

## Standard Signal Generators

# SG-5000 SERIES

150MHz FM stereo/FM/AM Standard signal generator

## SG-5150

150MHz FM/AM Standard signal generator

## SG-5155

### OUTLINE

The SG-5150 is a programmable FM stereo/FM/AM standard signal generator integrating an RF signal generator with continuous coverage in the range from 100 kHz to 150 MHz & a stereo signal generator. This is the ideal choice for production line quality control and the servicing of products, including not only FM/AM radio and FM stereo tuners, but cordless telephones as well. All operations can be remotely controlled by using the optional remote controller or the GP-IB (factory option), which also allows improved efficiency in the design and production departments. The SG-5155 is a FM standard signal generator integrating an RF signal generator with continuous coverage in the range from 100 kHz to 150 MHz.

GP-IB  
OPTION



## SG-5000 SERIES

### FEATURES

The RF signal is generated with high precision by a highly stable PLL synthesizer technique.

The output level can be set in the range from -20dB $\mu$  to 100dB $\mu$  in 1dB $\mu$  steps by a high-accuracy attenuator.

The STO and RCL keys can be used to store and recall the programmed values.

The frequency is shown on a 7-digit LED display. It is not only continuously variable but an arbitrary digit can be varied by aligning the cursor. In addition, a  $\Delta F$  display is provided.

The stereo modulation has excellent distortion figures, S/N ratios and separation characteristics. A preset key enables the setting of the modulation depth to 30% or 100% (SG-5150 only).

The storage and recall of up to 100 front panel setting conditions are possible. By using the optional RT-150 Remote Controller, it is possible to remotely control all operations.

Compatibility with the GP-IB (factory option) enables automated measurements.

# PROGRAMMABLE FM/AM STANDARD SIGNAL GENERATORS

## SPECIFICATIONS

Model			SG-5150
Frequency	Range		100kHz ~ 150MHz
	Display		7-digit LED display
	Resolution		100Hz (below 34.999MHz) 1kHz (35MHz and above)
	Δf Direct display		± 0.9999MHz ( below 34.999MHz) ± 0.999MHz (35MHz and above)
	Accuracy		± 5 × 10 <sup>-5</sup>
Output	Level range		- 20dBμ to 100dBμ (open circuit)
	Display		3-digit LED display
	Resolution		1dB
	Level accuracy		± 1dB (at 100dBμ)
	Attenuator accuracy		± 1dB (0 to 100dBμ) ± 2dB ( - 20dBμ to 0dBμ)
	Output impedance		50Ω (VSWR1.2 max.)
	Spurious output		- 30dB max. (at 100dBμ)
	Residual modulation (S/N)		FM 70dB or better AM 50dB or better
Modulation	Internal modulation frequency		400Hz, 1kHz ± 3%
	Display		3-digit LED display
	External modulation	Input impedance	Approx. 10kΩ
		Input voltage	Approx. 3Vp-p
FM	Range		0 to 100kHz
	Resolution		0.1kHz
	Distortion		0.05% max. (at 75kHz modulation) AF1kHz, RF10.7MHz and 76MHz to 110MHz
	External modulation Frequency response		20Hz to 100kHz ± 1dB RF10.7MHz and 76MHz to 150MHz
FM stereo	Separation		Approx. 55dB( 400Hz to 1kHz )
	External modulation Frequency response		50Hz to 15kHz ± 1dB RF10.7MHz and 76MHz to 150MHz
	Pilot frequency		19kHz ± 2Hz
AM	Range		0 to 60%
	Resolution		0.1%
	Distortion		0.5% max. (30% modulation, AF : 1kHz) RF 500kHz to 34.999MHz
Memory function	Sequence presets		100 points
	Output presets		4 points
	Modulation presets		FM modulation 3.5kHz, 22.5kHz, 75kHz
			Stereo modulation 30%, 100%
			AM modulation 30%
Remote control connector			Sequence memory address, frequency, output level, modulation
GP-IB			Factory option (conforms to IEEE-488-1978):listener/talker, local, remote, and device clear functions
Power requirements			100/115/215/230V AC, 50/60Hz , approx. 28W
Case dimensions			430 (W) × 100 (H) × 380 (D) mm
Weight			Approx. 9.2kg
Accessories			Instruction manual (1), cable (1), power cord (1)
Options			RT-150, LU-100 loop antenna and GP-IB interface (factory option)

# SG-5000 SERIES

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	SG-5155
	100kHz to 150MHz
	7-digit LED display
	100Hz (below 34.999MHz) 1kHz (35MHz and above)
	± 0.9999MHz ( below 34.999MHz) ± 0.999MHz (35MHz and above)
	± 5 × 10 <sup>-6</sup>
	- 20dBμ to 100dBμ (open circuit)
	3-digit LED display
	0.1dB
	± 1dB (at 100dBμ)
	± 1dB (0 to 100dBμ) ± 2dB ( - 20dBμ to 0dBμ)
	50Ω (VSWR1.2 max.)
	- 30dB max. (at 100dBμ)
	FM 70dB or better AM 50dB or better
	400Hz, 1kHz ± 3%
	3-digit LED display
	Approx. 10kΩ
	Approx. 3Vp-p
	0 to 100kHz
	0.1kHz
	0.06% max. (at 75kHz modulation) AF1kHz, RF10.7MHz and 76MHz to 110MHz
	20Hz to 100kHz ± 1dB RF10.7MHz and 76MHz to 150MHz
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	0 to 60%
	0.1%
	0.5% max. (30% modulation, AF : 1kHz) RF 200kHz to 30MHz
	100 points
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	FM modulation 3.5kHz, 22.5kHz, 75kHz
	Stereo modulation 30%, 100%
	AM modulation 30%
	Sequence memory address, frequency, output level, modulation
	Factory option (conforms to IEEE-488-1978):listener/talker, local, remote, and device clear functions
	100/120/220/230V AC, 50/60Hz , approx. 42VA
	427 (W) × 100 (H) × 282 (D) mm
	Approx. 8.5kg
	Instruction manual (1), cable (1), power cord (1)
	RT-150, LU-100 loop antenna and GP-IB interface (factory option)