参数显示。

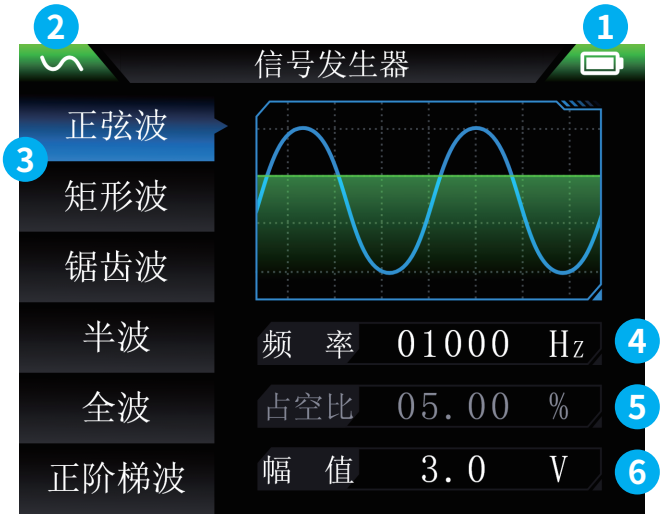
⑩**触发设置:**可长按MODE键,可以设置触发模式、触发沿、探头比例、耦合类型。

⑪**系统电压:**指垂直方向一大格代表电压长度,由采样速率决定。

按键	操作	功能
⏻	短按	菜单键,返回到功能菜单。
	长按	开启关闭电源
MODE	短按	切换到其他模式
	长按	打开示波器设置菜单,可设置波形、参数、余辉、图片等。再次长按,关闭参数菜单。
AUTO LIVE	短按	自动测量
	长按	自动校准

按键	操作	功能
ENTER ⇋ 50%	短按	可切换水平垂直单位、水平触发移动、通道波形移动、触发电平移动。若在参数菜单中，短按为确认设置。
	长按	50%居中
RUN SAVE	短按	单击暂停，再次单击运行
	长按	截图

2.5 信号发生器页面示意图



①**电量显示:**此区域显示电量剩余。

②**状态显示:**此区域显示信号发生器开启状态，绿色开启，红色关闭。

③**波形类别:**短按上下键选择波形类别，共13种波形可选择。

④**频率设置:**单击确认键,进入频率/占空比/幅值选择，单击键选择频率进入三级导航，设置频率值，点击返回键保存即可。

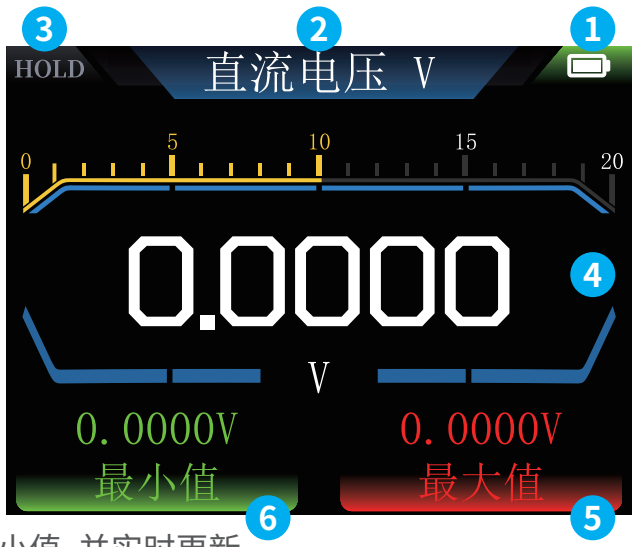
⑤**占空比设置:**单击确认键,进入频率/占空比/幅值选择，单击键选择占空比进入三级导航，设置占空比，点击返回键保存即可。

⑥**幅值设置:**单击确认键,进入频率/占空比/幅值选择，单击键选择幅值进入三级导航，设置幅值，点击返回键保存即可。

按键	操作	功能
⏻	短按	菜单键，返回到功能菜单
	长按	开启关闭电源
MODE	短按	切换到其他模式
AUTO LIVE ↩	短按	返回键

按键	操作	功能
ENTER	短按	确认，进入频率/占空比/幅值选择，配合上下左右键设置对应值
RUN SAVE	短按	单击开启/关闭，再次单击开启/关闭

2.6 万用表页面示意图



①**电量显示:**此区域显示电量剩余。

②**档位显示:**此区域显示为万用表测量选择的档位。

③**数据保持:**短按运行/暂停按键，实现HOLDS数据保持功能。

④**测量数据显示:**此区域显示为万用表测量选择档位的测量数据。

⑤**最大值:**此区域显示测量过程中的最大值，并实时更新。

⑥**最小值:**此区域显示测量过程中的最小值，并实时更新。

按键	操作	功能
⏻	短按	菜单键，返回到功能菜单
	长按	开启关闭电源
MODE	短按	切换到其他模式
	长按	切换到记录模式，此模式会将测量数据可视化
AUTO LIVE	短按	切换到零火线检测，再次点击，退出
RUN SAVE	短按	开启/关闭数据保持HOLD
	长按	在记录模式下显示，记录此刻的测量数据，并显示在屏幕右侧区域
ENTER	短按	可快速切换当前档位其他选项

2.7 系统设置页面示意图

①**电量显示:**此区域显示电量剩余。

②**模式显示:**此区域显示为模式系统设置。

③**语言设置:**中文、English可切换。

④**声光设置:**单击确认键进入声光设置,上下键选择声音/亮度,左右键进行调节,声音可设置为静音。

⑤**开机启动:**共3种功能模式可选择开机默认进入,也可以都不选择。

⑥**主题设置:**设备提供两种主题:黑夜、日光。

⑦**自动关机设置:**可设置自动关机时间15min、30min、1hour,在不进行操作时间待机设置时间,自动关机。

⑧**USB共享:**开启后将进入USB共享界面,连接电脑后有U盘弹出,可在【Screenshot file】文件夹获取截图图片。以及可在【LOGO】文件夹中放置"LOGODST-210.jpg"(自定义开机LOGO)。

⑨**关于:**显示产品品牌信息与当前版本号。

⑩**恢复出厂设置:**点击确定可选择是否进行恢复出厂设置

三、技术规格

3.1 机型参数

参数	规格
产品型号	DST-210
屏幕材质	2.8英寸 TFT彩屏
背光	背光亮度可调
供电电源	TYPE-C (5V / 1A)
电池	3000mAh
语言	中文、English
产品尺寸	≈177.43×87.47×34.5mm
裸机重量	≈300g

