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› HANMATEK HO15 Digital Oscilloscope User Manual

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Model: HO15

INTRODUCTION

The HANMATEK HO15 is a portable digital oscilloscope designed for various electronic testing and measurement applications. It features a 50MHz bandwidth and a 200MSa/s sampling rate, providing accurate waveform capture. Equipped with a 2.8-inch TFT color screen, it offers clear visibility and an intuitive interface suitable for both beginners and professionals. This device also includes a built-in signal generator with multiple waveform functions, making it a versatile tool for field work, mobile laboratories, and educational purposes. Its compact design and USB-C rechargeable battery ensure long operational periods.



Figure 1: The HANMATEK HO15 Digital Oscilloscope shown with its standard accessories, including probes and cables.

PACKAGE CONTENTS

Before first use, please verify that all items are present in the package:

- HANMATEK HO15 Digital Oscilloscope
- Oscilloscope Probe (x1/x10)
- BNC to Alligator Clip Cable
- USB-C Charging Cable
- User Manual (this document)
- Protective Carrying Case
- Small screwdriver for probe adjustment
- Color rings for probe identification

PAY ATTENTION TO DETAILS

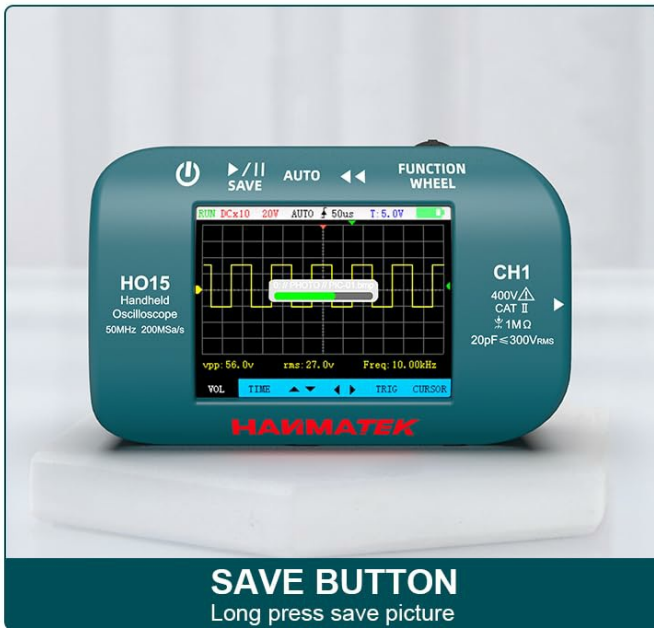


Figure 3: The Type-C port for convenient charging and data transfer.

Device Overview and Controls

Familiarize yourself with the main components and controls of the HO15 oscilloscope:

