关于我们

汉顺电子是一家具有单片机软件开发，windows 软件开发,android APP 开发，电子电路设计及具有生产能力的工厂.

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用户单击**设置**按钮,进入设置界面,通过设置界面来设置通道,游标,触发,测量等选项.

注意: 普通触发模式/一次触发模式,一定要有触发才显示波形,所以在您等了很久屏幕波形没更新，切换到自动模式，在没有触发条件满足的情况下，系统会定时触发。单次触发即只能触发一次，再次触发也不会刷新波形,只有再次按下运行键方可继续刷新波形.

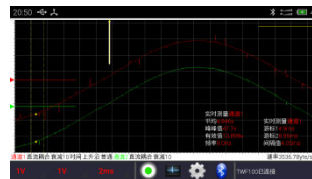**帧延时设置**:无线传输因环境，设备之间存在一定的误码率，当出现错误时，将帧延时设大一些(最大 20)

通道零点位置,水平触发,垂直触发位置都可以移动,通过长按屏幕,软件进入移动位置模式.每个位置三角标志延伸出一条长线，通过点击相应的线条，选定移动目标,按住不放的同时移动,把位置标志移动到你所需要的地方.再次长按屏幕退出移动位置值模式,回到正常显示.
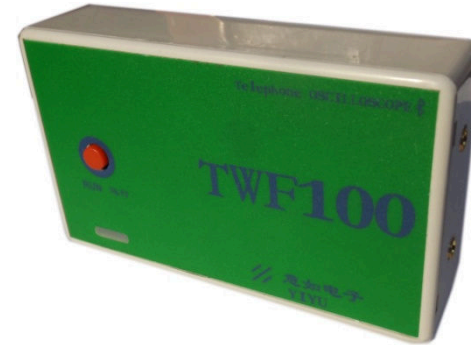
游标测量

游标 1：指示游标一线所处的位置值。

游标 2:另一游标线所处的位置值.

间隔值:两游标线之间的值.

TWF100 Manual

TWF100 is a telephone oscilloscope. The device samples an electronic signal, and transmits the signal data by Bluetooth to your Android telephone, which displays the signal and operates the device.

TWF100 specification:

ADC sample rate:1MHz

Pulse width:100us-50s

Measure type: average, peak-to-peak, frequency, effective value

Cursor：voltage / time measure

Trigger type：rising edge，failling edge，rising pulse，falling pulse

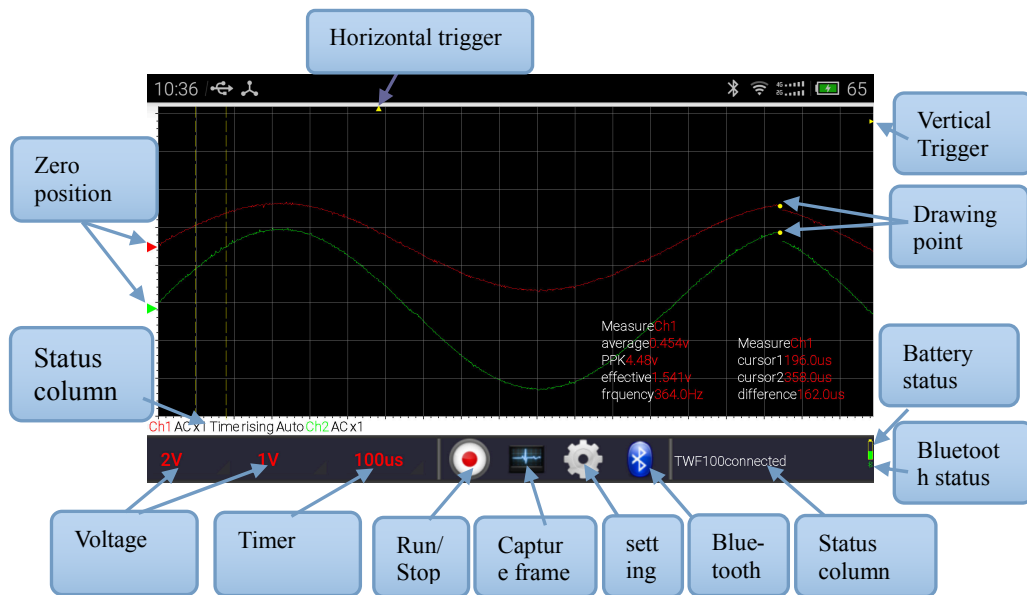Trigger mode: normal，automatic，single

Channels: 2

Compact: dc/ac

Supporting OS: Android 4.0 or above

Supporting devices: Android telephones having a Bluetooth panel

Bluetooth version: BT2.1v

Probe X1: 1M ohm $\pm$10v

Probe X10：10M ohm $\pm$100v

Left diagram labels (oscilloscope screen):