3.2 示波器参数

参数	规格描述	备注
实时采样率	48MSa/s	
模拟带宽	10MHz	
输入阻抗	1MΩ	
耦合方式	AC/DC	
测试电压范围	1:1探头：80Vpp(±40V) 10:1探头：800Vpp(±400V)	示波器置于X1 示波器置于X10
垂直灵敏度	10mV/div~10V/div	X1档
垂直位移	可调，并带有指示	
水平时基范围	50ns~20s	
触发模式	自动、常规和单次（Auto/Normal/Single）	
触发种类	上升沿、下降沿	
触发电平	可调，并带有指示	
波形冻结	有（HOLD功能）	
自动测量	最大值、最小值、平均值、有效值、 峰峰值、频率、周期、占空比	

3.3 万用表参数

功能	量程	精度度
直流电压	1.9999V/19.999V/199.99V/1000V	±(0.5%+3)
交流电压	1.9999V/19.999V/199.99V/750.0V	±(1%+3)
直流电流	19.999mA/199.99mA/1.9999A/9.999A	±(1.2%+3)
交流电流	19.999mA/199.99mA/1.9999A/9.999A	±(1.5%+3)
电阻	19.999MΩ/1.9999MΩ/199.99KΩ/19.999KΩ	±(0.5%+3)
	1.9999KΩ/199.99Ω	±(2.0%+3)
电容	999.9uF/99.99uF/9.999uF/ 999.9nF/99.99nF/9.999nF	±(2.0%+5)
	9.999mF/99.99mF	±(5.0%+20)
频率	9.999MHz/999.9KHz/99.99KHz/9.999KHz/ 999.99Hz/99.99Hz/9.999Hz	±(0.1%+2)
温度	(-55~1300°C)/(-67~2372°F)	±(2.5%+5)
二极管 / 通断	✓	
单表笔交流电压探测（LIVE）	✓	

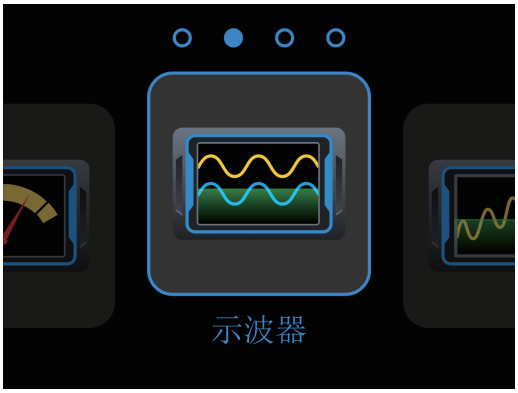
3.4 信号发生器参数

参数	规格描述
输出波形	支持13种波形输出
波形频率	0-50KHz
方波占空比	0-100%，矩形波、锯齿波可调
波形幅值	0.1V-3.0V

四、操作指南

4.1 开机

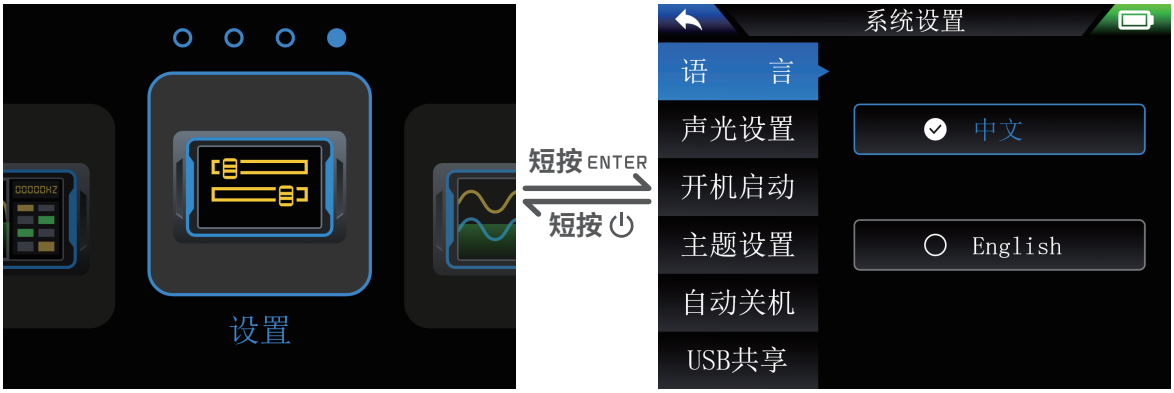
长按 ⏻ 开机，等待系统加载，
进入系统设置默认界面。



默认界面

4.2 语言设置

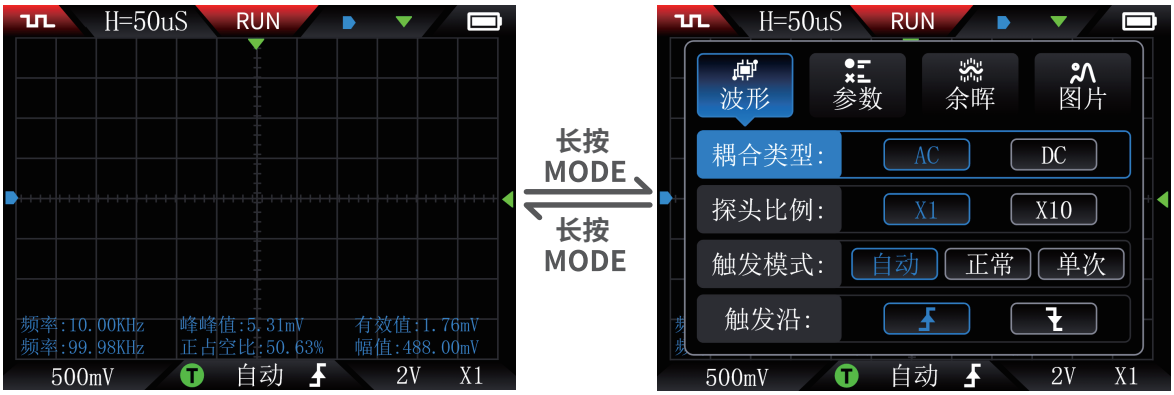
在默认界面，短按选择键选择系统设置，短按确认键进入系统设置，短按选择键选择语言，后短按确认键进入语言设置，上下键选择需要设置的语言即可



