AOPUTTRIVER T4-1013D-E

AOPUTTRIVER 1013D Plus Oscilloscope User Manual

Model: T4-1013D-E

Comprehensive Guide for Operation and Maintenance

1. Introduction

Thank you for choosing the AOPUTTRIVER 1013D Plus Oscilloscope. This portable handheld tablet oscilloscope is designed for a wide range of applications, from electronic production and home appliance repair to scientific research and product development. Featuring a 7-inch TFT LCD touch screen, 100MHz bandwidth, and 1GSa/s sampling rate, it offers powerful functionality in a compact form factor.

This manual provides detailed instructions for the proper setup, operation, and maintenance of your oscilloscope. Please read this manual thoroughly before using the device to ensure safe and efficient operation.

2. Safety Information

Always observe the following safety precautions to prevent injury and avoid damage to the instrument or other devices connected to it.

- **Power Source:** Use only the specified power adapter and USB cable provided with the device.
- **High Voltage Protection:** The oscilloscope features a built-in high voltage protection module, capable of withstanding up to 400V continuous voltage. However, always exercise extreme caution when working with high voltages. Do not exceed the maximum input voltage ratings.
- **Probe Usage:** Ensure probes are correctly connected and rated for the voltage being measured. Use the 100X high voltage probe for high voltage measurements.
- **Environment:** Operate the device in a dry, well-ventilated area. Avoid exposure to moisture, dust, and extreme temperatures.
- **Maintenance:** Do not attempt to open or repair the device yourself. Refer all servicing to qualified personnel.
- **Cleaning:** Disconnect power before cleaning. Use a soft, dry cloth. Do not use abrasive cleaners or solvents.

Image: The oscilloscope's intelligent anti-burning feature, highlighting its built-in high-voltage protection module that tolerates up to 400V continuous voltage input.

3. Product Overview and Features

The AOPUTTRIVER 1013D Plus is a versatile and portable oscilloscope designed for precision measurements. Key features include:

- **Display:** 7-inch color TFT LCD touch screen with 800x480 resolution, offering bright colors and high contrast for clear waveform display.
- **Performance:** 2 channels, 100MHz analog bandwidth, and a real-time sampling rate of up to 1GSa/s.
- **Triggering:** Full range of triggering functions (single/normal/automatic) suitable for both periodic analog and non-periodic digital signals.
- **Signal Generator:** Built-in DDS signal generator supporting 12 kinds of function signals.
- **Data Storage:** Built-in 1GB storage space, capable of storing up to 1000 screenshots and 1000 sets of waveform data.
- **Connectivity:** USB interface for connection to a computer for secondary analysis and data sharing.

- **Portability:** Slim, compact, and easy to carry, powered by a 6000mAh lithium battery for up to 4 hours of standby time.

Image: The AOPUTTRIVER 1013D Plus Oscilloscope displaying waveforms on its 7-inch touch screen, with a hand interacting with the interface.