Horizontal trigger · Vertical Trigger · Drawing point · Zero position · Status column · Battery status · Bluetooth status · Voltage · Timer · Run/Stop · Capture frame · setting · Blue-tooth · Status column

Screen text:
10:36 65
Measure Ch1
average 0.454v
PPK 4.48v
effective 1.541v
frquency 364.0Hz
Measure Ch1
cursor1 196.0us
cursor2 358.0us
difference 162.0us
Ch1 AC x1 Time rising Auto Ch2 AC x1
2V 1V 100us TWF100connected

Device diagram labels:

Charge port: micro USB
Battery capacity: 1000mAh
Battery voltage: 4.2v
Language: English/中文

TWF100 accessories
 TWF100 device x1
 MCX probe x2
 Manual x1

MCX Probe Port
Run/Stop Button
Power switch
Micro USB
LED indicator

截图功能,单击按键,保存当前画面为 Jpg 图片.并保存到手机的存储器里,保存路径为 TWF100 文件夹,当你的手机或平板有插入 SD 卡，则保存在 SD 卡上的 TWF100 文件夹,如未插入 SD，且保存在手机内存储器里.命名以当前时间年月日时分秒.jpg.

运行/暂停功能
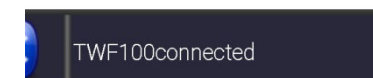单击按键来运行或暂停波形显示，也可以通过设备运行/暂停键来操作.

蓝牙在线指示图标,蓝牙连接成功时，显示为绿色，蓝牙连接失败时为灰色
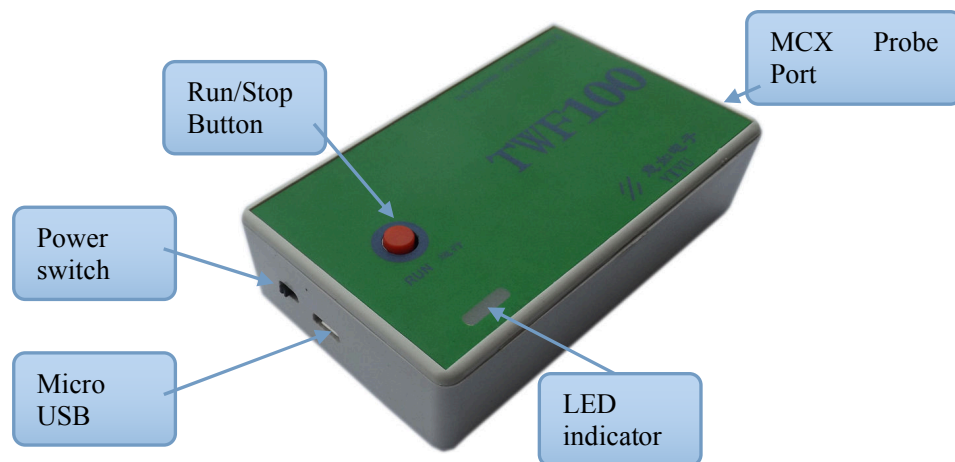
电量指示图标，指示设备内置电池的电量,每 5 分钟更新一次.

提示信息栏，对用户操作或设备状态进行提示.

TWF100connected

通道选项状态

Ch1 AC x1 Time rising Auto Ch2 AC x1

使用前的准备工作
1. 打开你的手机蓝牙.
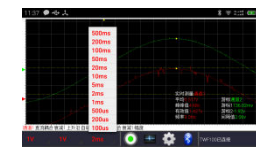2. 打开 TWF100 设备电源开关.
3. 用过手机对 TWF100 进行蓝牙配对.配对密码:1234

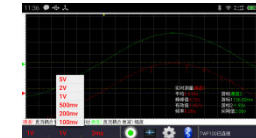**连接 TWF100 设备:**
单击工具栏的蓝牙按键,弹出蓝牙连接对话框.选择您的设备.