4.3 调整示波器参数

示波器调节

在默认界面，短按左右键选择功能模块示波器，单击确认键进入示波器。长按模式切换键（**MODE**）进入示波器参数设置，可以通过按键选择区选择设置耦合类型、探头比例、触发模式、触发沿等参数。再次长按模式切换键（**MODE**）可关闭示波器参数设置。

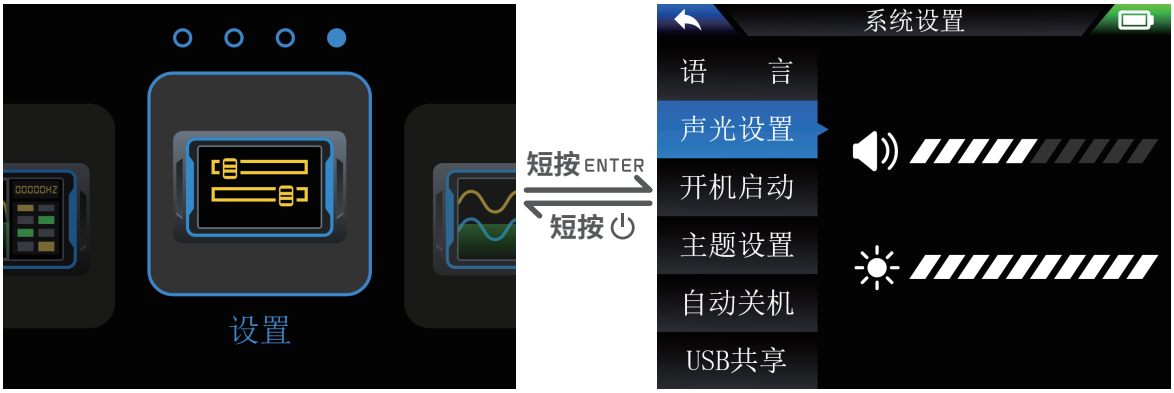


示波器功能界面　　示波器参数设置界面

4.4 亮度调节

亮度调节

在默认界面，短按选择键选择系统设置，短按确认键进入系统设置，单击选择键选择声光设置，后单击确认键进入声光设置，选择亮度左右选择键实时调整亮度。



系统设置其他功能调节：

对应功能选择与开启同以上两点操作导航大致相同，省略步骤描述

五、快速入门

5.1 快速测量

1、开启多功能万用表示波器，等待系统加载，可选择模式：示波器、信号发生器、万用表等，举例选择信号发生器。

2、首先将接口连接好，进入信号发生器，选择需要输出的波形。点击确认键，确认设置频率、占空比、幅值等。

3、当设置好对应参数，点击运行/暂停键开启信号发生器即可。

4、点击模式切换按键，即可进行其他功能。

5.2 固件升级

●设备关机,同时按住**MODE**键和电源键，此时设备会弹出Firmware Upgrade界面,插入USB Type-c数据线连接电脑,进入Firmware Upgrad界面进行固件升级。

●进入Firmware Upgrad后，电脑识别出U盘，把固件文件直接拷贝到U盘即可。

●拉取固件文件到U盘指定文件夹下即可。如果固件升级完成，会显示关机充电界面

※**注意：**固件升级只支持在电脑Windows10及以上系统使用。

六、故障排查

6.1 无法开机

可能原因：

•电池电量耗尽　　•电池连接松动或损坏

解决方法：

①检查电池电量，若电量不足请充电。

②如果电池无法充电或设备依然无法开机，尝试重新安装电池，或更换电池。

6.2 屏幕无法显示

可能原因：

•屏幕背光关闭　　•显示屏硬件故障　　•系统软件异常

解决方法：

①按照手册检查并调节背光亮度设置。

②尝试重启设备，确保系统恢复正常。

③如果屏幕仍无法正常显示，可能需要维修或更换显示屏。

七、维护保养

清洁设备外部

●**频率：**每月清洁一次，具体取决于使用环境。

●**方法：**使用柔软的布轻轻擦拭设备表面。避免使用化学清洁剂，特别是含有酒精或强酸、强碱的清洁剂，以免损坏外壳或屏幕。

●**注意事项：**

•定期清理设备和按钮周围的灰尘，以保持设备良好状态。

•确保设备无任何液体、灰尘或杂物进入设备接口。

•输入插孔如果弄脏或潮湿可能会影响读数。

•用新的棉花球沾上清洁剂或润滑剂,清理每个插孔,润滑剂能防止和 湿气有关的插孔污染。

检查电池与电源

●**电池保养：**对于内置电池的示波器，定期检查电池的健康状态。避免电池完全放电，建议定期充电并避免长时间不使用设备。

●**充电规范：**使用官方提供的充电器进行充电，避免过充或过放，确保电池处于适宜的工作电压范围。

●**电池更换：**若电池表现出过度衰减（如无法正常充电或极快放电），应及时更换。

存放与携带

●存放环境：仪器应存放在干燥、通风的环境中，避免高温、高湿或剧烈的温度变化。避免将其放置在阳光直射的地方。

●携带：使用时应小心避免摔落，尤其是在携带过程中。推荐使用保护套或专用包进行携带。

软件更新

●定期检查设备是否有新的固件更新。最新的固件可以修复已知的BUG并提升设备性能。

●更新时确保操作步骤正确，使用官方发布的固件文件，并避免断电或其他干扰。

恢复出厂设置

●若设备出现异常或无法正常工作，可尝试恢复出厂设置。恢复设置后，设备将清除所有自定义配置，恢复到初始状态。

●恢复出厂设置的方法可以参考用户手册或联系厂商客服。

八、生产信息

产品名称：多功能示波器万用表

品牌/型号：FNIRSI / DST-210

服务电话：0755-28020752

生产商：深圳市菲尼瑞斯科技有限公司

地址：广东省深圳市龙华区大浪街道伟达工业园C栋西边8楼

服务邮箱：support@fnirsi.com

商务邮箱：business@fnirsi.com

官方网站：www.fnirsi.cn

执行标准：GB/T 32194-2015

九、保修说明

感谢您选择本公司产品，本产品自销售之日起计保修期。在产品保修期内，凡按照产品使用说明书安装使用于正常环境、条件使用之下，因原物料及加工过程中之瑕疵而导致故障，可依据本保修条款的内容享受无偿维修服务，本保修卡请用户妥善保存，以作保修凭证，丢失恕不补发。

以下情况将实施有偿维修服务：

●不能出示有效保修卡原件；

●产品安装不符合产品要求、标准和相关规范造成的损坏

●产品安装环境中相关配件不符合产品要求、标准和相关规范造成的损坏；

●用户对产品使用不当、保管不妥或擅自拆机、私自维修等原因造成的损坏；

●超过保修期.