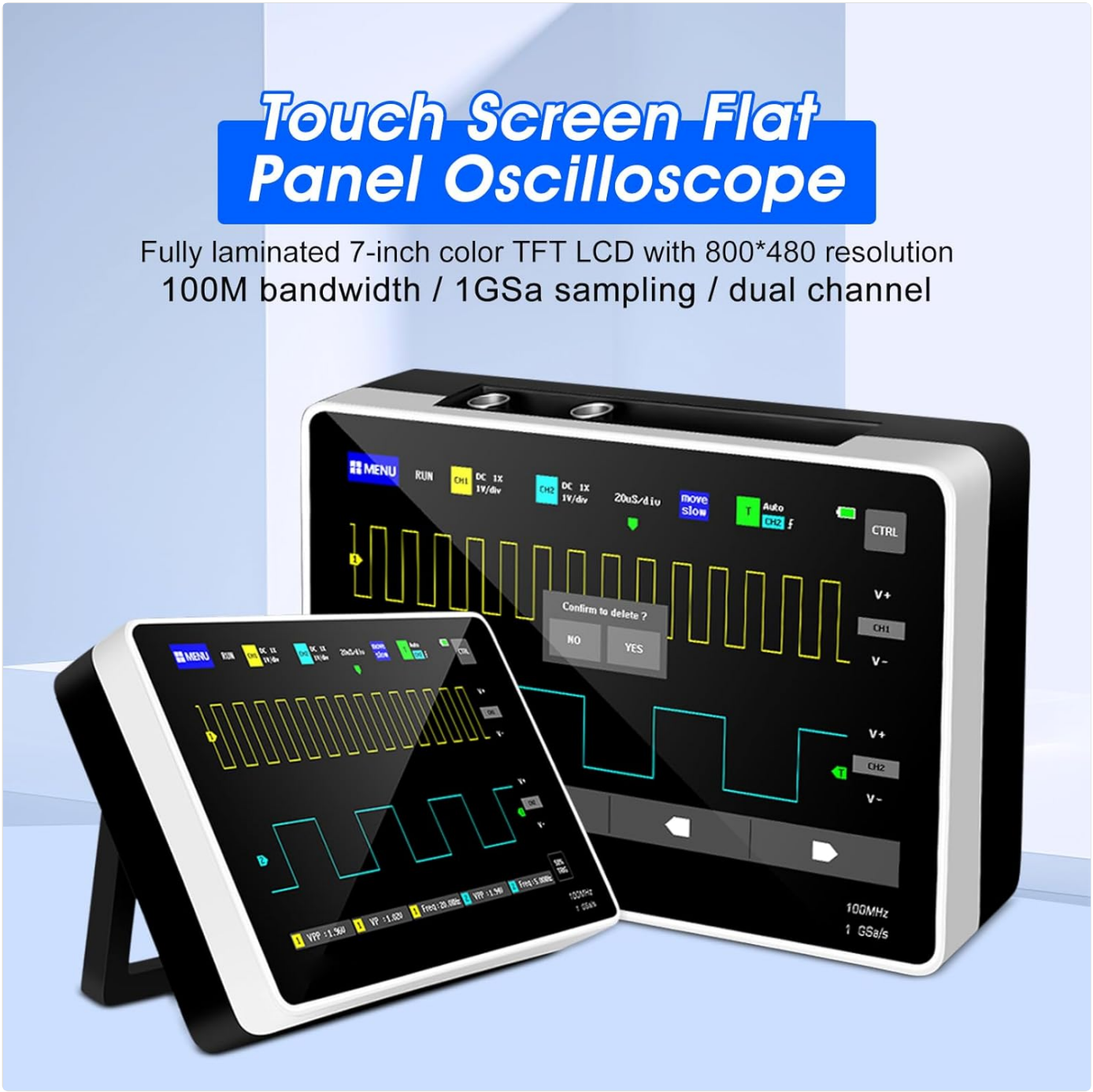

Image: A close-up view of the oscilloscope's touch screen, demonstrating its flat panel design and dual-channel display capabilities.

4. Specifications

The following table details the technical specifications of the AOPUTTRIVER 1013D Plus Oscilloscope:

Parameter	Value	Parameter	Value
Channels	2	Cursor	Position XY Trigger Y
Display	7inch 800*480 pixels	Roll mode	Support
Bandwidth	100MHz	One-Button AUTO	Support
Sampling Rate	1GSa/s	Waveform Storage	1000 Picture + 1000 Waveform
Rise time	<3nS	Waveform Manager	Support

Parameter	Value	Parameter	Value
Storage Depth	240 Kbit	Voltage Accuracy	±2%
Input Resistance	1MΩ	Frequency Precision	+0.01% High Precision
Sensitivity	50mV~500V	Parameter	12 Kinds in Total
Time Base	50S~10nS	Battery	6000mAh Lithium
Trigger Mode	Single/Normal/Auto	Standby	4 Hours
Trigger Edge	Rising/Falling	Extension	USB Export
Coupling	AC/DC	Charging	Type-C 5V 2A/3A/4A
Highest Test Voltage	1X:40V 10X:400V		

Channels	2	Cursor	Position XY Trigger Y
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Rise time	<3nS	Waveform Manager	Support
Storage Depth	240 Kbit	Voltage Accuracy	±2%
Input Resistance	1MΩ	Frequency Precision	+0.01%High Precision
Sensitivity	50mV~500V	Parameter	12 Kinds in Total
Time Base	505~10nS	Battery	6000mah Lithium
Trigger Mode	Single/Normal/Auto	Standby	4 Hours
Trigger Edge	Rising/Falling	Extension	USB Export
Coupling	AC/DC	Charging	Type-C 5V 2A/3A/4A
Highest Test Voltage	1X:40V 10X:400V		

Image: Physical dimensions of the oscilloscope and a comprehensive table of its technical specifications.

5. Setup

5.1 Unboxing and Package Contents

Carefully unpack all components and verify that all items listed below are present and undamaged. If any items are missing or damaged, please contact customer support.

- T4-1013D-E Pro Oscilloscope (x1)
- Matching Probe (x2)
- Type-C USB Cable (x1)
- 5V2A Charger (x1)
- User Manual (x1)

Image: A visual representation of the items included in the product package, such as the oscilloscope, probes, USB cable, charger, and user manual.

5.2 Initial Charging

Before first use, it is recommended to fully charge the oscilloscope's built-in 6000mAh lithium battery. Connect the

provided Type-C USB cable to the oscilloscope's charging port and the 5V2A charger to a power outlet. The charging indicator will show the charging status.

