



# 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		
<b>Output function</b>	Sine, Triangle, Ramp, Square, Sync Output, Arbitrary	<b>Square output</b> Rise / Fall Time Overshoot Asymmetry	≤ 15 nS ≤ 5% (at full scale output) ± 1% of period + 4nS
<b>Frequency range</b> Sine Square Triangle Ramp	20 mHz ~ 30 MHz 20 mHz ~ 30 MHz 100 mHz ~ 100 kHz 10 mHz ~ 100 kHz	<b>Triangle and Ramp</b> Linearity	± 0.1% (of full scale output)
<b>Frequency resolution</b>	Sine / Square 20 mHz Triangle / Ramp 10 mHz	<b>Arbitrary Waveforms</b> Sample Rate Waveform Length Vertical Resolution	42.949600 MHz / N, N = 8, 10, 12.....2 <sup>15</sup> 12.000 points maximum 12 bits
<b>Accuracy</b>	± 10 ppm	<b>Sweep</b> Sweep Function Sweep Range Sweep Time	LIN o LOG 20 mHz ~ 30 MHz 0.01 s ~ 1000 s
<b>Frequency aging</b>	± 5 ppm / year	<b>Modulation</b> AM Modulation Function Modulation Rate	External, Internal (sine, Triangle, Ramp, Square) 10 mHz ~ 10 kHz (internal) 50 kHz max. (external)
<b>Output impedance</b>	50 Ω ± 10%	Modulation Span External input Ext. Input Impedance FM Function Modulation Rate Modulation Span PSK Span Modulation Rate	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
<b>Amplitude Range</b> 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). ± 12% + 5 mV (Square out). ± 5% + 5 mV (Triangle out). ± 5% + 5 mV (Arbitrary out).	<b>Interface</b> Standard GPIB Interface (optional) Arbitrary waveform composer software	RS-232 C GPIB-01 (Windows 95) SFG-S1 (optional)
<b>DC Offset</b> Range Resolution Accuracy	± 5 V (into 50 Ω)   Vac peak   +   Vdc   < 5 V 3 digits ± 1.5% of setting + 1mV	<b>Power supply</b> Accessories	100V/120V/220V/240V AC± 0%, 50/60Hz Mains cord x 1, User's manual x 1, GTL-101 x 1
<b>Sync output</b> Sync output Sync Fan-Out	TTL Levels > 10 TTL Load	<b>Mechanical features</b> Dimensions Weight	214 (W.) x 89 (H.) x 370 (D.) mm, 4.8 kg Approx.
<b>Sine output</b> 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		