1. Safety Requirements

1.1 Environmental Requirements

Precautions

- Avoid high temperatures, open flames, corrosive gases, humid or dusty environments to prevent equipment failure.
- Follow the safety regulations to prevent incorrect use of the meter. To ensure your personal safety, please use the test pens provided with the meter. Before use, check and make sure they are intact.
- The correct input terminal, function, and range must be used for measurement. The input value must not exceed the input limit value specified for each range to prevent damage to the meter.

Keep away from the following items

- Heaters: Avoid overheating or fire risks.
- Water, chemicals: Solvents: Leakage may damage the device or cause a fire.
- Strong magnetic devices: Prevent magnetic fields from interfering with the normal operation of the device.

Do not discard used batteries or devices with household waste. Dispose of in accordance with national or local regulations.

2. Product Overview

2.1 Product Introduction

DST-210 is a multifunctional oscilloscope multimeter launched by FNIRSI, which is comprehensive and practical, and is designed for the maintenance and R&D industries. It integrates oscilloscope, signal generator and multimeter in one, and has the following features.

The main features of the product are:

Oscilloscope functions:

- Sampling rate: 48MSa/s
- Analog bandwidth: 10MHz
- Voltage protection: ±400V
- Waveform storage: supports screenshot saving and viewing, which is convenient for data analysis

Signal generator function:

- Supports 13 types of waveform output, frequency range 0-50kHz, with adjustable output voltage up to 3V.
- Output parameters (frequency, amplitude, duty cycle) are adjustable, providing flexibility to meet various needs.

Multimeter functions:

- Full functions: with recording mode, automatic measurement, AC / DC voltage, AC / DC current, resistance, capacitance, diode/on/off, frequency, temperature, data retention, live detection of neutral and live wires, overload protection and battery undervoltage indication.

Portable design:

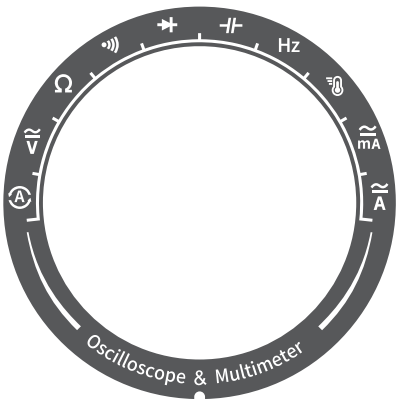
- Equipped with a 2.8-inch TFT color screen, the picture is clear and intuitive
- Built-in high-capacity rechargeable lithium battery (1500mAh), supports long standby time (4 hours)
- Small and light, suitable for mobile use.

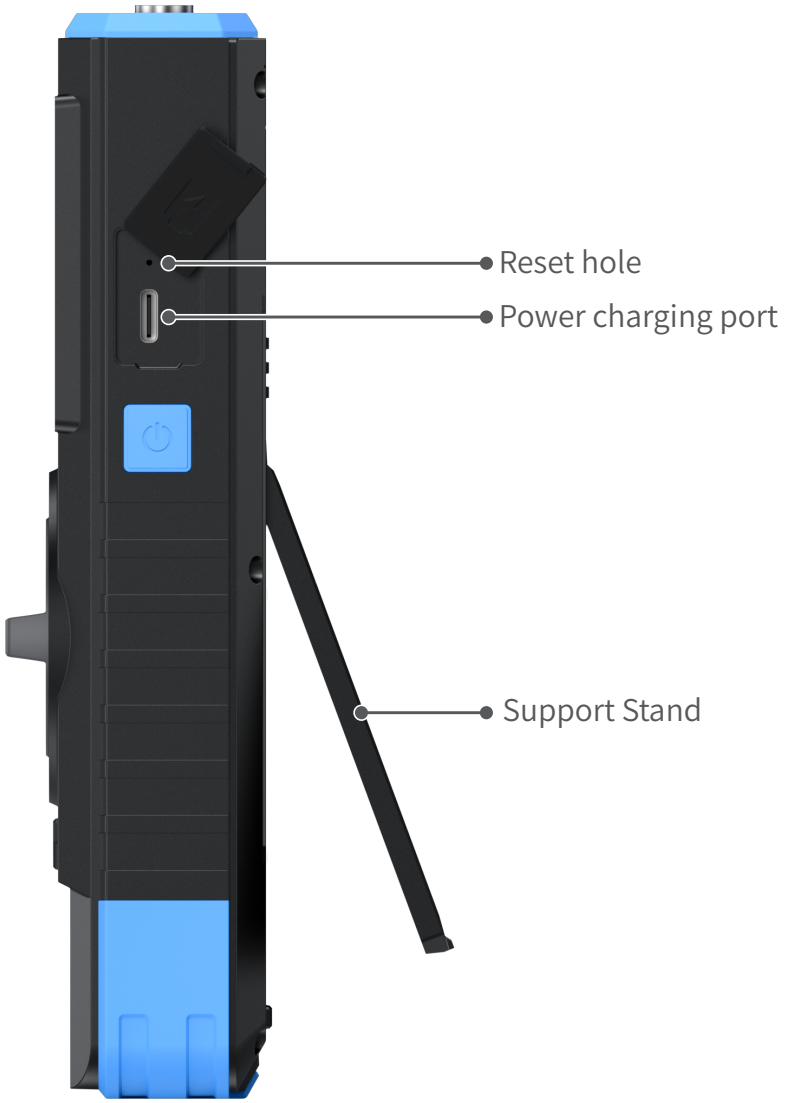
FNIRSI-DST-210 is committed to providing users with powerful, flexible functions and portable operation experience. It is an ideal multi-functional instrument for professionals, factories, schools, enthusiasts or families.

