Function Generator Option

DS2-FGN for GDS-2000A

QUICK START GUIDE

GW INSTEK PART NO. 82DS-23044MA1

ISO-9001 CERTIFIED MANUFACTURER

GW INSTEK

The information in this manual was correct at the time of printing. However, Good Will continues to improve its products and therefore reserves the right to change the specifications, equipment, and maintenance procedures at any time without notice.

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OVERVIEW

The DDS Function Generator module allows the GDS-2000A to create basic sine, square and triangle waveforms.
To function properly, the DS2-FGN option needs to work with GDS-2000A firmware version V1.16 or above. Please refer to the CD for more details about updating the firmware.

Main Features

Functions	• Triangle, Sine, Square waveforms
Frequency	• 0.1Hz~5MHz (Sine, Square) • 0.1Hz~500kHz (Triangle)
Amplitude	• 60mVpp ~ 6Vpp (into 1MΩ) • 30mVpp ~ 3Vpp (into 50Ω)
DC Offset	• ±2V (into 1MΩ) • ±1V (into 50Ω)
Duty Range	• 5 (min)% ~ 95% (max) (Square wave only)

Default Settings

Frequency:	1kHz
Offset:	0V
Duty Cycle[1]:	50%
Amplitude:	3Vpp

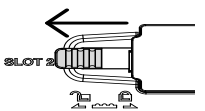
[1] Square wave only

Installing the Function Generator

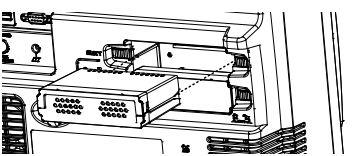
The function generator modules need to be installed into the module slots on the rear panel.

Do not insert or remove the modules with the power on.

1. Slide the tabs holding the module cover to the unlock position and then remove.



2. Install the optional module. Be sure to make sure that the groves on the module line-up to the slots in the module bay.



3. Slide the locking mechanisms back to the locked position.
4. Turn on the GDS-2000A.
5. The GDS-2000A is now ready to operate

Accessing the Function Generator Menu

The Function Generator menu can be accessed using the Option key.

1. Press the Option key and select *Function Gen 1* or *Function Gen 2* to access the Function Generator menu.
   - Use Function Gen 1 if the module is installed in module slot 1.
   - Use Function Gen 2 if the module is installed in module slot 2.
   - Output is via the GEN 1 or GEN 2 terminals.
2. Choose a waveform function by pressing *Sine, Square* or *Triangle* from the bottom menu.
3. Press *Frequency* to choose the waveform frequency.
   - The *Variable* and *Select* key can be used to accurately edit the value of the frequency.
4. Press *Amplitude* to set the amplitude.
   - The actual amplitude depends on the input impedance of the DUT.
5. Press *Offset* to set the DC offset.
   - The actual offset depends on the input impedance of the DUT.
6. Press *Dutycycle* to set the duty cycle from 5% to 95%.
   - Square wave only.

SPECIFICATIONS

Function Generator

Waveforms	Sine, Square, Triangle
Frequency range	0.1Hz ~ 5MHz for sine 0.1Hz ~ 5MHz for square 0.1Hz ~ 500KHz for triangle
Frequency Stability	±50ppm
Frequency Accuracy	±50ppm (± 0.25Hz)
Aging	±5ppm/Year
Amplitude Range	60mVpp ~ 6Vpp (into 1MΩ) 30mVpp ~ 3Vpp (into 50Ω)
Amplitude Accuracy	±10%
Attenuator	-20dB
Impedance	50Ω
DC Offset	±2V (into 1MΩ) ±1V (into 50Ω)
Duty Control Range	5%(min) ~ 95%(max) (Square wave only)
Rise or Fall Time	⩽ 15ns (Square wave only)