



Technical Data Sheet

SG-300

Handheld Signal Generator

KEY FEATURES

- 30 - 3,000 MHz frequency range
- -70 to +10 dBm output
- CW, AM, FM, noise modulation
- Battery operation with numerous battery options
- Drop resistant hand held case

DESCRIPTION



The SG-3000 is the latest in signal generator technology offering impressive RF performance equivalent to signal generators costing three times more than the SG-3000 and up to ten times the size. The SG-3000 miniature signal generator is ideally suited for field operations and includes

multiple battery options allowing for true portability. Its high performance is also perfectly suited for testing of receivers and direction finding systems in house and in the field.

A state-of-the-art frequency synthesizer generates the desired frequency in 1 kHz steps under control of a numeric keypad and LCD control screen. Software-controlled precision RF attenuators allow for 0.5 dB power increments. Settable CW, AM, FM, or noise modulation is digitally generated by the internal controller. Programmable functions include frequency, modulation, RF power, and RF enable. Power is provided by one 9 volt Lithium battery, and converted

to the required operating voltages by miniature, high-efficiency switching and low drop out linear power supplies.

The SG-3000 offers a wide output range allowing for a number of general purpose applications. The -70 dBm power output provides the ability to perform sensitivity tests on a wide variety of receivers while also providing an output power of +10 dBm for use in applications requiring higher power. The calibrated output power allows for receiver alignment and the ability to reliably characterize and calibrate direction finding systems. The unit is packaged in a small drop resistant hardened plastic enclosure that is ideally suited for utilization in a field tool kit. Two sizes of rechargeable battery cases are also available.

APPLICATIONS

- Portable field test and measurement
- Homing beacon
- Special communications systems
- Signal processing



Specifications subject to change without notice as we improve our products

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SPECIFICATIONS

RECEIVER PARAMETERS

Frequency range.....	30 MHz to 3,000 MHz
Standard Tuning resolution.....	1 kHz steps
Internal frequency accuracy.....	±1.0 ppm (-40 to +85°C)
RF output power.....	-70 to +10 dBm
RF output power increments.....	0.5 dB RF
Output power accuracy.....	±1 db
VSWR.....	protected short and open
Duty cycle.....	Continuous
Modulation.....	CW, AM, FM, Noise
Harmonics.....	-40 dBc typ
Spurious signals.....	-70dBc typ
Broadband Noise (Measured at 2GHz)	
- 10 KHz removed from carrier.....	-101 dBc/Hz
- 100 KHz removed from carrier.....	-102 dBc/Hz
- 1 MHz removed from carrier.....	-121 dBc/Hz
- 10 MHz removed from carrier.....	-134 dBc/Hz

CONTROL CHARACTERISTICS

Control interface.....	4x4 keypad, 128x64 dot matrix backlit LCD display
Remote interface.....	Mini-B USB connector, female
Processor.....	Microchip 32F series
Control functions.....	Frequency, power output, modulation type, modulation settings
Programmability.....	Internal programming plug
Open architecture features.....	Compiled C language firmware

PHYSICAL/ENVIRONMENTAL CHARACTERISTICS

Power consumption.....	9 VDC nom, standard one 9V LA522 Lithium battery, 5w max
Weight (without battery).....	11.4 oz
Size.....	3.5 x 6.5 x 1.25 inches
RF output connector.....	SMA
Operating temperature range.....	-20 to +60°C
Specified performance.....	25 ± 5°C
Non-operating temperature range.....	-40 to +70°C
Operating altitude.....	0 to 12,000 ft (0 to 3657 m)
Operating humidity.....	10 to 95% non-condensing



Optional battery trays available

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