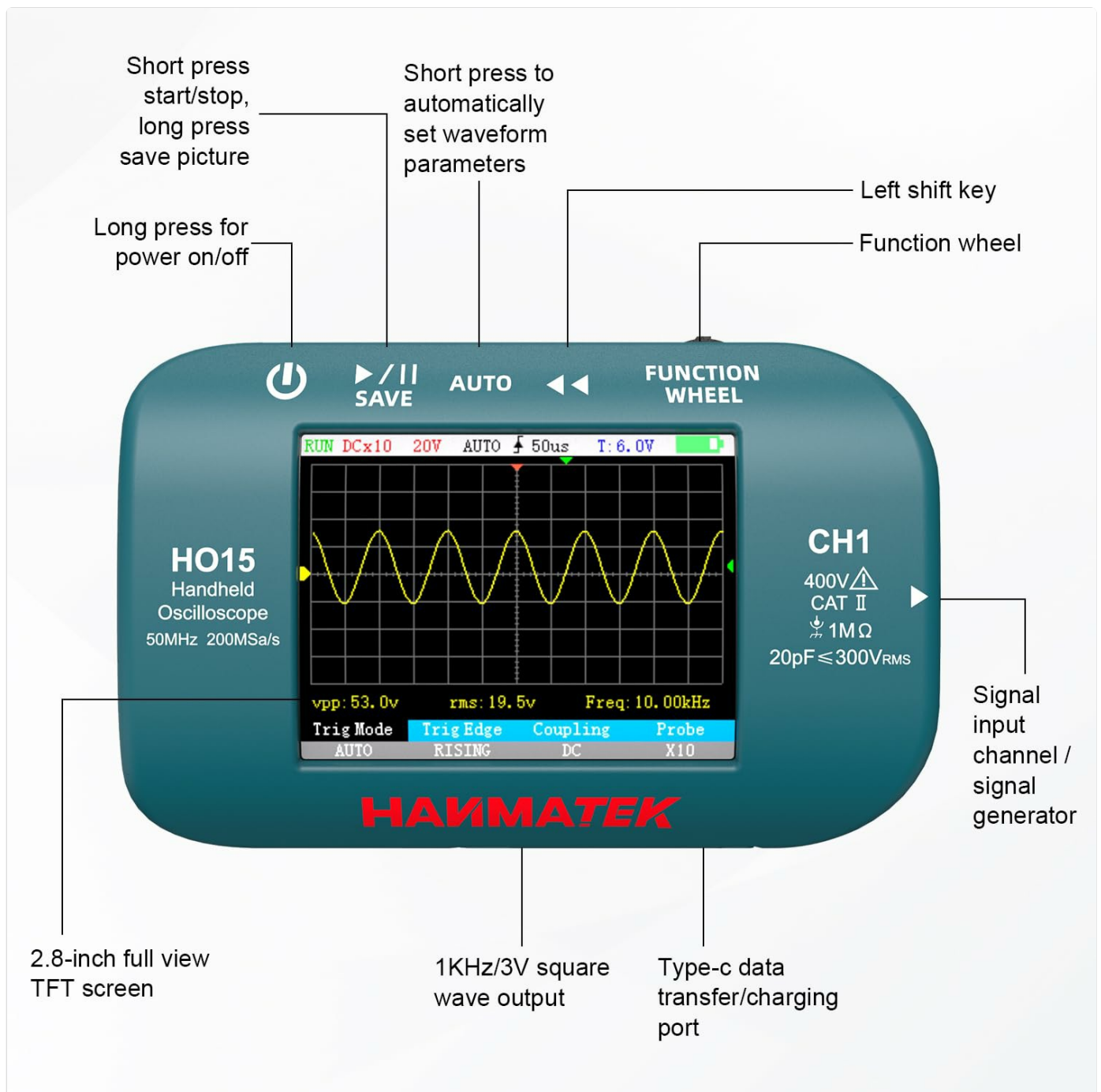


Figure 4: Labeled diagram of the HO15's user interface and physical controls.

- **Power Button:** Long press to power on/off.
- **Start/Stop Button:** Short press to start/stop waveform acquisition. Long press to save the current waveform image.
- **AUTO Button:** Short press to automatically set waveform parameters.
- **Function Wheel:** Used for navigation and adjusting parameters. Press to select, rotate to change values.
- **Left Shift Key:** Used for specific menu navigation or function shifts.
- **2.8-inch Full View TFT Screen:** Displays waveforms and measurement data.
- **Signal Input Channel / Signal Generator Output:** BNC connector for oscilloscope input and signal generator output.
- **Type-C Data Transfer/Charging Port:** For charging and connecting to a computer.
- **1KHz/3V Square Wave Output:** A dedicated output for calibration or testing.

Basic Oscilloscope Operation

1. **Power On:** Long press the power button.
2. **Connect Probe:** Attach the oscilloscope probe to the BNC input connector. Ensure the probe is securely connected.
3. **Probe Attenuation Setting:** Set the probe's attenuation switch (e.g., X1 or X10) to match the setting on the oscilloscope's display. The HO15 supports voltage measurements up to $\pm 400\text{V}$ with dual probes (X1/X10).
4. **Connect to Circuit:** Connect the probe tip to the test point on your circuit and the ground clip to the circuit's ground.
5. **Auto-Adjust:** Press the **AUTO** button to automatically adjust the vertical and horizontal scales for a stable waveform display.
6. **Manual Adjustments:** Use the Function Wheel to fine-tune vertical sensitivity (Volts/Div), horizontal time base (Time/Div), and trigger level.
7. **Trigger Modes:** The HO15 features Auto, Normal, and Single trigger modes. These are crucial for stable signal acquisition, especially for intermittent or complex signals.

