



SG-10

10 MHz DDS Sine & Square Wave Signal Generator

User's Manual

Rev 1.2



TEST INSTRUMENT SAFETY GUIDELINES

WARNING

An electrical shock of over 10 milliamps of current to pass through the heart will stop most human heartbeats. Voltage as low as 35 volts dc or ac rms should be considered dangerous and hazardous since it can produce a lethal current under certain conditions. Be sure to observe following safety precautions:

1. Do not expose high voltage needlessly in the equipment under test. Remove housings and covers only when necessary. Turn off equipment while making test connections in high-voltage circuits. Discharge high-voltage capacitors after removing power.
2. If possible, familiarize yourself with the equipment being tested and the location of its high voltage points. However, remember that high voltage may appear at unexpected points in defective equipment.
3. Use an insulated floor material or a large, insulated floor mat to stand on, and an insulated work surface on which to place equipment; make certain such surfaces are not damp or wet.
4. When using a probe, touch only the insulated portion. Never touch the exposed tip portion.
5. When testing ac powered equipment, remember that ac line voltage is usually present on some power input circuits such as the on-off switch, fuses, power transformer, etc. any time the equipment is connected to an ac outlet, even if the equipment is turned off.

Limited One-Year Warranty

GME Technology warrants to the original purchaser that this product and the component parts thereof, will be free from defects in workmanship and materials for a period of one years from the data of purchase. GME Technology will, without charge, repair or replace, at its' option, defective product or component parts. Returned product must be accompanied by proof of the purchase date in the form a sales receipt.

Term and Conditions

- The warranty period is based upon the invoice date of the original purchase by the end-user.
- Warranty only applies to defects in materials and/or workmanship, which occur during normal use.
- Warranty does not apply to those products that are damaged due to misuse, abuse, negligence or modification.
- Warranty does not extend to any damage that occurs in shipment or due to natural phenomenon (i.e. lightning or line surges).
- Warranty will be voided if the original serial number on the product is removed by accident or intentionally

This warranty gives you specific rights and you may have other rights, which vary from state-to-state.

Service & Repair

The following are procedure for returning a GME product for servicing and repair. Turn around time for repair is normally within five (5) working days excluding shipping time.

RMA Procedure

Before sending your GME product in for service, be sure to contact GME Technology first to obtain a RMA number. If your product is still under warranty, please send in the product along with a copy of the receipt showing the date when the product was purchased. If the warranty has already expired, please ask for the repair cost when you contact GME Technology for the RMA number and include a check or money order for the repair cost when you send in the product.

Please make check payable to: GME Technology

You may send your GME product to our service & repair department at:

GME Technology
ATTN: Service & Repair Department
380 S. East End Ave., #H
Pomona, CA 91766

Be sure to include a note showing your RMA number, your name, telephone number, return address, and a description of the problem with the product.

For the most recent support information, please visit GME Technology website at www.gmetechnology.com/support

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Introduction

Thank you for purchasing the SG-10 10 MHz DDS Sine & Square Wave Signal Generator. Based on the latest advances in DDS technology, the SG-10 is a high precision sine and square wave signal generator. The SG-10 utilizes microprocessor control that delivers clean and accurate DC to 10MHz waveforms with crystal frequency accuracy of +/- 50ppm and 0.1 Hz frequency resolution. Eight push wheel switches allow simple and accurate frequency setting. There are two BNC connectors for separate sine and square wave output. The SG-10 also features variable sine wave amplitude control.

Item Checklist

- ✓ SG-10 10 MHz DDS Sine & Square Wave Signal Generator
- ✓ One protective rubber holster
- ✓ One 7.5 V AC power adaptor
- ✓ One User's Manual

Features

- ◆ 10 MHz waveform for sine and square wave
- ◆ DDS technology with microprocessor control for clean and accurate waveform
- ◆ Variable sine wave amplitude control
- ◆ Eight push wheel switch for simple and accurate frequency setting
- ◆ Standard BNC connectors for sine and square wave output
- ◆ AC adaptor power source or standard 9V battery operation
- ◆ Low battery indicator
- ◆ Handheld enclosure with protective rubber boot
- ◆ Ideal for on-the-bench and in-the-field testing
- ◆ Easy to use, lightweight, and portable

Understanding the Front Panel

1. **Power ON/OFF switch**

This Power ON/OFF switch is on the left side of the unit. Slide the switch upward to turn the unit on and downward to turn the unit off.

2. **Power ON/OFF LED**

Power is ON when the LED lights up and power is off when the LED is off.

3. **Battery Low LED**

When the HG139 is operating on a 9V battery and the voltage on the battery is drop down to around 5V, this green LED will turn on indicating the voltage on the battery is low.

4. **7.5V DC adaptor input**

Connect the 7.5V 200mA **center positive** AC adaptor (included) to power the SG-10.