2.2 Operating Instructions

Knob gear button

- Ⓐ :Auto Range
- Ω :Resistance
- ⊣⊢ :Diode
- Hz :Frequency
- ≂ mA :AC/DC mA current
- ≂ V :AC / DC voltage
- •)) :Buzzer mode
- ⊣⊢ :Capacitance
- :Temperature
- ≂ A :AC / DC current



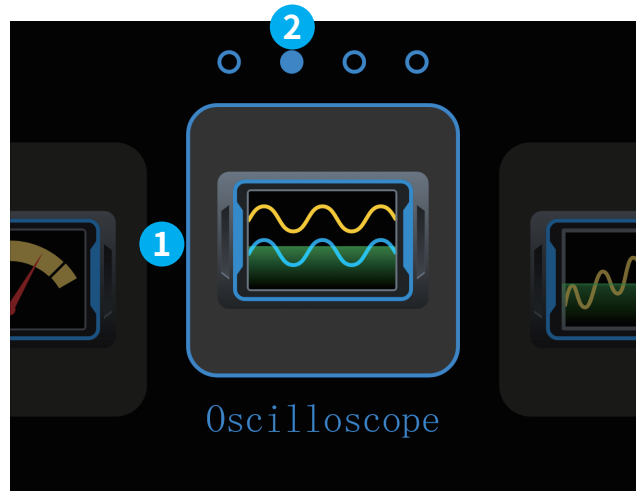


2.3 Function mode

①**Function menu:**This area displays the function name selected at the moment.

②**Mode switch:**Click the left and right buttons or the up and down buttons to select the function. There are 4 sections:

- **multimeter**
- **oscilloscope**
- **signal generator**
- **settings**

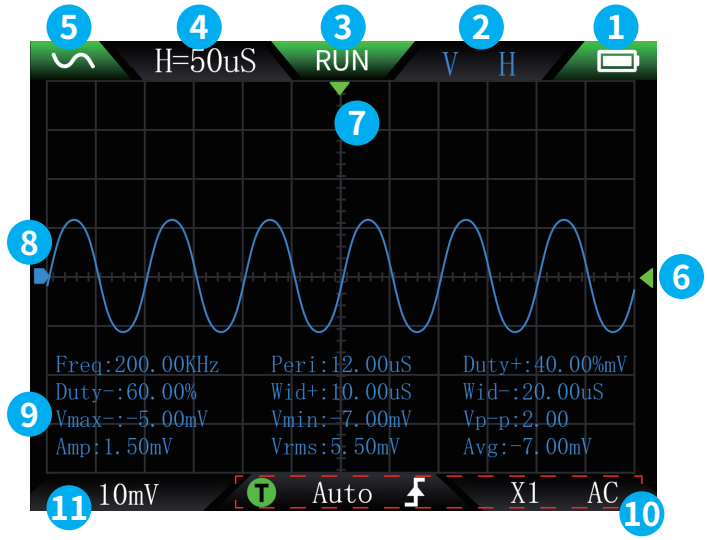


Button	Operation	Function
⏻	Long Press	Switch on/off
	Short Press	Menu button
◀ ▶ / ▲ ▼	Short Press	Enter the function panel page of the switching mode and select the mode
ENTER ⇋ 50%	Short Press	ENTER confirmation button, confirm to enter the currently selected mode
MODE	Short Press	MODE switch button, quickly switch modes
Knob Selector	Flip	Quickly jump to the corresponding multimeter function and measure the gear

2.4 Oscilloscope page diagram

①**Battery indicator:**This area displays the remaining battery.

②**Mode switch:**Short press the ENTER confirmation button to switch horizontal and vertical units, horizontal trigger movement, channel waveform up and down movement, and trigger level up and down movement.



③**Run/pause indication:**Short press the run/pause button, RUN for running, STOP for stopping.

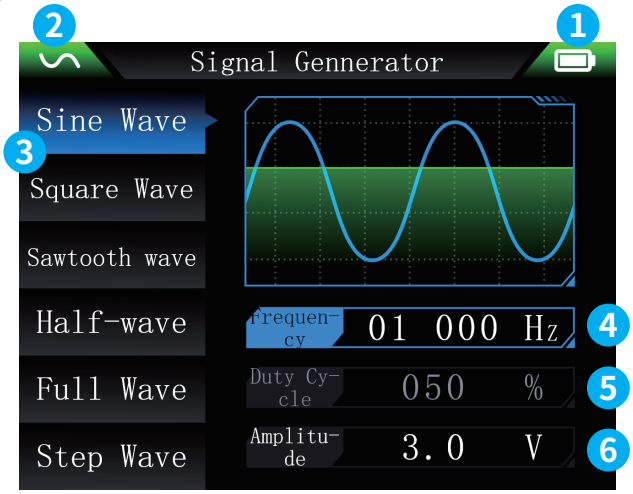
④**Time base：**refers to a large horizontal grid representing the length of time, which is determined by the sampling rate.

⑤**Signal generator indication:**Green means the function signal generator is turned on, red means it is not turned on, and the displayed graphics represent the set waveform category.

⑥**Trigger voltage indicator icon:**trigger threshold.
⑦**Trigger X position indicator arrow:**indicates that this is the trigger point.
⑧**Channel waveform:**waveform signal collected by the channel.
⑨**Measurement data:**long press the run/pause button to turn on/off the measurement parameter display.
⑩**Trigger setting:**long press the MODE button to set the trigger mode, trigger edge, probe ratio, and coupling type.
⑪**System voltage:**refers to a large vertical grid representing the voltage length, which is determined by the sampling rate.

Button	Operation	Function
⏻	Short Press	Menu button, return to the function menu
	Long Press	Turn the power on and off
MODE	Short Press	Switch to other modes
	Long Press	Open the oscilloscope setting menu to set waveforms, parameters, afterglow, pictures, etc. Press and hold again to close the parameter menu.
AUTO LIVE ↩	Short Press	Automatic measurement
	Long Press	Automatic calibration
ENTER ⇋ 50%	Short Press	Switch horizontal and vertical units, horizontal trigger movement, channel waveform movement, trigger level movement.If in the parameter menu, short press to confirm the setting.
	Long Press	50% center
RUN SAVE	Short Press	Click to pause, click again to run
	Long Press	Screenshot

2.5 Signal generator page



①**Battery indicator:**This area displays the remaining battery.

