

YXJPP HO52S-Generator

YXJPP HO52S-Generator Digital Oscilloscope and Multimeter User Manual

Model: HO52S-Generator

1. INTRODUCTION

Thank you for choosing the YXJPP HO52S-Generator. This device is a versatile 3-in-1 instrument, combining the functions of a digital oscilloscope, a multimeter, and a signal generator. It features a 50MHz bandwidth, 2 channels, and a 3.5-inch TFT display, making it suitable for various electronic testing and measurement applications. This manual provides essential information for the safe and effective operation, setup, and maintenance of your device.

2. SAFETY INFORMATION

Please read and understand all safety instructions before operating the device. Failure to follow these instructions may result in electric shock, fire, or damage to the device or other equipment.

- Always use the provided probes and accessories. Ensure they are in good condition before use.
- Do not exceed the maximum input voltage ratings specified for the oscilloscope and multimeter functions.
- Avoid operating the device in wet or damp conditions. Keep it away from liquids.
- Do not open the device casing. Servicing should only be performed by qualified personnel.
- Ensure proper ventilation to prevent overheating.
- Disconnect power before cleaning or when the device is not in use for extended periods.

3. SETUP

3.1 Unpacking and Inspection

Carefully unpack the device and all accessories. Verify that all items listed in the packing list are present and undamaged. If any items are missing or damaged, contact your supplier immediately.

3.2 Powering On and Charging

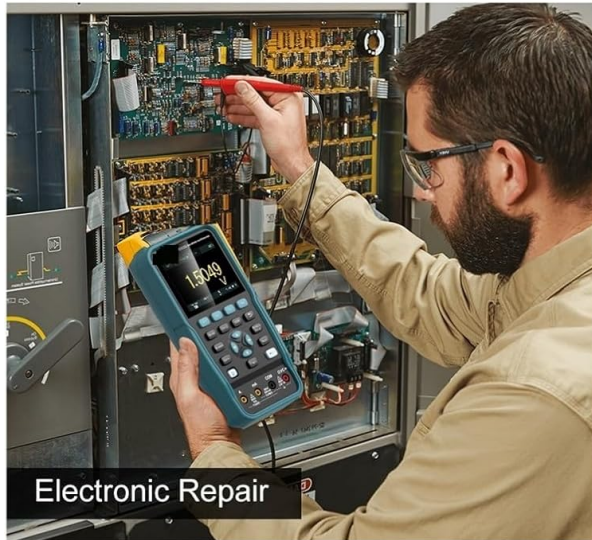
The HO52S-Generator is powered via a USB Type-C interface. Connect the provided USB Type-C cable to the device and to a compatible USB power adapter (5V/2A recommended) or a computer USB port. The device can be used while charging. A full charge typically takes several hours.

Wide Use

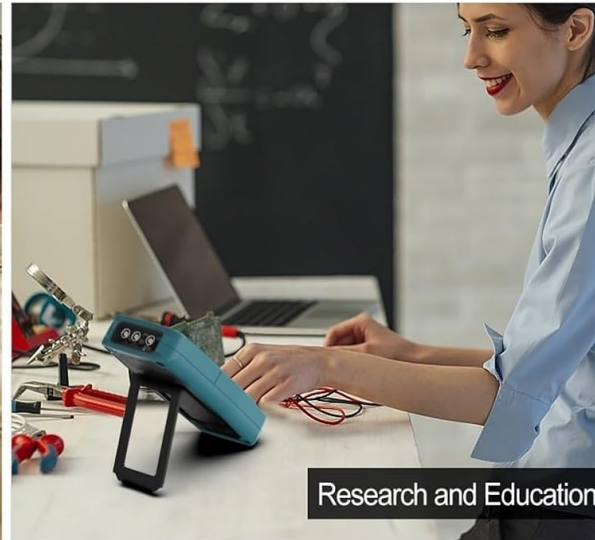
PC Connection



TYPE C Charging



Electronic Repair



Research and Education

Image: The HO52S-Generator connected to a laptop for PC communication and also showing the USB Type-C charging port.

