Hantek Hantek DSO2D10

Hantek DSO2D10 Digital Storage Oscilloscope User Manual

Model: Hantek DSO2D10

Introduction

The Hantek DSO2D10 is a 2-channel digital storage oscilloscope featuring a 100MHz bandwidth, 1GSa/s sampling rate, and an 8M memory depth. It also includes a built-in 25MHz DDS (Direct Digital Synthesizer) generator, making it a versatile tool for electronic testing and measurement. This manual provides essential information for the proper setup, operation, and maintenance of your device.

Safety Information

Please read and understand the following safety precautions before operating the device to prevent injury and avoid damage to the instrument or connected equipment.

- **Power Source:** Use only the specified power adapter and cable. Ensure the power supply voltage matches the requirements indicated on the device.
- **Grounding:** Always ensure the oscilloscope is properly grounded to prevent electric shock.
- **Ventilation:** Do not block ventilation openings. Ensure adequate airflow around the instrument to prevent overheating.
- **Environment:** Operate the device in a dry environment, away from moisture, dust, and direct sunlight. Avoid extreme temperatures.
- **Probes:** Use only probes rated for the voltage and frequency being measured. Always connect the probe ground clip to circuit ground before connecting the probe tip.
- **Servicing:** Do not attempt to service the instrument yourself. Refer all servicing to qualified personnel. Hazardous voltage is present inside.

Package Contents

Verify that all items listed below are included in your package. If any items are missing or damaged, please contact your vendor.



Image: The Hantek DSO2D10 oscilloscope shown with its complete set of accessories, including probes, cables, and documentation.

- Hantek DSO2D10 Digital Storage Oscilloscope Unit
- 1 x PP150 100MHz Oscilloscope Probe
- 1 x Additional Hantek Probe for 2nd Channel
- 1 x USB Cable (for PC connection)
- 1 x Clip Line
- 1 x US Power Cable
- User Manual (this document or similar)

Product Overview

Front Panel



Image: Front view of the Hantek DSO2D10, highlighting the display, control knobs, and input connectors.

The front panel features the main display, various control knobs and buttons for vertical, horizontal, and trigger adjustments, and the input channels (CH1, CH2) for connecting probes. The DDS generator output is also located here.

Rear Panel



Image: Rear view of the Hantek DSO2D10, showing the power input, USB port, and ventilation.

The rear panel includes the AC power input, a USB port for PC connectivity, and ventilation slots to ensure proper heat dissipation.

Setup

Power Connection

1. Ensure the oscilloscope's power switch is in the OFF position.
2. Connect the supplied US power cable to the AC power input on the rear panel of the oscilloscope.
3. Plug the other end of the power cable into a grounded electrical outlet.

Probe Connection

1. Connect the BNC connector of the oscilloscope probe to the CH1 or CH2 input on the front panel.

2. Attach the probe's ground clip to the ground point of the circuit under test.
3. Connect the probe tip to the test point of the circuit.
4. For accurate measurements, ensure the probe compensation is correctly adjusted. Connect the probe to the probe compensation output (usually a square wave signal) and adjust the probe until a flat-top square wave is displayed.

Operating Instructions

Basic Measurement

1. Turn on the oscilloscope by pressing the power button.
2. Connect your probe to the desired channel (CH1 or CH2) and to the circuit under test.
3. Press the **AUTOSET** button to automatically adjust the vertical, horizontal, and trigger settings for a stable waveform display.
4. Adjust the **VERTICAL VOLTS/DIV** knob to change the vertical scale (voltage per division).
5. Adjust the **HORIZONTAL SEC/DIV** knob to change the horizontal scale (time per division).
6. Use the **TRIGGER LEVEL** knob to set the trigger point for stable waveform capture.
7. Access the **MEASURE** menu to select from 32 kinds of auto measurements (e.g., Vpp, Vmax, Freq, Period).

Trigger Modes

The DSO2D10 supports 14 kinds of trigger modes to capture specific events. Press the**TRIGGER MENU** button to access these options.

- **Edge Trigger:** Triggers on the rising or falling edge of a signal.
- **Pulse Width Trigger:** Triggers on pulses of a specified width.
- **Video Trigger:** Triggers on standard video signals.
- **Slope Trigger:** Triggers on a specific rise or fall time.
- And many more, including serial protocol decoding for 5 types of protocols.

DDS Generator Operation

The built-in 25MHz DDS generator can output various waveforms for testing circuits.

1. Connect the clip line or a BNC cable from the **EXT TRIG/GEN OUT** port to your circuit under test.
2. Press the **WAVE GEN** button to activate the DDS generator menu.
3. Use the function buttons (F1-F6) and rotary knobs to select waveform type (Sine, Square, Triangle, etc.), frequency, amplitude, and offset.
4. Ensure the generator output is enabled from the menu.

Maintenance

Proper maintenance ensures the longevity and accuracy of your Hantek DSO2D10.

- **Cleaning:** Disconnect the power before cleaning. Use a soft, damp cloth with mild detergent to clean the exterior. Do not use abrasive cleaners or solvents.
- **Storage:** When not in use, store the oscilloscope in a dry, dust-free environment, away from direct sunlight and extreme temperatures.
- **Probe Care:** Handle probes carefully. Avoid bending or kinking cables. Store probes properly to prevent damage to the tips and connectors.

- **Firmware Updates:** Periodically check the Hantek official website for firmware updates to ensure optimal performance and access to new features.

Troubleshooting

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

Problem	Possible Cause	Solution
No waveform displayed	Probe not connected or faulty; incorrect vertical/horizontal settings; trigger not set correctly.	Check probe connection; press AUTOSET; adjust VOLTS/DIV and SEC/DIV; adjust TRIGGER LEVEL.
Unstable waveform	Trigger level incorrect; trigger mode unsuitable; noise in signal.	Adjust TRIGGER LEVEL; try different TRIGGER MODE; ensure proper grounding; use probe compensation.
Device not powering on	Power cable loose; power outlet faulty; device fault.	Check power cable connection; test outlet with another device; contact support if issue persists.
DDS generator not outputting	Generator not enabled; incorrect settings.	Ensure WAVE GEN is active and output is enabled in the menu; check frequency/amplitude settings.

Specifications

Key technical specifications for the Hantek DSO2D10 oscilloscope.

Feature	Specification
Bandwidth	100 MHz
Channels	2 CH
Sample Rate	1 GSa/s
Memory Depth	8M
DDS Generator	Built-in 25MHz
Trigger Modes	14 types
Serial Protocol Decode	5 types
Auto Measurements	32 types
Power Input	100-240V, 50/60/400Hz
Max Power Consumption	50 Watts MAX
Dimensions	14.25 x 8.38 x 7.63 inches (approx.)
Weight	6.2 Pounds (approx.)

Warranty and Support

Hantek products are designed for reliability and performance. For specific warranty terms and conditions, please refer to the documentation provided with your purchase or visit the official Hantek website. For technical support, troubleshooting assistance, or service inquiries, please contact Hantek customer service or visit the official Hantek store page on Amazon:
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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.

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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