50MHz HIGH BANDWIDTH HANDHELD OSCILLOSCOPE

Highly sensitive response signal for fast and accurate measurement

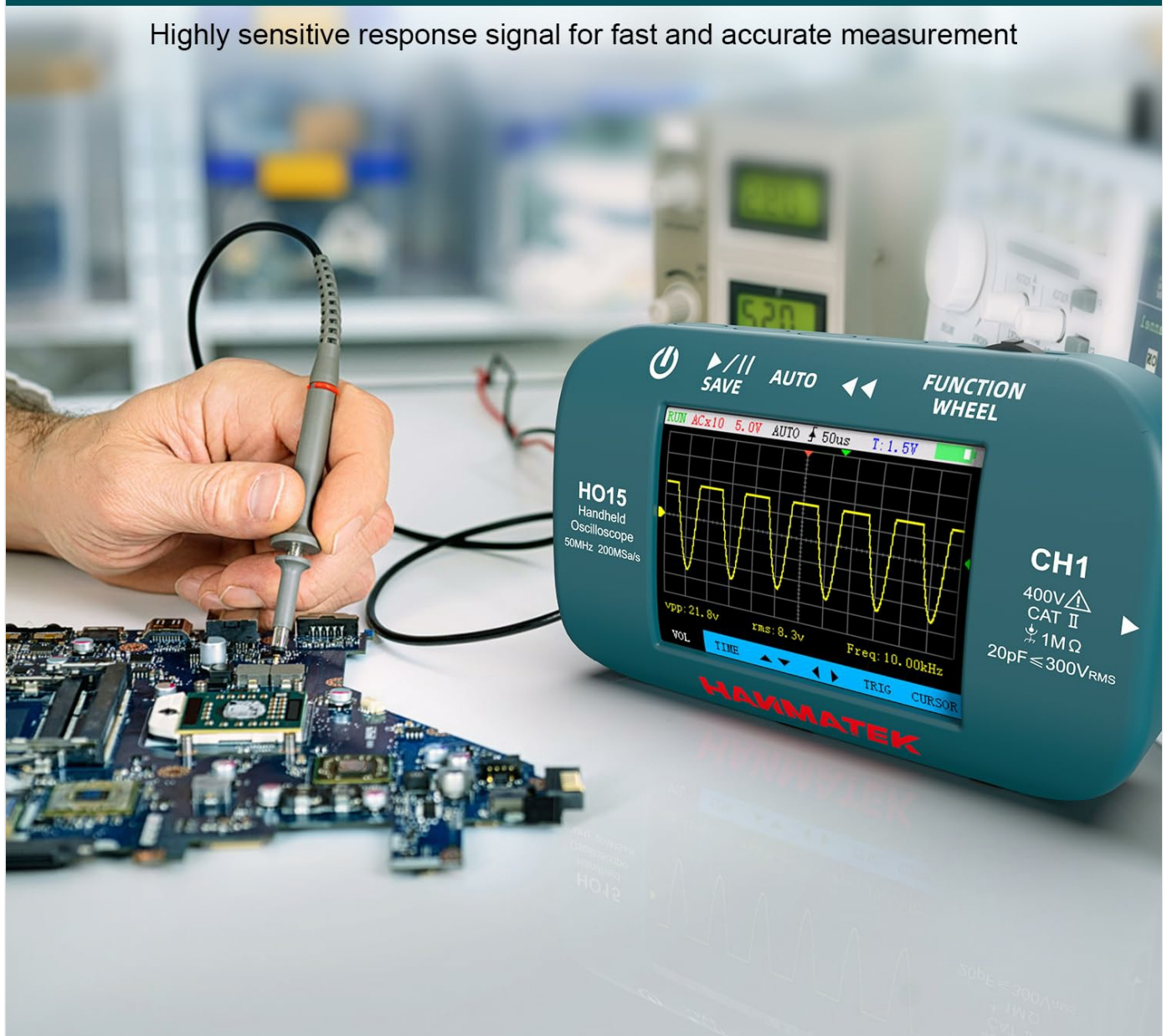


Figure 5: The HO15 in action, demonstrating its use in electronic diagnosis.

Signal Generator Function

The HO15 includes a built-in signal generator capable of outputting various waveforms. This feature is useful for testing circuits or calibrating other equipment.

- **Waveform Selection:** Press the Function Wheel to enter the signal generator menu. Rotate the wheel to select from available waveforms.
- **Adjust Parameters:** Adjust the frequency, amplitude, and duty cycle (for some waveforms) using the Function Wheel.
- **Available Waveforms:** The HO15 supports Square, Sine, Triangle, Half, Full, and Sawtooth waveforms.

