Siglent SDG1032X

Siglent Technologies SDG1032X Arbitrary Waveform - Function Generator User Manual

Model: SDG1032X | Brand: Siglent

1. Introduction

This user manual provides comprehensive instructions for the setup, operation, maintenance, and troubleshooting of the Siglent SDG1032X Arbitrary Waveform - Function Generator. The SDG1032X is a versatile instrument designed for generating various waveforms, including sine, square, pulse, ramp, and arbitrary waveforms. It features dual channels, sweep, burst, and modulation capabilities, along with a built-in frequency counter. This generator is capable of producing square waves up to 30 MHz and offers advanced features such as phase offset between channels and waveform combining.

2. Safety Information

Please read and understand all safety precautions before operating the device. Failure to comply with these warnings may result in injury or damage to the instrument.

- **Power Source:** Use only the specified power adapter and voltage. Ensure the power cord is properly grounded.
- **Environment:** Operate the device in a dry, well-ventilated area, away from direct sunlight, high temperatures, humidity, and dust. Avoid operating in explosive atmospheres.
- **Ventilation:** Do not block ventilation openings. Adequate airflow is essential to prevent overheating.
- **Cleaning:** Disconnect power before cleaning. Use a soft, dry cloth. Do not use liquid or aerosol cleaners.
- **Servicing:** Do not attempt to service the instrument yourself. Refer all servicing to qualified service personnel.
- **Connections:** Ensure all connections are secure and correct before applying power.

3. Product Overview

The Siglent SDG1032X is a compact and robust function generator designed for precision signal generation. Its intuitive interface and comprehensive features make it suitable for a wide range of applications in education, research, and industrial settings.

3.1 Front Panel

The front panel features a high-resolution display, control buttons, a numeric keypad, a rotary knob, and output connectors

for Channel 1 and Channel 2. A USB host port is also available for external storage.



Figure 3.1: Front view of the Siglent SDG1032X Function Generator, showing the display, control buttons, numeric keypad, rotary knob, and output connectors.



Figure 3.2: Angled view of the Siglent SDG1032X Function Generator, highlighting the side handle and USB port.



Figure 3.3: Angled view of the Siglent SDG1032X Function Generator, displaying burst mode settings on the screen.

3.2 Rear Panel

The rear panel typically includes the power input, LAN port for remote control, and external reference input/output connectors.



Figure 3.4: An engineer utilizing Siglent test equipment, demonstrating a typical laboratory setup.

4. Setup

4.1 Unpacking and Inspection

Carefully remove the instrument from its packaging. Inspect the device for any signs of damage during transit. Retain the original packaging for future transportation or storage.

4.2 Power Connection

1. Ensure the power switch on the rear panel is in the OFF position.
2. Connect the provided power cord to the AC input on the rear panel of the SDG1032X.
3. Plug the other end of the power cord into a grounded AC power outlet.

4.3 Initial Power On

Press the power switch on the rear panel to turn on the instrument. The device will perform a self-test and display the boot-up screen. Once the self-test is complete, the main operating interface will appear.

5. Operating Instructions

5.1 Basic Waveform Generation

To generate a basic waveform (e.g., Sine, Square, Ramp):

1. Press the **Waveforms** button to select the desired waveform type.
2. Use the numeric keypad or rotary knob to set the frequency, amplitude, and offset.
3. Press the **Output** button for the desired channel (CH1 or CH2) to enable the output.

5.2 Modulation Types

The SDG1032X supports various modulation types including AM, FM, PM, FSK, ASK, PSK, and PWM.

1. Select the desired channel (CH1 or CH2).
2. Press the **Mod** button.
3. Use the soft keys to select the modulation type and configure its parameters (e.g., modulation depth, frequency, source).

5.3 Dual Channel Operation

The instrument features two independent output channels. You can configure each channel with different waveform types, frequencies, and amplitudes. The phase offset between CH1 and CH2 can also be adjusted.

- Press the **CH1**/**CH2** button to switch between channel settings.
- Configure parameters for each channel independently.
- To set phase offset, navigate to the phase setting for one channel and adjust relative to the other.

5.4 Sweep and Burst Modes

The SDG1032X supports both sweep and burst modes for advanced signal generation.

- **Sweep:** Press the **Sweep** button to configure sweep parameters such as start frequency, stop frequency, sweep time, and sweep type (linear/log).
- **Burst:** Press the **Burst** button to set up burst parameters including burst count, gate mode, and burst period.

5.5 Built-In Frequency Counter

The instrument includes a built-in frequency counter. Refer to the on-screen menu or the full user manual for detailed instructions on accessing and utilizing this feature for external signal measurement.

6. Maintenance

6.1 Cleaning the Instrument

To maintain the appearance and functionality of your SDG1032X:

- Always disconnect the power cord before cleaning.
- Use a soft, dry cloth to wipe the exterior surfaces.
- For stubborn dirt, dampen the cloth slightly with water or a mild, non-abrasive cleaner.
- Do not allow any liquids to enter the instrument.
- Avoid using harsh chemicals, abrasive cleaners, or solvents.

6.2 Storage

When not in use for extended periods, store the instrument in a clean, dry environment, ideally in its original packaging, to protect it from dust and physical damage.

7. Troubleshooting

This section provides solutions to common issues you might encounter. If the problem persists, contact Siglent customer support.

Problem	Possible Cause	Solution
No power	Power cord not connected; Power switch off; Power outlet fault.	Check power cord connection; Ensure power switch is ON; Test power outlet with another device.
No waveform output	Output channel disabled; Amplitude set to 0V; Incorrect cable connection.	Press the Output button to enable channel; Adjust amplitude; Verify cable connections to the device under test.
Display is blank or frozen	System error; Software issue.	Restart the instrument. If the problem persists, contact support.
Incorrect waveform shape	Incorrect settings (e.g., frequency, offset, modulation).	Review and adjust waveform parameters. Ensure proper load impedance.

8. Specifications

Key technical specifications for the Siglent SDG1032X Arbitrary Waveform - Function Generator:

Feature	Detail
Model Number	SDG1032X
Product Dimensions	10.2 x 4.2 x 11.6 inches; 7.72 Pounds
Manufacturer	Siglent Technologies
Square Wave Frequency	Up to 30 MHz
Channels	Dual Channel
Key Features	Sweep, Burst, Modulation, Harmonics, CH1-CH2 Waveform Combining, Built-In Frequency Counter

Feature	Detail
Country Of Origin	China
First Available	September 5, 2016

9. Warranty and Support

Siglent Technologies is committed to providing high-quality electronic test and measurement equipment. The company is ISO 9001:2015 and ISO 14001:2015 Certified, reflecting its dedication to product quality and environmental management. For technical support, service, or warranty inquiries, please contact Siglent customer service. Siglent maintains offices in the USA and is known for its helpful customer service. For more information and resources, visit the official Siglent store:

Visit Siglent Store

© 2025 Siglent Technologies. All rights reserved.
This manual is for informational purposes only. Specifications are subject to change without notice.

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

you@example.com

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

Answered questions about this manual

I used my Siglent SDG1032X function generator on a tube-type radio and forgot to use a DC blocking capacitor. Now I am getting an 'overload error'. What is the likely damage or estimate for repair?

Connecting a modern function generator like the Siglent SDG1032X directly to a tube-type radio without a DC blocking capacitor is a serious error. Tube radios often operate with high DC voltages (B+) that can...

Read full answer