②**Status:**This area displays the on-state of the signal generator, green for on, red for off.

③**Waveform category:**Short press the up and down keys to select the waveform category, a total of 13 waveforms are available.

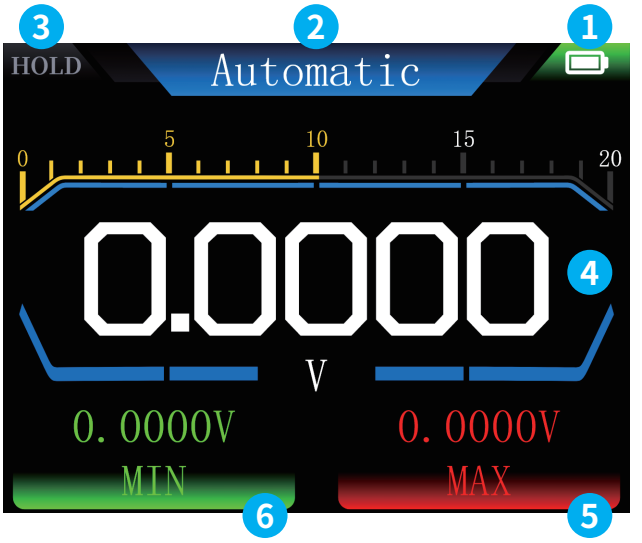
④**Frequency setting:**Click the confirmation button to enter the frequency/duty cycle/amplitude selection, click the button to select the frequency to enter the third-level navigation, set the frequency value, and click the return key to save.

⑤**Duty cycle setting:**Click the confirmation button to enter the frequency/duty cycle/amplitude selection, click the button to select the duty cycle to enter the third-level navigation, set the duty cycle, and click the return button to save.

⑥**Amplitude setting:**Click the confirmation button to enter the frequency/duty cycle/amplitude selection, click the button to select the amplitude to enter the third-level navigation, set the amplitude, and click the return button to save.

Button	Operation	Function
⏻	Short Press	Menu button, return to the function menu
	Long Press	Turn the power on and off
MODE	Short Press	Switch to other modes
AUTO LIVE	Short Press	Return button
ENTER	Short Press	Confirm, enter the frequency/duty cycle/ amplitude selection, and use the up, down, left, and right buttons to set the corresponding values.
RUN SAVE	Short Press	Click to turn on/off, and click again to turn on/off

2.6 Multimeter page



①**Power display:**This area displays the remaining power.

②**Gear display:**This area displays the gear selected for the multimeter measurement.

③**Data hold:**Short press the Run/Pause button to implement the data hold function.

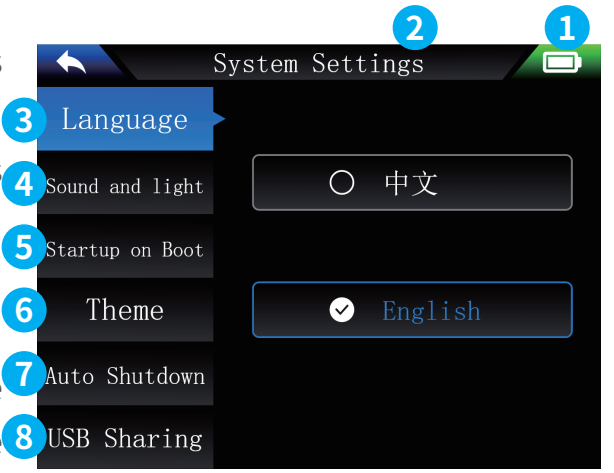
④**Measurement data display:**This area displays the measurement data of the gear selected for the multimeter measurement.

⑤**Max. value:**This area displays the maximum value during the measurement process and is updated in real time.

⑥**Min. value:**This area displays the minimum value during the measurement process and is updated in real time.

Button	Operation	Function
⏻	Short Press	Menu button, return to the function menu
	Long Press	Turn the power on and off
MODE	Short Press	Switch to other modes
	Long Press	Switch to recording mode, which will visualize the measured data
AUTO LIVE	Short Press	Switch to neutral line and live line detection, click again to exit
RUN SAVE	Short Press	Turn on/off data retention
	Long Press	Display in recording mode, record the measured data at the moment, and display it in the right area of the screen
ENTER	Short Press	Quickly switch the current gear and other options

2.7 System settings



①**Battery display:**This area displays the remaining battery.

②**Mode display:**This area displays the mode system settings.

③**Language:**Chinese and English can be switched.

④**Sound and light:**Click the confirmation button to enter the sound and light settings, use the up and down keys to select the sound/brightness, and the left and right keys to adjust. The sound can be set to mute.

⑤**Startup on Boot:**There are 3 function modes that can be selected to enter by default when the power is turned on, or you can choose none of them.

⑥**Theme:**The device provides two themes: night and daylight.

⑦**Auto Shutdow:**You can set the auto-off time to 15min, 30min, or 1hour. When there is no operation, the device will automatically shut down after the set standby time.

⑧**USB sharing:**After turning it on, you will enter the USB sharing interface. After connecting to the computer, a USB flash drive will pop up. You can get the screenshot image in the [Screenshot file] folder. You can also place "LOGODST-210.jpg" (custom startup LOGO) in the [LOGO] folder.

⑨**About:**Display product brand information and current version number.

⑩**Restore factory settings:**Click OK to choose whether to restore factory settings.

3.Technical Specifications

3.1 Device Parameters

Parameters	Specifications
Model	DST-210
Display	2.8-inch TFT color screen
Backlight	Brightness adjustable
Power supply	TYPE-C (5V / 1A)
Battery	3000mAh
Languages	中文、English
Product size	≈177.43×87.47×34.5mm
Bare weight	≈300g

3.2 Oscilloscope Parameters

Parameters	Specifications	Notes
Sampling rate	48MSa/s	
Bandwidth	10MHz	
Input impedance	1MΩ	
Coupling mode	AC/DC	
Test voltage range	1:1 probe: 80Vpp (+40V) 10:1 probe: 800Vpp (+400V)	Oscilloscope placed at X1 Oscilloscope placed at X10
Vertical sensitivity	10mV/div~10V/div	X1
Vertical displacement	Adjustable, with indication	
Horizontal time base range	50ns~20s	
Trigger mode	Automatic, normal and single	
Trigger mode	Rising edge, falling edge	
Trigger level	Adjustable, with indication	
Waveform freeze	With HOLD function	
Automatic measurement	Max, Min, Avg(Vavg), RMS, VPP, Freq, Cycle, Duty cycle	