5.3 Probe Connection

Connect the oscilloscope probes to the input channels (CH1, CH2) on the device. Ensure a secure connection. For accurate measurements, calibrate the probes as described in the operating instructions section.

6. Operating Instructions

6.1 Power On/Off

To power on the oscilloscope, press and hold the power button located on the side/top of the device until the screen illuminates. To power off, press and hold the power button again until the device shuts down.

6.2 Navigating the Touch Screen Interface

The 1013D Plus features an intuitive touch screen interface. Most functions and settings can be accessed by tapping icons and menus directly on the screen. Use gestures like swiping to navigate through menus or adjust waveform positions.

6.3 Waveform Display and Adjustment

Upon powering on, the oscilloscope will display real-time waveforms. You can adjust various parameters to optimize the display:

- **Vertical Scale (V/div):** Adjust the voltage per division for each channel to fit the waveform vertically on the screen.
- **Horizontal Scale (Time/div):** Adjust the time per division to control the horizontal spread of the waveform.
- **Trigger Settings:**
    - *Mode:* Select between Auto, Normal, or Single trigger modes. Auto mode is suitable for most signals, Normal for stable displays of repetitive signals, and Single for capturing single-shot events.
    - *Edge:* Set the trigger to rising or falling edge.
    - *Level:* Adjust the trigger level to stabilize the waveform display.
- **One-Button Auto:** Utilize the efficient one-touch automatic device function to quickly display the measurement waveform without tedious manual adjustments.

6.4 Data Storage and Management

The oscilloscope allows for convenient storage of waveforms and screenshots:

- **Save Waveform/Screenshot:** Use the dedicated "Save Pic" or "Save Wave" functions on the touch screen to store data with one click.
- **Waveform Image Manager:** Access the powerful waveform image manager to browse, view, zoom, move, and delete stored data.

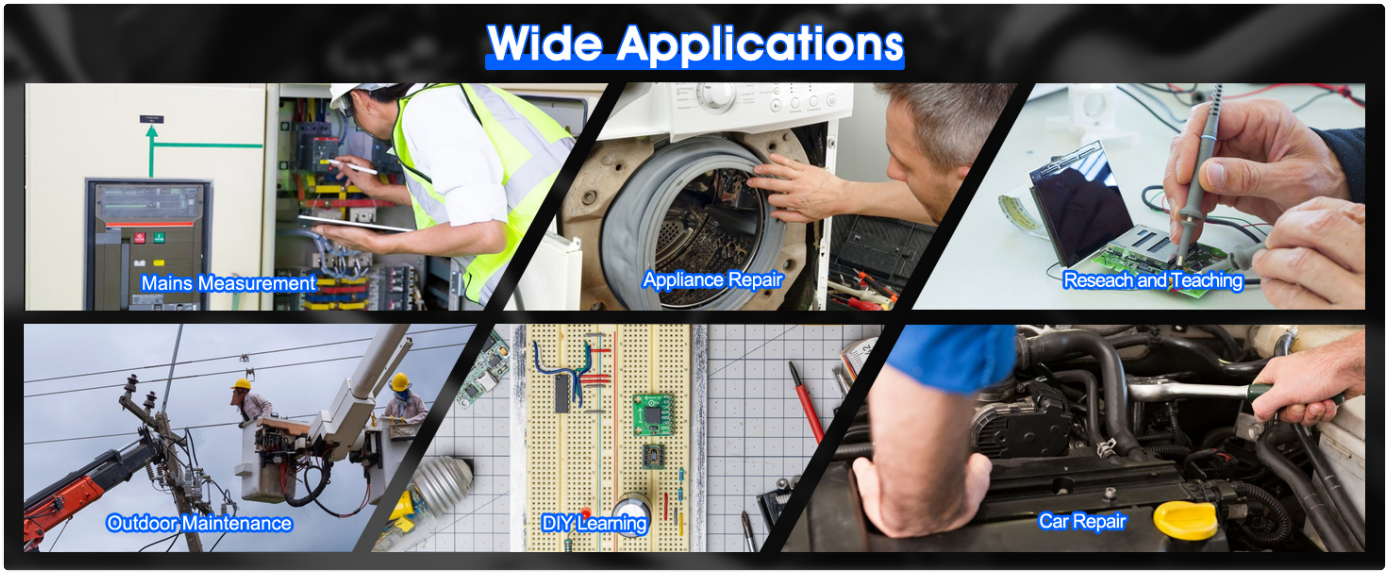


Image: Illustration of the oscilloscope's data waveform storage feature, showing its ability to store up to 1000 screenshots and 1000 sets of waveform data with a single tap.

6.5 Connecting to a Computer for Secondary Analysis

The oscilloscope is equipped with a USB interface, allowing you to connect it to a computer for further analysis of stored data. This feature is convenient for detailed examination and reporting.