3.3 Device Layout and Controls

Familiarize yourself with the device's front panel, input ports, and control buttons. Refer to the diagram below for an overview of the main components.

Product Parameters

Display Area

Channel switch key

Switch key

Enter the system settings key

Enter the save settings key

Power switch key

Trigger menu key (oscilloscope) or relative value key (multimeter)

Multi-function keys

HOR key

Return key

Measurement menu key (oscilloscope) or range key (multimeter)

Zoom or move key

Automatic setting key (oscilloscope) or automatic range key (multimeter)

Stop / run key (oscilloscope) or value hold key (multimeter)

Multimeter input port

Oscilloscope input

Calibration Signal: 3.3V/1kHz square wave signal output

Charging port or USB communication port

Bracket

Waveform generator output

Image: Detailed layout of the HO52S-Generator, indicating the display area, multi-function keys, navigation buttons, oscilloscope inputs (CH1, CH2), waveform generator output (GEN Out), and multimeter input ports (A, mA, COM, QVC).

- **Display Area:** 3.5-inch TFT screen for waveform and measurement display.
- **Multi-function Keys (F1-F4):** Context-sensitive keys for various operations.
- **Navigation Keys:** Up, Down, Left, Right, and Center (OK) for menu navigation and parameter adjustment.
- **System Key:** Enters system settings.
- **Save Key:** Saves waveforms or settings.
- **Power Switch Key:** Turns the device on/off.
- **Trig/A Key:** Trigger menu for oscilloscope or relative value hold for multimeter.
- **Mode Key:** Switches between Oscilloscope, Multimeter, and Signal Generator modes.
- **CH1/2 Key:** Channel switch key for oscilloscope.
- **HDR Key:** Return key.
- **Measure/Range Key:** Measurement menu for oscilloscope or range key for multimeter.
- **Zoom/Move Key:** Zoom or move display.
- **Auto Key:** Automatic setting function for oscilloscope or automatic range key for multimeter.
- **Run/Stop Key:** Starts/stops waveform acquisition for oscilloscope or value hold for multimeter.
- **Oscilloscope Input (CH1, CH2):** BNC connectors for oscilloscope probes.

- **Waveform Generator Output (GEN Out):** Output for signal generation.
- **Multimeter Input Port:** Terminals for multimeter leads (A, mA, COM, QVC).

3.4 Connecting Probes

For oscilloscope measurements, connect the BNC end of the oscilloscope probe to the CH1 or CH2 input. Ensure the probe's ground clip is securely connected to the circuit's ground. For multimeter measurements, insert the test leads into the appropriate multimeter input ports (e.g., COM and VΩmA for voltage/resistance/current).

4. OPERATING INSTRUCTIONS

The HO52S-Generator integrates three primary functions: Oscilloscope, Multimeter, and Waveform Generator. Use the **Mode** key to switch between these functions.