GENERATOR WITH 6 WAVEFORM FUNCTIONS

Press the function wheel to select different waveforms

- ☒ Square waveform
- ☒ Sine waveform
- ☒ Triangle waveform
- ☒ Half waveform
- ☒ Full waveform
- ☒ Sawtooth waveform

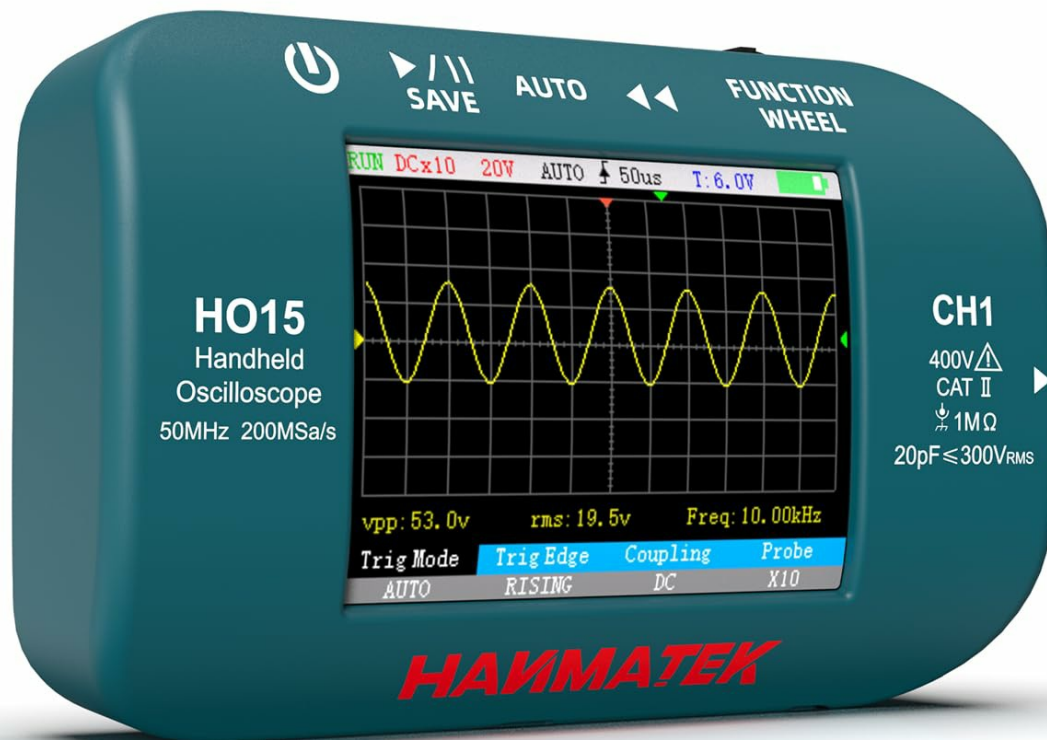


Figure 6: The HO15's signal generator interface showing the six available waveform functions.