3.3 Multimeter Parameters

Function	Range	Accuracy
DC voltage	1.9999V/19.999V/199.99V/1000V	±(0.5%+3)
AC voltage	1.9999V/19.999V/199.99V/750.0V	±(1%+3)
DC current	19.999mA/199.99mA/1.9999A/9.999A	±(1.2%+3)
AC current	19.999mA/199.99mA/1.9999A/9.999A	±(1.5%+3)
Resistance	19.999MΩ/1.9999MΩ/199.99KΩ/19.999KΩ	±(0.5%+3)
	1.9999KΩ/199.99Ω	±(2.0%+3)
Capacitance	999.9uF/99.99uF/9.999uF/ 999.9nF/99.99nF/9.999nF	±(2.0%+5)
	9.999mF/99.99mF	±(5.0%+20)
Frequency	9.999MHz/999.9KHz/99.99KHz/9.999KHz/ 999.99Hz/99.99Hz/9.999Hz	±(0.1%+2)
Temperature	(-55~1300°C)/(-67~2372°F)	±(2.5%+5)
Diode/Continuity	✓	
Single probe AC voltage detection (live) (LIVE)	✓	

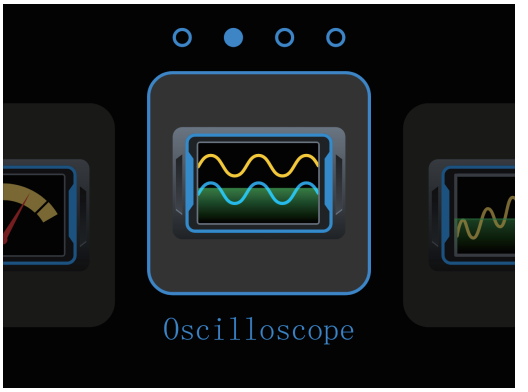
3.4 Signal Generator Parameters

Parameters	Specifications
Output waveform	Supports 13 waveform outputs
Waveform frequency	0-50KHz
Square wave duty cycle	0-100%, rectangular wave, sawtooth wave adjustable
Waveform amplitude	0.1V-3.0V

4.Operation Guide

4.1 Power on

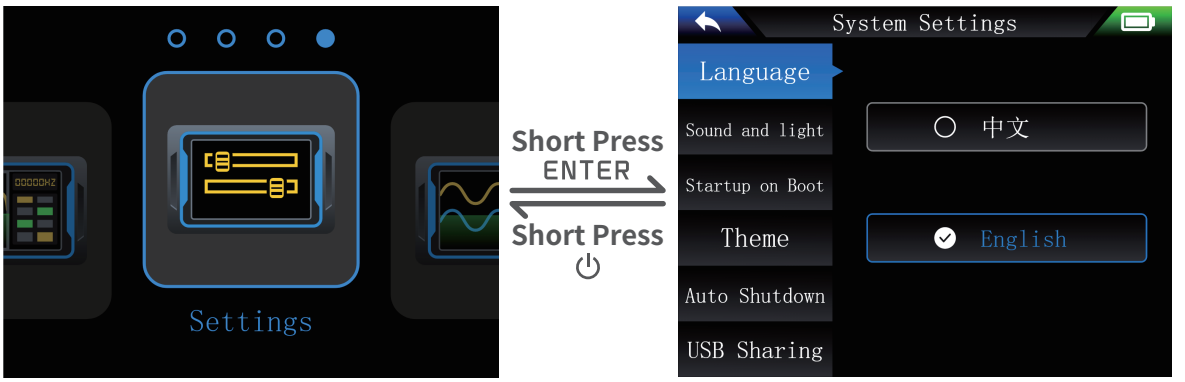
Long press ⏻ power on, wait for the system to load, and enter the default interface of system settings.



Default Interface

4.2 Language settings

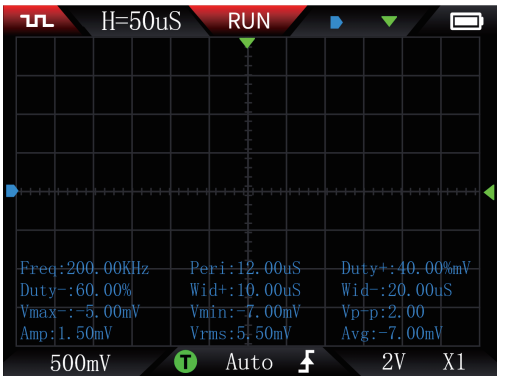
In the default interface, short press the left/right button to select system settings, short press the OK button to enter system settings, select language settings using the up/down buttons, and then short press the OK button to enter language settings, select the language to be set using the up/down buttons, and confirm the selection with the OK button.



4.3 Adjust oscilloscope parameters

Oscilloscope adjustment

In the default interface, short press the left and right buttons to select the function module oscilloscope, and click the confirmation button to enter the oscilloscope. Long press the mode switch button (**MODE**) to enter the oscilloscope parameter setting, and select and set the coupling type, probe ratio, trigger mode, trigger edge and other parameters through the button selection area. Long press the mode switch button (**MODE**) again to close the oscilloscope parameter setting.



Long press MODE

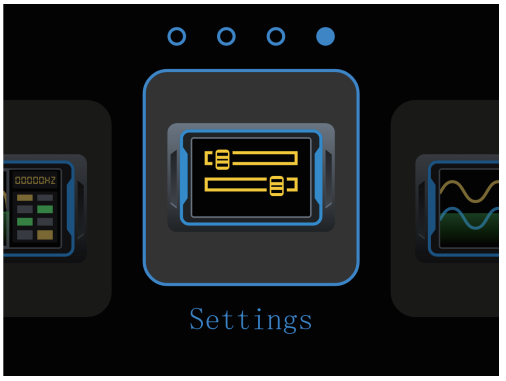
Long press MODE

Oscilloscope function **Oscilloscope parameter settings**

4.4 Brightness adjustment

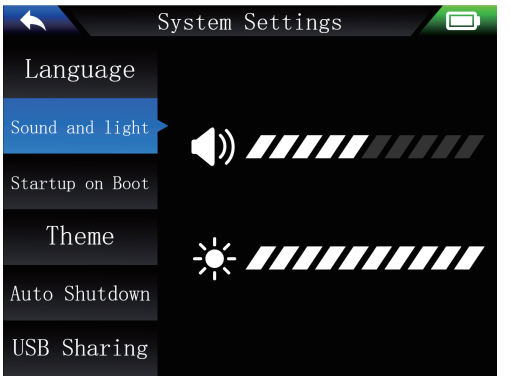
Brightness adjustment

In the default interface, short press the Select button to select System Settings, short press the Confirm button to enter System Settings, click the Select button to select Sound and Light Settings, then click the Confirm button to enter Sound and Light Settings, select Brightness, and use the left and right Select buttons to adjust the brightness in real time.