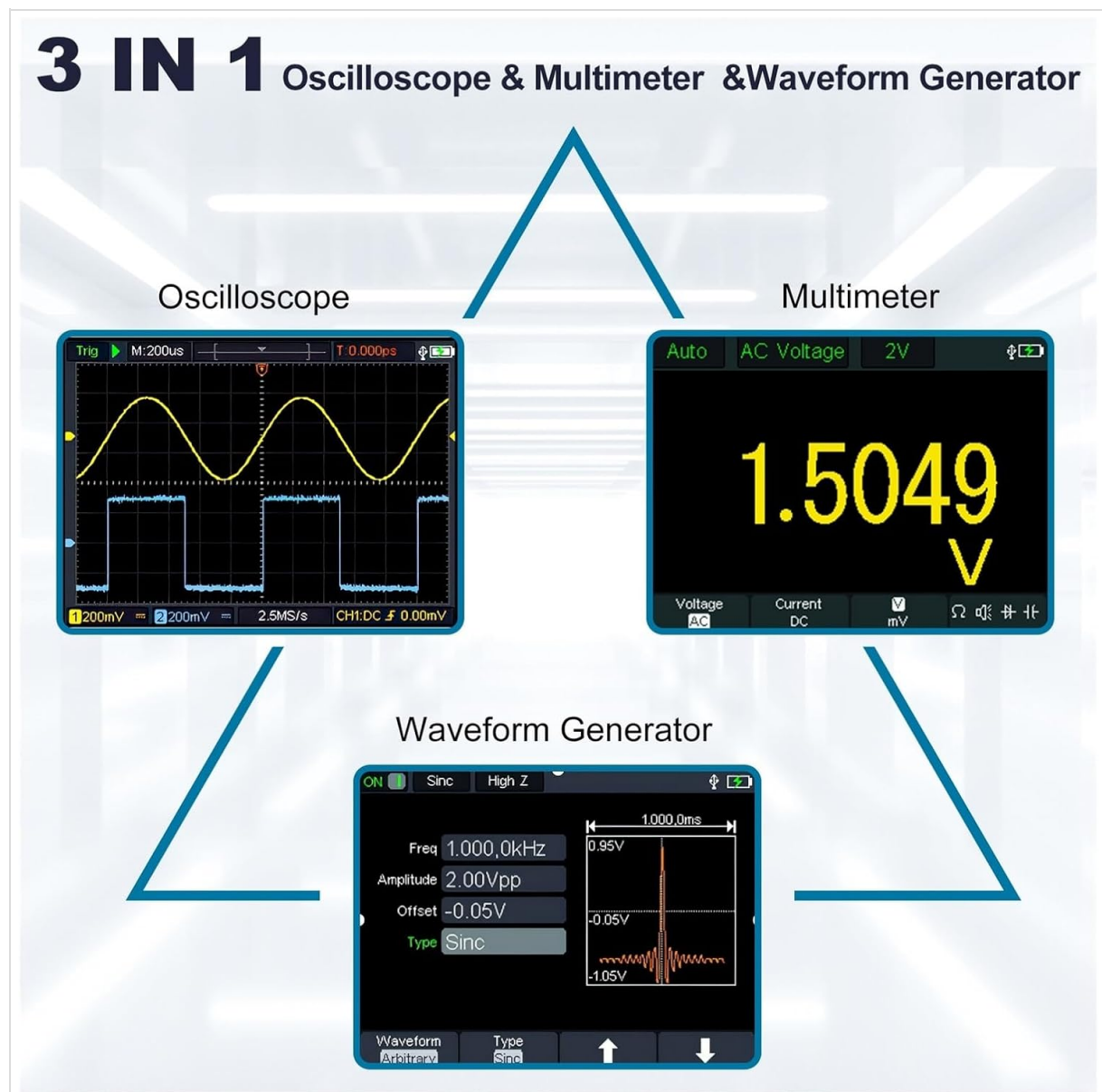


Image: Visual representation of the 3-in-1 functionality, showing example screens for Oscilloscope, Multimeter (displaying voltage), and Waveform Generator (displaying sine wave settings).

4.1 Oscilloscope Mode

In Oscilloscope mode, the device displays real-time waveforms, allowing for detailed analysis of electrical signals.

- **Selecting Channels:** Press the **CH1/2** key to toggle between Channel 1 and Channel 2, or to display both simultaneously.
- **Auto Setting:** Press the **Auto** key for automatic adjustment of vertical and horizontal scales and trigger settings to display a stable waveform. This is useful for quick signal acquisition.
- **Manual Adjustments:** Use the navigation keys to adjust vertical sensitivity (Volts/Div), horizontal time base (Sec/Div), and trigger level.
- **Measurements:** Press the **Measure** key to access automatic measurement functions. The device supports 7 types of automatic measurements (e.g., Vpp, Vmax, Vmin, Freq, Period, Duty Cycle).
- **Run/Stop:** Press the **Run/Stop** key to pause or resume waveform acquisition.