电压档位
选择合适的电压档位,以最合适的图形观察波形
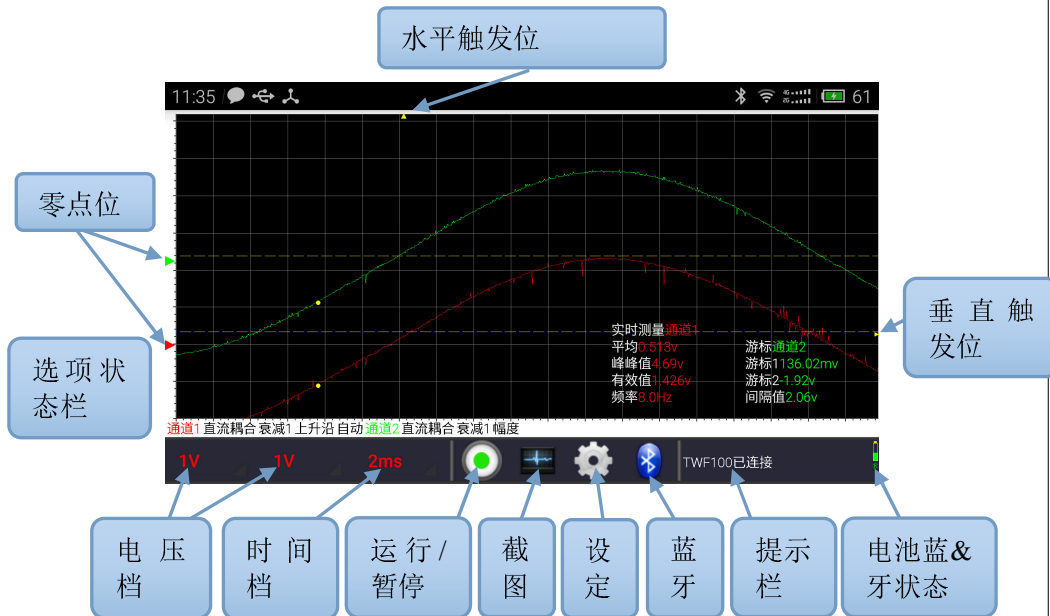如果你设置探头衰减为 X1,那么可选档位为 100mV-5V.
如果你设置探头衰减为 X10,那么可选档位为 1V-50V.

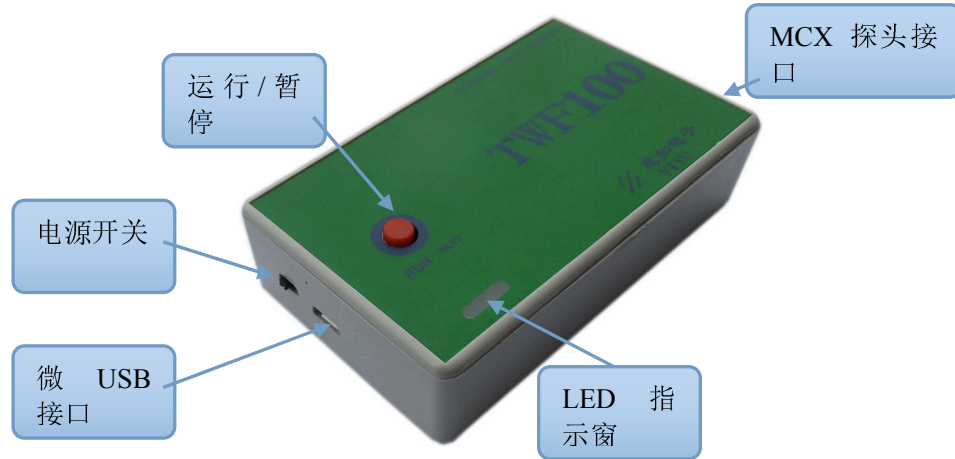**时间档位**
选择合适的档位，以方便观察波形的脉宽.
时间档位为 100us 到 50 秒.

