

15MHz PROGRAMMABLE FUNCTION GENERATOR



GFG-3015 (15MHz)

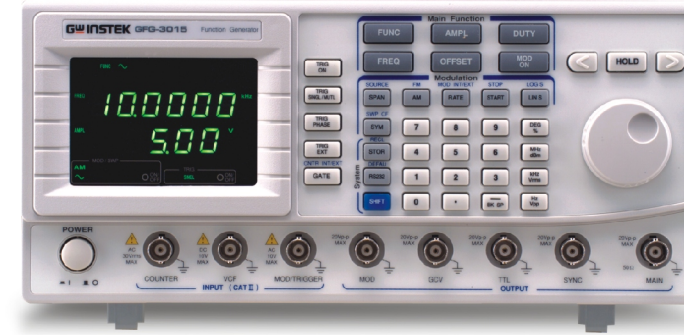


FEATURES

- * Frequency Range 0.01Hz~15MHz
- * Maximum Frequency Resolution 10mHz
- * Frequency Accuracy 0.02%±5 Count
- * Dual Displays Indicate Frequency and Amplitude
- * Built-in 6 Digit Counter With INT/EXT Function up to 150MHz/High Resolution
- * Output Waveforms Sine, Square, Triangle, Pulse, AM, FM, Sweep, TTL, Trigger and Gate or Burst
- * INT/EXT AM/FM Modulation
- * LIN/LOG Sweep Mode
- * Variable DC Offset Control
- * VCF for 100:1 EXT Frequency Control
- * GCV Output for Synchronization
- * SYNC Output
- * Output Overload Protection
- * RS-232C Standard Interface

The GFG-3015 is a versatile and high precision function generator, providing stable and accurate signal at 15MHz frequency range. Powered by the Frequency Feedback technology, the GFG-3015 delivers the frequency accuracy as low as 0.02% and maximum resolution at 10mHz. 10 sets of front panel setup memory make it easier to output the specific signal as pre-defined. Other functions include AM/FM, Gate, Burst, Trigger, 5 sets of standard waveforms, 150MHz counter, VCF control, and dedicated channels for different outputs. The GFG-3015 provides exceptional values to users in the educational field as well as repair service, production testing, and development lab.

SPECIFICATIONS	
MAIN	
Output Waveforms	Sine, Square, Triangle, Ramp, Pulse, AM, FM, Sweep, Trigger, Gate or Burst
Frequency Range	10mHz~15MHz in 8 frequency range(auto switch)
Frequency Resolution	15MHz~150kHz(100Hz);1.5MHz~15kHz(10Hz); 150kHz~1.5kHz(1Hz);15kHz~150Hz(0.1Hz);1.5kHz~15Hz(10mHz); 150Hz~1.5Hz(10mHz);15Hz~0.15Hz(10mHz);1.5Hz~0.01Hz(10mHz)
Frequency Accuracy	0.02%±5 count
Output Impedance	50Ω±10%
Amplitude Range	10.00V ~ 0.01V(into 50Ω) 4 amplitude range Vac peak + Vdc = 5V ; Resolution : 10mV(10.00V ~ 0.01V)
Amplitude Accuracy	≤3%±5count at 10Hz~1MHz ; ≤10%±5count at 1MHz~15MHz
Amplitude Unit	Vpp, Vrms, dBm
DC Offset	-5V ~ 5V (into 50Ω); resolution 10mV
DC Offset Accuracy	≤3%±3count at minimum amplitude
Duty Control	20% ~ 80% ~ 1MHz; resolution 1%
Duty Accuracy	≤1% ~ 1MHz at 50% duty
Display	Dual display for frequency 6 digits and amplitude 4 digits
SINE WAVE	
Distortion	≤0.5%(-46dBc) for 10Hz~100kHz; ≤-30dBc at 15MHz (for 1Vpp~10Vpp)
TRIANGLE WAVE	
Linearity Error	<1% of full scale output at 100Hz
SQUARE WAVE	
Asymmetry	±1% of period + 3nS
Rise or Fall Time	<18nS
SYNC OUTPUT	
Impedance	50Ω±10%
Level	>1Vp-p open circuit
MODULATION CHARACTERISTICS	
Types	AM, FM, Sweep, Trigger(int/ext), Gate or Burst (implement by trigger type)
Waveform	Sine, Square, Triangle, Ramp or Variable Symmetry Pulse
Rate Frequency Range	10mHz~10kHz in 3 frequency range (auto switch)
Rate Frequency Accuracy	5%±1 count
Rate Frequency Resolution	10.0kHz~0.1kHz(100Hz);99Hz~1Hz(1Hz); 0.99Hz~0.01Hz(0.01Hz)
Symmetry	90% : 10% : 90%; resolution : 1%
Symmetry Accuracy	±1 count(≤±1%)
Output Level	≥1Vpp into 10kΩ load
Sine Wave Distortion	≤2% from 10Hz~10kHz
AMPLITUDE MODULATION	
Depth	0 ~ 100%
Modulation Frequency Rate	0.01Hz ~ 10kHz(INT) ; DC ~ 1MHz(EXT)
Carries -3dB Bandwidth	<100Hz to >5MHz
External Sensitivity	≤ 10Vpp for 100% modulation
FREQUENCY MODULATION	
Deviation	0 ~ ±15%
Modulation Frequency Rate	0.01Hz ~ 10kHz(INT) ; DC ~ 50kHz(EXT)
External Sensitivity	≤ 5Vpp for 15% deviation
SWEEP CHARACTERISTICS	
Sweep Range	15MHz ~ 150kHz; 1.5MHz ~ 15kHz; 150kHz ~ 1.5kHz; 15kHz ~ 150Hz; 1.5kHz ~ 15Hz; 150Hz ~ 1.5Hz; 15Hz ~ 0.15Hz; 1.5Hz ~ 0.01Hz
Width	>100:1 (in the same frequency range)
Rate	0.01Hz ~ 10kHz
Symmetry Control	90% : 10% : 90% ; resolution:1%
Mode	Linear /Log sweep
Sweep Output	0 ~ -5Vpp into 10kΩ