4.2 Multimeter Mode

In Multimeter mode, the device functions as a digital multimeter for measuring voltage, current, resistance, capacitance, and continuity.

- **Function Selection:** Use the navigation keys or dedicated function keys (if available) to select the desired measurement function (e.g., DC Voltage, AC Voltage, Resistance).
- **Auto Ranging:** The **Auto** key can be used to enable or disable auto-ranging for most measurements.
- **Connecting Leads:** Connect the test leads to the appropriate input jacks for the selected measurement.
- **Reading Measurements:** The measurement value will be displayed on the screen.

4.3 Signal Generator Mode

The built-in signal generator can output various waveforms for testing circuits.

- **Waveform Selection:** Select the desired waveform type (e.g., Sine, Square, Triangle) from the menu.
- **Parameter Adjustment:** Adjust parameters such as frequency, amplitude, and offset using the navigation keys.
- **Output Connection:** Connect the output of the signal generator (GEN Out) to the circuit under test.

4.4 PC Connection

The USB Type-C interface allows connection to a computer for data transfer and remote control. Refer to the manufacturer's website for specific software and driver requirements.

5. MAINTENANCE

5.1 Cleaning

To clean the device, wipe the exterior with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure the device is powered off and disconnected from all power sources before cleaning.

5.2 Storage

When not in use, store the device in a dry, cool place, away from direct sunlight and extreme temperatures. Protect it from dust and moisture. If storing for an extended period, ensure the battery is partially charged (around 50%) to prolong its lifespan.

5.3 Battery Care

The device contains a rechargeable lithium-ion battery. To maximize battery life, avoid fully discharging the battery frequently. Recharge the device regularly, even if not in constant use.

6. TROUBLESHOOTING

If you encounter issues with your HO52S-Generator, refer to the following common problems and solutions:

- **Device does not power on:**
 - Ensure the battery is charged. Connect the device to a power source via USB Type-C.
 - Verify the power cable and adapter are functioning correctly.
- **No waveform displayed in Oscilloscope mode:**
 - Check if the probe is correctly connected to the input channel and the circuit under test.
 - Ensure the probe's ground clip is connected to the circuit's ground.
 - Press the **Auto** key to automatically adjust settings.
 - Adjust vertical (Volts/Div) and horizontal (Sec/Div) scales.
 - Check trigger settings; adjust the trigger level or mode.
- **Incorrect readings in Multimeter mode:**
 - Ensure test leads are inserted into the correct input jacks for the selected measurement.
 - Verify the measurement function is correctly selected.
 - Check if the test leads are making good contact with the circuit.
- **Device freezes or becomes unresponsive:**
 - Try restarting the device by holding down the power button.
 - If the issue persists, contact customer support.

7. SPECIFICATIONS

Max Waveform Capture Rate	30,000 wfm/s
Record Length	8K points
Real Time Sampling Rate	200 MSa/s (Oscilloscope), 250 MSa/s (Dual-channel input)
Display Resolution	320*240 Pixels
Display Size	3.5 Inches
Bandwidth	50 MHz
Digital Channels	2
Automatic Measurement Functions	7 types
Interface	USB Type-C (for power, charging, and PC connection)
Input Type	Independent multimeter and oscilloscope input

8. WARRANTY AND SUPPORT

Your YXJPP HO52S-Generator comes with a standard manufacturer's warranty against defects in materials and workmanship. Please refer to the warranty card included with your product or visit the official

YXJPP website for detailed warranty terms and conditions.

For technical support, troubleshooting assistance, or service inquiries, please contact YXJPP customer service through the contact information provided on the official website or your purchase platform.

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