电池容量:1000mAH
电池电压:4.2v
充电端口:微型 USB
支持语言:中文/English

TWF100 配件
TWF100 设备一台
说明书一份
MCX 探头 两条

MCX 探头接口

运 行 / 暂 停

电源开关

微 USB 接口

LED 指示窗

水平触发位

零点位

选项状态栏

垂直触发位

通道1 直流耦合 衰减1 上升沿 自动 通道2 直流耦合 衰减1 幅度

实时测量通道1
平均 0.513v
峰峰值 4.69v
有效值 1.426v
频率 3.0Hz

游标通道2
游标 1136.02mv
游标2 -1.92v
间隔值 2.06v

TWF100已连接

1V   1V   2ms

电 压 档

时 间 档

运 行 / 暂 停

截 图

设 定

蓝 牙

提 示 栏

电池蓝&牙状态

Setup:
1. Enable Bluetooth on your telephone.
2. Turn on TWF100 and note the blue light flash.
3. Pair the TWF100 Bluetooth device, and input password "1234".
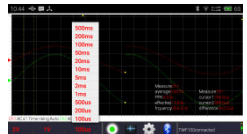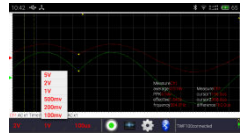
Connect the TWF100 Device:
Click the toolbar's Bluetooth button, select connect device, and then select your device.

Voltage range:
Select the appropriate voltage range to display the waveform you want. If you set the probe at X1 attenuation, the voltage range should be 100mV-5V; if at X10 attenuation, the range should be 1V-50V.
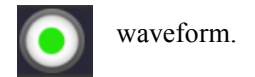
Time sweep:
You can select a time sweep from 100us to 50 seconds.

Run/Stop:
Press the toolbar's run/stop to stop or continue to display the   waveform.
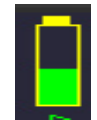
Capture:
The capture function can save the current display content as a jpg file. The file is saved in your telephone's storage or SD card's TWF100   folder.

Battery quantity:
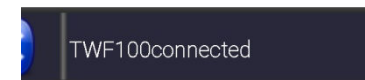In the lower right corner, a battery icon indicates the device's   battery level.

Bluetooth icon:
If Bluetooth connection is successful, the Bluetooth icon becomes green, otherwise it becomes gray.
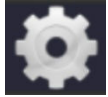
TWF100connected

Status column:
The status column shows user messages such as:"Twf100 connected", or capture file saved.

Option status column:
The option status column displays the channel setting status.

Ch1 AC x1 Time rising Auto Ch2 AC x1
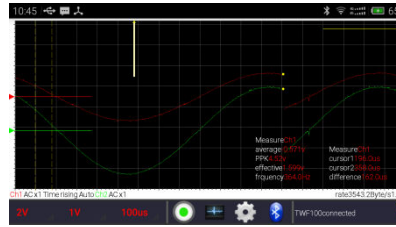
Set: channel, cursor, trigger option.
Note: In normal mode, a trigger signal is needed to start a frame display. If you open the device, and connect successfully, but do not see any waveform display, you can check the trigger mode, and change to auto mode.

Frame Delay: If your telephone display waveform has some error, you may need to set a larger value in the edit box (max 20).

Move and set position value:
If you long press your telephone screen, you enter set position mode. A long line extends from the triangle. The pressed line will change color to white. Then you can drag the line anywhere. Exit set position mode by another long press.
The user can move the cursors to measure a waveform's voltage or time. The waveform interface's cursor 1 is a cursor line position, and cursor 2 is a second cursor line position. Their difference is the absolute value of two line's difference.

APP download：
http://pan.baidu.com/s/1hratpSK

About us
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TWF100 规格：
ADC 采样率:1MHz/S
脉宽范围:100us-50s
实时测量参数:平均值,峰峰值,频率,有效值.
游标：幅度与时间
触发方式：上升沿，下降沿，上升脉冲，下降脉冲
触发模式:普通，自动，单次
通道数:2
耦合方式:直流/交流
支持手机系统:android4.0 及高版本
支持设备:android 系统带蓝牙功能的手机与平板电脑
蓝牙版本:BT2.1v
探头 X1 输入电压:±10v,输入电阻 1M 欧姆
探头 X10 档输入电压：±100v,输入电阻 10M 欧姆

TWF100 操作说明书