

SIGNAL FUNCTION SYNTHESIZER

The **GF-857** is a functional signal generator that applies DDS (Direct Digital Synthesis) technique and can generate frequencies at a resolution of 20 MHz, with a high frequency accuracy of 10 ppm. Its main signal source can generate waveforms of sine wave, square wave, triangle wave, ramp wave, and arbitrary wave.

GF-857 has complete environment of computer interface, including standard RS232 and optional GPIB, to fulfill your requirement of automatic test and control.

The arbitrary waveform function offers 12000 x 12 bits data length for free compiling. The user can compile not only with keys on the front panel, but also through a compiling software "Arbitrary Waveform Composer Software for Windows".



Specifications	GF-857		
Output function	Sine, Triangle, Ramp, Square, Sync Output, Arbitrary	Square output Rise / Fall Time Overshoot Asymmetry	≤ 15 nS $\leq 5\%$ (at full scale output) $\pm 1\%$ of period + 4nS
Frequency range Sine Square Triangle Ramp	20 MHz ~ 30 MHz 20 MHz ~ 30 MHz 100 MHz ~ 100 kHz 10 MHz ~ 100 kHz	Triangle and Ramp Linearity	$\pm 0.1\%$ (of full scale output)
Frequency resolution	Sine / Square 20 mHz Triangle / Ramp 10 mHz	Arbitrary Waveforms Sample Rate Waveform Length Vertical Resolution	42.949600 MHz / N, N = 8, 10, 12..... ¹⁵ 12.000 points maximum 12 bits
Accuracy	± 10 ppm	Sweep Sweep Function Sweep Range Sweep Time	LIN o LOG 20 mHz ~ 30 MHz 0.01 s ~ 1000 s
Frequency aging	± 5 ppm / year	Modulation AM Modulation Function Modulation Rate Modulation Span External input Ext. Input Impedance FM Function Modulation Rate Modulation Span PSK Span Modulation Rate	External, Internal (sine, Triangle, Ramp, Square) 10 mHz ~ 10 kHz (internal) 50 kHz max. (external) 0 ~ 100% ± 5 V for 100% modulation 100 k Ω Sine, Triangle, Ramp, Square 10 mHz ~ 10 kHz 30 mHz (100 kHz for Triangle Ramp) 360 Degrees 20 Hz ~ 10 kHz
Output impedance	50 $\Omega \pm 10\%$	Interface Standard GPIB Interface (optional) Arbitrary waveform composer software	RS-232 C GPIB-01 (Windows 95) SFG-S1 (optional)
Amplitude Range Resolution Accuracy	10 mV ~ 10 Vp-p (into 50 Ω) 8 amplitude ranges Vac peak + Vdc < 5 V. 3 digits ± 0.5 dB + 5 mV (Sine out). $\pm 12\%$ + 5 mV (Square out). $\pm 5\%$ + 5 mV (Triangle out). $\pm 5\%$ + 5 mV (Arbitrary out).	Power supply Accessories	100V/120V/220V/240V AC $\pm 0\%$, 50/60Hz Mains cord x 1, User's manual x 1, GTL-101 x 1
DC Offset Range Resolution Accuracy	± 5 V (into 50 Ω) Vac peak + Vdc < 5 V 3 digits $\pm 1.5\%$ of setting + 1mV	Mechanical features Dimensions Weight	214 (W.) x 89 (H.) x 370 (D.) mm, 4.8 kg Approx.
Sync output Sync output Sync Fan-Out	TTL Levels > 10 TTL Load		
Sine output Harmonics	DC ~ 100 kHz : -50 dBc, 0.1 MHz ~ 1 MHz : -40 dBc 1 M ~ 10 MHz : -30 dBc, 10 MHz ~ 30 MHz : -25 dBc		