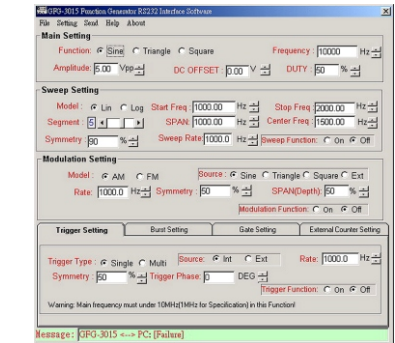


GFG-3015

Rear Panel



RS-232 Interface PC Software



SPECIFICATIONS	
TRIGGER CHARACTERISTICS	
Start/Stop Phase Range	80° ~ 90°
Rate	0.1Hz ~ 10kHz
Frequency Range	0.1Hz ~ 1MHz(Useful ~ 10MHz)
Ext Trig Frequency Range	DC ~ 1MHz, TTL compatible input level
Gate or Burst	Implemented by trigger settings
VCF(Voltage Controlled Frequency)	
Range	100:1(0 ~ 10V ±1V)
Input Linearity	<0.5% ~ 1MHz, <5% ~ 10MHz
Input Impedance	10 kΩ
GCV(Generator Controlled Voltage) OUTPUT	
0.2V ~ 2V as per different frequencies in the same frequency range	
TTL Output	
Level ≥ 3Vpp ; Fan-Out > 10 TTL Load	
FREQUENCY COUNTER	
INT/EXT	Switch selector
Range	5Hz ~ 150MHz EXT
Accuracy	Time base accuracy ±1 count
Time Base	±20ppm(23°C ±5°C) after 30 minutes warm up
Resolution	The maximum resolution is 100nHz for 0.1Hz and 1Hz for 100MHz
Input Impedance	1MΩ // 150pF
Sensitivity	≤35mVrms(5 ~ 100MHz); ≤45mVrms(100MHz~150MHz)
MEMORY	
Save/Recall	10 sets of front panel setting memories
INTERFACE	
RS-232C	
POWER SOURCE	
AC115V/230V ±15%, 50/60Hz	
DIMENSIONS & WEIGHT	
290(W) x 142(H) x 460(D)mm, Approx. 5kg	

ORDERING INFORMATION	
GFG-3015 15MHz Programmable Function Generator	
ACCESSORIES :	
User manual x 1, Power cord x 1, Test lead GTL-101 x 2	
Optional Accessories	
GTC-001	Instrument Cart, 450(W) x 430(D)mm (120V Input Socket)
GTC-002	Instrument Cart, 330(W) x 430(D)mm (120V Input Socket)
GTL-232	RS232C Cable, 9-pin Female to 9-pin, Null Modem for Computer