Short Press ENTER

Short Press



Adjust other functions of system settings

The corresponding function selection and activation are roughly the same as the above operation navigation, and the step description is omitted.

5.Quick Start Guide

5.1 Quick Measurement

1、Turn on the multi-function multimeter oscilloscope, wait for the system to load, and select the mode: oscilloscope, signal generator, multimeter, etc. For example: select signal generator.

2、First connect the interface, enter the signal generator, and select the waveform to be output. Click the confirmation button to confirm the setting of Freq, Duty cycle, Amp., etc.

3、When the corresponding parameters are set, click the run/pause button to start the signal generator.

4、Click the mode switch button to perform other functions.

5.2 Firmware Upgrade

- Turn off the device, long press the **MODE** button and the power button at the same time, the device will pop up the Firmware Upgrade interface, insert the USB Type-c data cable to connect the computer, enter the Firmware Upgrade interface to upgrade the firmware.
- After entering Firmware Upgrade, the computer will recognize the USB drive and copy the firmware file directly to the USB drive.
- Pull the firmware file to the specified folder of the USB drive. If the firmware upgrade is completed, the shutdown charging interface will be displayed.

※**Note:**Firmware upgrade is only supported on computers with Windows 10 and above.

6.Troubleshooting

6.1 Unable to boot

Possible causes:

·Battery exhausted. ·Loose or damaged battery connection

Solution:

①Check battery charge and charge if low

②If battery fails to charge or device still does not power on, try reinstalling or replacing the battery.

6.2 Screen does not display

Possible causes:

·Screen backlight is off. ·Display hardware malfunction.

·System software abnormality

Solution:

①Check and adjust the backlight brightness settings according to the manual.

②Try restarting the device to ensure the system returns to normal.

③If the screen still does not display properly, the display may need to be repaired or replaced.

7. Maintenance

Cleaning the outside of the device

●**Frequency:** Clean once a month, depending on the usage environment.

●**Method:** Use a soft cloth to gently wipe the surface of the device. Avoid using chemical cleaners, especially those containing alcohol or strong acids or alkalis, to avoid damaging the casing or screen.

●**Note:**

•Keep the device clean and remove dust around the buttons regularly to keep it in good condition.

•Ensure that no liquid, dust or debris enters the device interface.

•If the input jack is dirty or wet, it may affect the reading.

•Use a new cotton ball dipped in a cleaner or lubricant to clean each jack. The lubricant can prevent moisture-related jack contamination.

Check the battery and power

- **Battery maintenance:** For instruments with built-in batteries, check the health of the battery regularly. Avoid complete battery discharge. It is recommended to charge regularly and avoid not using the device for a long time.
- **Charging specifications:** Use the official charger to charge, avoid overcharging or over-discharging, and ensure that the battery is in the appropriate operating voltage range.
- **Battery replacement:** If the battery shows excessive attenuation (such as failure to charge normally or extremely fast discharge), it should be replaced in time.

Storage and Carrying:

- Storage environment: The device should be stored in a dry and ventilated environment, avoiding high temperature, high humidity or drastic temperature changes. Avoid placing it in direct sunlight.
- Carrying: Be careful to avoid falling when using, especially when carrying. It is recommended to use a protective case or a special bag for carrying.

Software Update

- Regularly check whether the device has new firmware to update. The latest firmware can fix known bugs and improve device performance.
- When updating, make sure the operation steps are correct, use the officially released firmware files, and avoid power outages or other interference.

Restore factory settings

- If the device is abnormal or does not work properly, try to restore the factory settings. After restoring the settings, the device will clear all custom configurations and return to the initial state.
- For methods to restore factory settings, please refer to the user manual or contact the manufacturer's customer service.

8.Contact Us

Any FNIRSI users who contact us with questions will receive our promise of a satisfactory solution, plus an extra 6-month warranty as a token of our appreciation for your support! By the way, we have created an exciting community, and we welcome you to contact FNIRSI staff to join.

SHENZHEN FNIRSI TECHNOLOGY CO.,LTD

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Tel: 0755-28020752

Web:www.fnirsi.com

E-mail:business@fnirsi.com (Business)

E-mail:service@fnirsi.com(Equipment Service)

http://www.fnirsi.com/

9.WARRANTY INFORMATION

※**This page is the basic warranty card. Please keep it.**

Thank you for choosing our company's products. The warranty period of this product starts from the date of sale. During the product warranty period, if the product is installed and used in accordance with the product manual and used in normal environment and conditions, and the fault is caused by defects in the original materials and processing, you can enjoy free repair services according to the content of this warranty clause. Please keep this warranty card properly as a warranty certificate. No reissue will be issued if it is lost.

The following situations will incur paid repair services

1.Unable to present the original valid warranty card.

2.Damage caused by improper installation not meeting product requirements, standards, or relevant specifications.

3.Damage caused by accessories in the installation environment not meeting product requirements, standards, or relevant specifications.

4.Damage caused by improper use, improper storage, unauthorized disassembly, or unauthorized repairs by the user.

5.Expiration of the warranty period.

保修卡

产品型号	**DST-210**	**数量**	
渠道商名称 （购买商店）			
联系方式			
渠道商地址			
发票号 （订单号）			
购买时间	**年　　月　　日**		
客户姓名:	**地址:**		
联系方式:	**故障说明:**		

Warranty Card

Product Model	**DST-210**	**Qty.**	
Distributor Name (where to buy)			
Contact			
Address			
Invoice Number (Order Number)			
Purchase Date (as per invoice)	**Year**	**Month**	**Day**
User Name:	**Address:**		
Contact:	**Fault Description:**		

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