SIGNAL GENERATOR

Different waveforms can be output to meet the needs of daily use

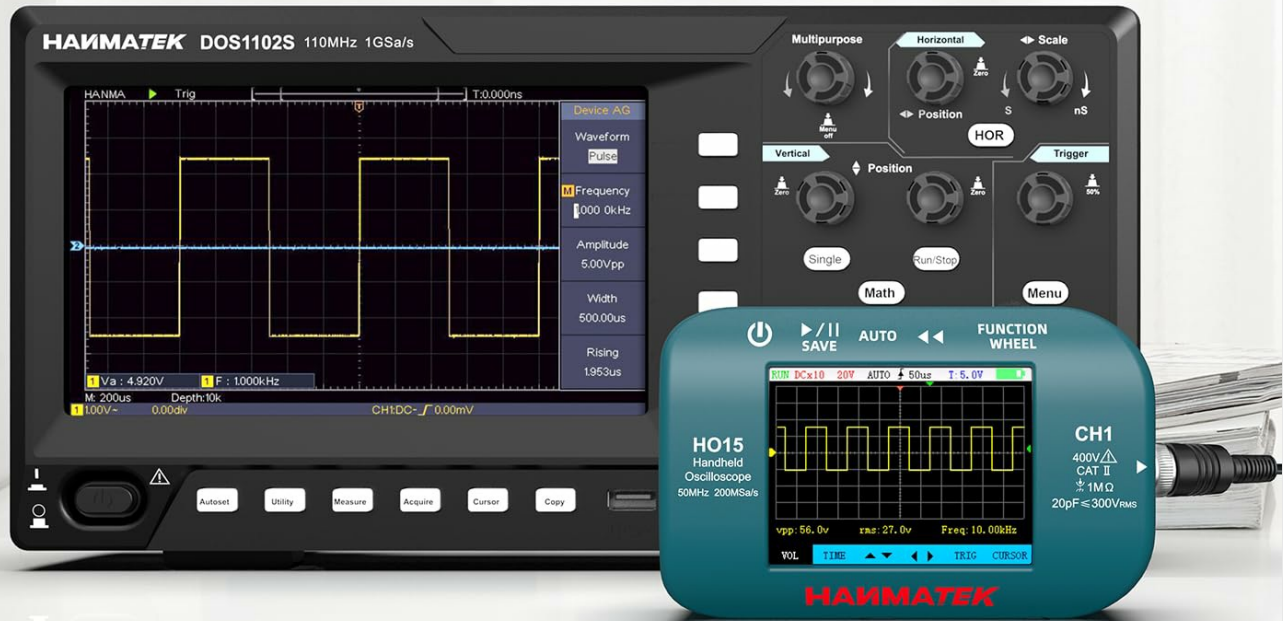


Figure 7: The HO15's signal generator function, capable of outputting different waveforms.

Saving Waveforms

To save the current waveform display as an image, long press the **SAVE** button. The image will be stored internally and can be accessed later or transferred via the USB-C port.

MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your HANMATEK HO15 oscilloscope.

- **Cleaning:** Use a soft, dry cloth to clean the device. For stubborn dirt, a slightly damp cloth with mild detergent can be used, but ensure no liquid enters the device. Do not use abrasive cleaners or solvents.
- **Battery Care:** To prolong battery life, avoid fully discharging the battery frequently. If storing the device for an extended period, charge it to approximately 50% and recharge every few months.
- **Storage:** Store the oscilloscope in a cool, dry place, away from direct sunlight, extreme temperatures, and high humidity. Use the provided protective carrying case when transporting the device.

- **Probe Care:** Handle probes carefully. Avoid bending or stressing the cables. Clean probe tips as needed.

TROUBLESHOOTING

This section addresses common issues you might encounter with your HO15 oscilloscope.

Problem	Possible Cause	Solution
Device does not power on.	Low or depleted battery.	Connect the device to a USB-C charger and allow it to charge for at least 30 minutes before attempting to power on again.
No waveform displayed.	Probe not connected or faulty; incorrect vertical/horizontal settings; no signal input.	Ensure the probe is securely connected. Press the AUTO button. Verify the probe is connected to a live signal source. Check probe attenuation settings.
Unstable or noisy waveform.	Incorrect trigger settings; poor ground connection; external interference.	Adjust trigger level and mode. Ensure the probe's ground clip is securely connected to the circuit's ground. Minimize electromagnetic interference.
Signal generator not outputting.	Incorrect settings; cable not connected.	Verify waveform type and parameters are set correctly. Ensure a cable is connected to the signal generator output.

SPECIFICATIONS

Key technical specifications for the HANMATEK HO15 Digital Oscilloscope:

Feature	Detail
Model Number	HO15
Brand	HANMATEK
Bandwidth	50 MHz
Sampling Rate	200 MSa/s
Display	2.8 inch TFT Color Screen
Voltage Measurement Range	±40 V to ±400 V (with X1/X10 probes)
Trigger Modes	Auto, Normal, Single
Signal Generator Waveforms	Square, Sine, Triangle, Half, Full, Sawtooth
Battery	1800 mAh Lithium-ion (rechargeable via USB-C)
Product Dimensions	10 x 8 x 5 cm
Weight	200 g
Manufacturer	Shenzhen Hanmatek Precision Technology Co.,Ltd.

WARRANTY AND SUPPORT

The HANMATEK HO15 Digital Oscilloscope is manufactured by Shenzhen Hanmatek Precision Technology Co.,Ltd. For information regarding warranty coverage, terms, and conditions, please refer to the warranty card included with your purchase or contact your point of sale. Specific warranty details may vary by region and retailer. For technical support, troubleshooting assistance beyond this manual, or service inquiries, please contact the seller or the manufacturer directly. Contact information can typically be found on the product packaging or the manufacturer's official website.

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Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question