Manuals+
Q & A | Deep Search | Upload

Hantek 6022BE

Hantek 6022BE 2CH USB Digital Oscilloscope User Manual

Model: 6022BE

1. Introduction

This manual provides essential information for the proper setup, operation, and maintenance of your Hantek 6022BE 2-channel USB Digital Oscilloscope. The Hantek 6022BE is a PC-based instrument designed for electronic measurement and analysis, offering a 20 MHz bandwidth and a 48 MSa/s real-time sample rate. It connects to your computer via USB, utilizing software for waveform display and analysis.

2. Safety Information

Observe the following safety precautions to prevent injury and avoid damage to the instrument or connected devices:

- **Power Source:** The device is powered via USB. Ensure your computer's USB port provides stable power.
- **Probe Usage:** Use only the provided probes or compatible accessories. Ensure probes are correctly connected before applying power to the circuit under test.
- **Environmental Conditions:** Operate the oscilloscope in a dry environment, away from moisture, dust, and extreme temperatures.
- **Maintenance:** Refer all servicing to qualified personnel. Do not attempt to open or modify the device.
- **Input Voltage Limits:** Do not exceed the maximum input voltage ratings specified for the oscilloscope channels.

3. Package Contents

Verify that all items are present in your package:

- Hantek 6022BE USB Digital Oscilloscope Unit
- USB Cable
- Oscilloscope Probes (2 units)
- Software CD
- Quick Start Guide / Manual

Figure 3.1: Contents of the Hantek 6022BE package, including the oscilloscope unit, two probes, a USB cable, a software installation CD, and a user manual.

4. Setup

4.1 System Requirements

- Operating System: Windows 10, Windows 8, Windows 7, Windows NT, Windows XP, Vista.
- USB Port: Available USB 2.0 port.

4.2 Hardware Overview

Figure 4.1: Detailed view of the Hantek 6022BE's front and rear panels, highlighting Channel 1 (CH1), Channel 2 (CH2) BNC inputs, Probe Compensation Output, Ground Terminal, USBXI interface, and the USB socket for PC connection.

4.3 Driver and Software Installation

1. **Connect the Device:** Connect the Hantek 6022BE to your computer using the provided USB cable.
2. **Install Drivers:** Insert the software CD into your computer's optical drive. Navigate to the driver installation directory and run the setup file. Follow the on-screen instructions. *Note: On Windows 10, you may need to temporarily disable driver signature enforcement if installation issues occur.*
3. **Install Application Software:** After driver installation, proceed to install the Hantek oscilloscope application software from the CD.
4. **Verify Installation:** Once installation is complete, launch the Hantek software. The software should detect the connected oscilloscope.

4.4 Probe Connection

Connect the oscilloscope probes to the BNC input connectors (CH1 and CH2) on the front panel of the Hantek 6022BE. Ensure a secure connection. Calibrate probes as needed using the probe compensation output.

5. Operating the Oscilloscope

The Hantek 6022BE operates entirely through its PC software interface. Familiarize yourself with the software layout for effective use.

5.1 Basic Operation

1. **Launch Software:** Start the Hantek oscilloscope application on your computer.
2. **Channel Selection:** Enable or disable Channel 1 (CH1) and Channel 2 (CH2) as required for your measurement.
3. **Vertical Scale (Volts/Div):** Adjust the vertical scale for each channel to properly display the amplitude of your signal.
4. **Horizontal Scale (Time/Div):** Adjust the horizontal scale to view the desired time duration of the waveform.
5. **Trigger Settings:** Configure the trigger source (CH1, CH2), trigger type (edge, pulse), and trigger level to stabilize the waveform display.
6. **Measurement Functions:** Utilize the software's built-in measurement tools to analyze waveform parameters such as frequency, peak-to-peak voltage, RMS, etc.

Figure 5.1: The Hantek 6022BE in operation, connected to a computer, with the software displaying multiple signal waveforms for analysis.

5.2 Key Features

- **Bandwidth:** 20 MHz
- **Real-time Sample Rate:** 48 MSa/s
- **Channels:** 2 Analog Channels
- **Interface:** USB 2.0, USBXI standard for combined instrument setups.

6. Maintenance

Proper maintenance ensures the longevity and accuracy of your Hantek 6022BE oscilloscope.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Do not use abrasive cleaners or solvents.
- **Storage:** Store the oscilloscope in a cool, dry place when not in use. Protect it from dust and physical impact.
- **Probe Care:** Handle probes carefully. Avoid bending or stressing the cables.

7. Troubleshooting

If you encounter issues, refer to the following common problems and solutions:

- **Device Not Recognized:**
  - Ensure the USB cable is securely connected to both the oscilloscope and the computer.
  - Try a different USB port on your computer.
  - Verify that the drivers are correctly installed. Reinstall drivers if necessary.
  - For Windows 10, temporarily disable driver signature enforcement during driver installation if issues persist.
- **Software Not Launching or Crashing:**
  - Ensure your operating system meets the minimum requirements.
  - Reinstall the application software.
  - Check for updated software versions on the Hantek website.
- **Inaccurate Measurements:**
  - Perform probe compensation to match the probe to the oscilloscope input.
  - Ensure correct vertical and horizontal scale settings.
  - Check probe attenuation settings (e.g., 1X, 10X) and ensure they match the software settings.

8. Specifications

Feature	Specification
Model Name	6022BE
Brand	Hantek
Analog Bandwidth	20 MHz
Real-time Sample Rate	48 MSa/s
Channels	2

Feature	Specification
Interface	USB 2.0, USBXI Standard
Operating System Compatibility	Windows 10, 8, 7, NT, XP, Vista
Material	Aluminum
Product Dimensions (L x W x H)	23 x 17 x 0.1 cm (approximate, device only)
Product Weight	720 grams (approximate, device only)
Recommended Uses	Electronics maintenance, research, and education

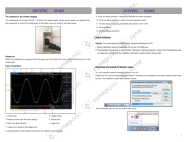
Figure 8.1: Visual representation of the Hantek 6022BE highlighting its core technical specifications.

9. Warranty and Support

For warranty information, technical support, or further inquiries, please refer to the official Hantek website or contact your local distributor. General support resources may be found at Hantek Support.

© 2023 Hantek. All rights reserved.

Related Documents - 6022BE

	Hantek 6022BE User Manual: Portable PC Oscilloscope Guide Download the Hantek 6022BE user manual for this portable PC-based USB oscilloscope. Learn about its features, setup, operation, and troubleshooting for testing, research, and educational applications.
Preview	Hantek 6022BE Portable Oscilloscope User Manual Comprehensive user manual for the Hantek 6022BE portable USB oscilloscope, detailing installation, operation, safety, features, measurements, and technical specifications.
	Hantek 6022BL User's Manual: Getting Started, Operation, and Features Comprehensive user manual for the Hantek 6022BL USB digital storage oscilloscope. Covers system requirements, software installation, driver setup, general features, operating basics, understanding functions, application examples, and technical specifications.
Preview	Hantek DSO5102P Digital Storage Oscilloscope User Manual A comprehensive user manual for the Hantek DSO5102P Digital Storage Oscilloscope, detailing its features, operation, safety guidelines, troubleshooting, and technical specifications for effective electronic testing and measurement.
	Hantek DSO4084C Digital Oscilloscope Quick Start Guide A concise guide to connecting, installing software, and understanding the user interface of the Hantek DSO4084C digital oscilloscope, covering power connection, software setup, PC interface, and front panel controls.
Preview	Hantek DSO2D20 - Hantek DSO2D20