Image: The oscilloscope connected to a laptop, demonstrating its capability for data sharing and secondary analysis of captured waveforms and screenshots.

7. Maintenance

7.1 Cleaning the Device

To clean the oscilloscope, first ensure it is powered off and disconnected from all power sources and probes. Use a soft, lint-free, slightly damp cloth to wipe the exterior. Do not use harsh chemicals, abrasive cleaners, or solvents, as these can damage the screen or casing.

7.2 Battery Care and Storage

To prolong the life of the built-in lithium battery:

- Avoid fully discharging the battery frequently.
- If storing the device for an extended period, charge the battery to approximately 50-70% before storage.
- Store the oscilloscope in a cool, dry place, away from direct sunlight and extreme temperatures.

8. Troubleshooting

This section addresses common issues you might encounter with your AOPUTTRIVER 1013D Plus Oscilloscope. If you experience a problem not listed here, or if the suggested solutions do not resolve the issue, please contact customer support.

Problem	Possible Cause	Solution
Device does not power on.	Battery is depleted; Power button not pressed correctly.	Charge the battery using the provided charger and USB cable. Ensure the power button is pressed and held until the screen illuminates.
No waveform displayed.	Probe not connected; Input signal too small or too large; Trigger settings incorrect.	Verify probe connections. Adjust vertical scale (V/div) and horizontal scale (Time/div). Check trigger mode and level settings, try "One-Button Auto".
Waveform is unstable or rolling.	Trigger level or mode is incorrect; Input signal is noisy.	Adjust the trigger level. Try different trigger modes (Normal for stable signals). Ensure proper grounding and minimize noise in the test environment.
Touch screen unresponsive.	Temporary software glitch; Screen dirty.	Restart the device. Clean the screen with a soft, dry cloth.
Cannot save data.	Storage space full; Software error.	Delete old data to free up space. Restart the device.

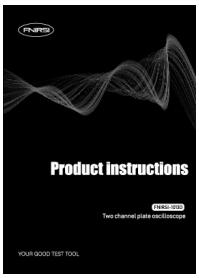
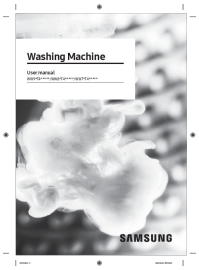
9. Warranty and Support

AOPUTTRIVER stands behind the quality of its products. This oscilloscope is covered by a manufacturer's warranty against defects in materials and workmanship. For specific warranty terms and conditions, please refer to the warranty card included in your package or contact AOPUTTRIVER customer support.

If you have any questions, require technical assistance, or need to arrange for a refund or replacement, please feel free to contact AOPUTTRIVER customer service. Contact information can typically be found on the manufacturer's official website or through your point of purchase.

Related Documents - T4-1013D-E

	FNIRSI 1013D Oscilloscope User Manual User manual for the FNIRSI 1013D digital oscilloscope, detailing its features, operation, and troubleshooting.

	[FNIRSI-1013D Two Channel Oscilloscope: Product Instructions and Operation Guide] Comprehensive product instructions and operation guide for the FNIRSI-1013D dual-channel digital oscilloscope. Learn about its features, setup, usage, and troubleshooting.
	[Samsung Washing Machine User Manual: Safety, Installation, and Operation Guide] Comprehensive user manual for Samsung washing machines, covering essential safety instructions, installation procedures, operational guidelines, and maintenance tips. Learn how to safely and efficiently use your Samsung washing machine.
	[AOC LCD Monitor User Manual: 24G2/24G2U/27G2/27G2U] Comprehensive user manual for AOC 24G2, 24G2U, 27G2, and 27G2U LCD monitors, covering setup, operation, features, troubleshooting, and specifications. Includes detailed instructions on OSD settings, software utilities like G-Menu and e-Saver, and technical specifications.
	[GooDisplay GDEP133UT3-T 13.3-inch E-paper Display Module Technical Specification] Detailed technical specifications for the GooDisplay GDEP133UT3-T, a 13.3-inch E-paper display module with touch screen, featuring high contrast, low power consumption, and wide temperature operation. Includes electrical, optical, and mechanical characteristics, pin assignments, timing diagrams, and reliability tests.
	[Intelligent AP7 E-Bike Display Manual] This manual provides comprehensive information for the CSC Intelligent AP7 E-Bike Display. It covers features such as the high-contrast 3.2-inch IPS colorful matrix screen, ergonomic button design, and various display modes including speed (average, max, real-time) and mileage. The manual also details electrical specifications, battery compatibility (24V/36V/48V), operating currents, and the USB charging port. It guides users on mode switching, understanding display icons like the clock, front light indicator, and power loop, as well as interpreting error codes.