5. **Sine Wave Amplitude control**

Use to change the output level of the sine waveform.

6. **Push wheel switches**

Use these eight push wheel switches to set the desire frequency

7. **Frequency Display**

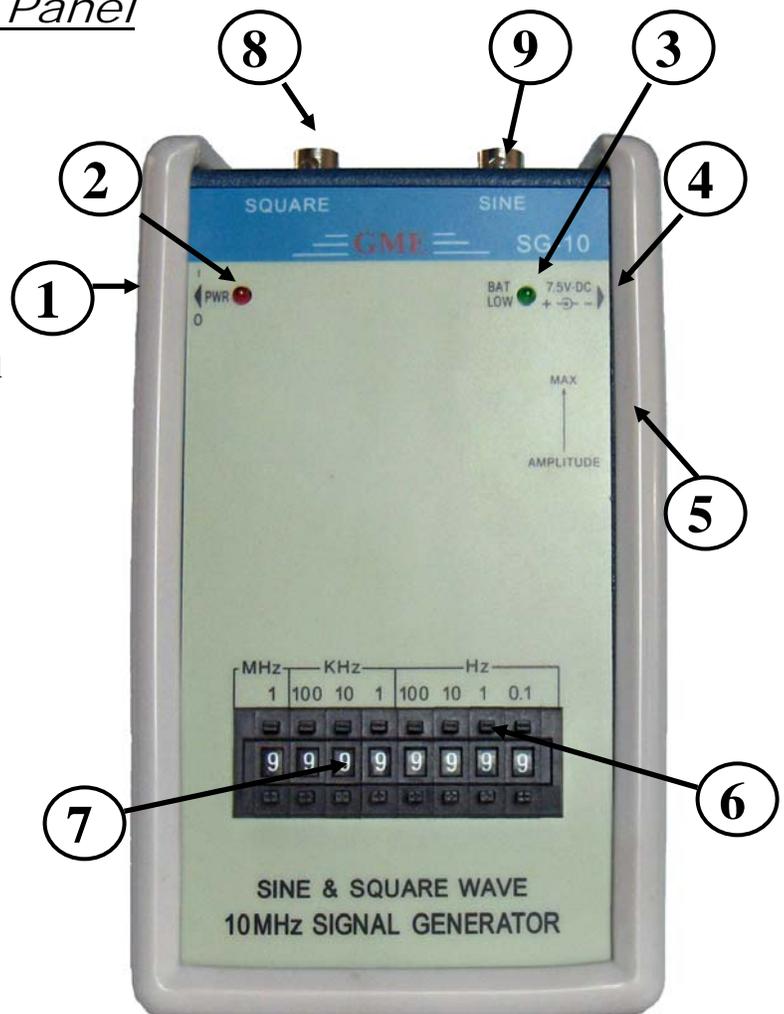
Display the frequency of the current output for both sine wave and square wave.

8. **Square Wave Output (BNC connector)**

Output the square wave signal for the frequency selected

9. **Sine Wave Output (BNC connector)**

Output the sine wave signal for the frequency selected



Basic Operation

CAUTION:

The signal generator output should never be connected to a signal injection point. Excessive voltage applied to the signal generator output can cause internal damage to the signal generator.

1. Slide the power switch to turn on the SG-10.
2. Set the desire output frequency using the eight push wheel switches.
3. Connect the SG-10 outputs using BNC cables to the desire test points.
4. Adjust the output level of the sine waveform using the amplitude control

Specifications

Waveforms	Sine, Square
Range	DC to 9.9999999 MHz
Frequency Resolution	0.1 Hz steps
Crystal Accuracy	+/- 50ppm
Sine wave output	5 Vp-p (no load) with variable amplitude control
Square wave output	5 Vp-p
Output impedance	50 ohm
Power	one standard 9V battery OR 6V - 9V AC adaptor (150mA, 5.5mmx2.1mm center positive)
Dimension	5.7"(H) x 3.8"(W) x 1.5"(D)
Weight	1 lb

***CHECK OUT THESE OTHER TEST EQUIPMENT
AVAILABLE FROM GME***

GME offers many different types of electronic test equipment to suit your needs. Here are some of the test equipment products we offer.

<i>Model</i>	<i>Description</i>
HG139	HDTV Pattern Generator
SG-10	10 MHz DDS Signal Generator
236	In-Circuit ESR & DCR Capacitor Tester
PG-16A	NTSC & Monitor Tester (Handheld Model)
PG-68	NTSC & Monitor Tester (Benchtop Model)
PG-38	NTSC Pattern Generator
MT-160	Computer Monitor Tester
LC200	Digital LC Meter
C350	Capacitance Meter

Other products such as digital / analog panel meters, step motor drivers are also available. Please visit our website at www.gmetechnology.com for complete detail.



Notes

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