



## Function Generator Option

DS2-FGN for GDS-2000A

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### QUICK START GUIDE

GW INSTEK PART NO. 82DS-23044MA1



ISO-9001 CERTIFIED MANUFACTURER

**GW INSTEK**

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**Good Will Instrument Co., Ltd. No. 7-1, Jhongsing Rd., Tucheng Dist., New Taipei City 236, Taiwan.**

## 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

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Functions	• Triangle, Sine, Square waveforms
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Frequency	• 0.1Hz~5MHz (Sine, Square) • 0.1Hz~500kHz (Triangle)
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Amplitude	• 60mVpp ~ 6Vpp (into 1M $\Omega$ ) • 30mVpp ~ 3Vpp (into 50 $\Omega$ )
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DC Offset	• $\pm 2V$ (into 1M $\Omega$ ) • $\pm 1V$ (into 50 $\Omega$ )
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Duty Range	• 5 (min)% ~ 95% (max) (Square wave only)
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### Default Settings

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Frequency:	1kHz
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Offset:	0V
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Duty Cycle <sup>1</sup> :	50%
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Amplitude:	3Vpp
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<sup>1</sup> Square wave only

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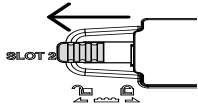
# Installing the Function Generator

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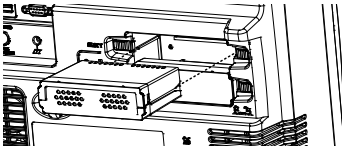
The function generator modules need to be installed into the module slots on the rear panel.

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 grooves 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

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

1. Press the  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)