Hantek DSO2D15

Hantek DSO2D15 Digital Oscilloscope User Manual

Model: DSO2D15

1. Product Overview

The Hantek DSO2D15 is a cost-effective digital storage oscilloscope designed for various applications including communication, aerospace, national defense, embedded systems, computers, research, and education. It features a 150MHz bandwidth, 1GSa/s real-time sampling rate, and an 8M memory depth. This model includes a built-in 1-channel 25MHz waveform generator supporting arbitrary waveform output.

Key features include 2 independent channels, 14 trigger modes, 5 serial protocol triggers and decodes (UART, LIN, CAN, SPI, IIC), 32 auto measurements with statistics, a 3-digit digital voltage meter, and a 6-digit hardware frequency indicator.



Figure 1: Front view of the Hantek DSO2D15 Digital Oscilloscope with included accessories.

2. Package Contents

Upon opening the package, verify that all items listed below are present and in good condition:

- 1 x Hantek DSO2D15 Digital Oscilloscope
- 1 x USB Data Cable
- 2 x Clip Lines (Probes)
- 1 x Power Cable (US plug)
- 1 x Product Manual (this document)

3. Setup and Connections

3.1 Power Connection

Connect the provided power cable to the power input port on the rear panel of the oscilloscope. Ensure the power switch is in the OFF position before connecting to a power outlet. The device supports 100-240V, 50/60Hz AC input.



Figure 2: Rear panel of the oscilloscope, highlighting the power input and warning labels.

3.2 Probe Connection

Connect the oscilloscope probes to the BNC input connectors labeled CH1 and CH2 on the front panel. Ensure a secure connection by twisting the BNC connector until it locks into place. The probes are used to connect the oscilloscope to the circuit under test.



Figure 3: Detailed view of the front panel, showing CH1, CH2, and EXT TRIG/GEN OUT ports, along with various control knobs.

3.3 USB Connection

The oscilloscope features USB Host/Device ports for data transfer and remote control. Use the provided USB data cable to connect the oscilloscope to a computer for software interaction or to a USB storage device for saving data.

4. Operating Instructions

4.1 Powering On/Off

To power on the oscilloscope, press the power button located on the front panel. To power off, press the power button again. Allow a few seconds for the system to boot up or shut down completely.

4.2 Basic Measurement Setup

After powering on, the oscilloscope will display a grid. Use the**VOLTS/DIV** knobs for CH1 and CH2 to adjust the vertical scale (voltage per division). Use the **SEC/DIV** knob to adjust the horizontal scale (time per division). The**POSITION** knobs

allow you to shift the waveform vertically or horizontally.

4.3 Triggering

The trigger system stabilizes repetitive waveforms. Adjust the **TRIGGER LEVEL** knob to set the voltage level at which the oscilloscope triggers. Press the **TRIG MENU** button to access advanced trigger settings, including Edge, Pulse, Video, Slope, and more.

4.4 Waveform Generator (DSO2D15 only)

The DSO2D15 model includes a built-in 1-channel 25MHz waveform generator. Connect the output from the **EXT TRIG/GEN OUT** port to your circuit. Press the **WAVE GEN** button to configure the waveform type (sine, square, triangle, etc.), frequency, and amplitude.

4.5 Auto Measurement and Statistics

Press the **MEASURE** button to access automatic measurement functions. The oscilloscope supports 32 types of auto measurements, including peak-to-peak voltage, RMS, frequency, period, etc. It also provides real-time statistics such as maximum, minimum, and standard deviation.

4.6 Saving Data

The oscilloscope can save various data formats, including settings, waveforms, reference waveforms, CSV files, and images. Use the **SAVE TO USB** button to save data to a connected USB storage device.

5. Maintenance

5.1 Cleaning

Regularly clean the exterior of the oscilloscope with a soft, dry cloth. For stubborn dirt, a slightly damp cloth with mild detergent can be used. Ensure no liquid enters the device. Do not use abrasive cleaners or solvents.

5.2 Storage

When not in use, store the oscilloscope in a cool, dry environment, away from direct sunlight, excessive dust, and extreme temperatures. Protect the screen from scratches.

5.3 Safety Precautions

WARNING: Hazardous voltage inside. Do not remove the cover unless by specified personnel. Refer to the warning label on the rear of the device for more information.

6. Troubleshooting

6.1 No Power

- Ensure the power cable is securely connected to both the oscilloscope and a working power outlet.
- Verify the power switch is in the ON position.
- Check the power outlet with another device to confirm it is supplying power.

6.2 No Waveform Displayed

- Check if the input probes are correctly connected to the CH1/CH2 inputs and to the circuit under test.
- Adjust the **VOLTS/DIV** and **SEC/DIV** settings to ensure the waveform is within the display range.

- Adjust the **TRIGGER LEVEL**. Try pressing the **AUTO SET** button for automatic waveform optimization.
- Ensure the input signal is present and within the oscilloscope's measurement capabilities.

6.3 USB Data Transfer Issues

- Ensure the USB cable is properly connected to both the oscilloscope and the computer/USB device.
- Try a different USB port or cable.
- For computer connection, ensure the necessary drivers are installed. Refer to the Hantek website for driver downloads.

7. Specifications

Feature	Specification
Model	DSO2D15
Bandwidth	150 MHz
Channels	2
Real-time Sampling Rate	1 GSa/s
Memory Depth	8M
Vertical Range	2mV/div - 10V/div
Vertical Resolution	8 bit
Waveform Generator	1 CH, 25 MHz (DSO2D15 only)
Trigger Modes	Edge, Pulse, Video, Slope, Overtime, Window, Pattern, Interval, Under Amp, UART, LIN, CAN, SPI, IIC
BUS Decode & Analysis	RS232/UART, I2C, SPI, CAN, LIN
Auto Measurements	32 kinds with statistics
Digital Voltage Meter	3-digit (2 sets)
Hardware Frequency Indicator	6-digit
Interface	USB Host/Device
Manufacturer	Qingdao Hantek Electronic Co., Ltd
Dimensions (Package)	137.8 x 98.43 x 78.74 inches
Weight	6.17 Pounds

8. Support Information

For technical support, warranty inquiries, or further assistance, please contact Hantek customer service. You may also visit the official Hantek website for updated drivers, software, and additional resources.
Manufacturer: Qingdao Hantek Electronic Co., Ltd

For more information, visit the Hantek Store on Amazon.

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