



Wireless Innovations Inc

SG-3000 Handheld Signal Generator

FEATURES

- 30 - 3,000 MHz frequency range (Option to 10 GHz)
- -85 to +10 dBm output
- CW, AM, FM, noise modulation
- Battery operation with numerous battery options
- Drop resistant hand held case
- Optional log period antenna in lid



DESCRIPTION

The **SG-3000** is the latest in signal generator technology offering equivalent RF performance to signal generators with costs exceeding three times the cost of the **SG-3000** and up to ten times the size. The **SG-3000** miniature signal generator is also ideally suited for field operations and includes multiple battery options allowing for true portability. Its high performance is ideally 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 .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 power supplies.

The **SG-3000** offers a wide output range allowing for a number of general purpose applications. The -85 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. A rugged metal case with two sizes of rechargeable battery cases is also available.

Specifications subject to change without notice as we improve our products
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SPECIFICATIONS

RF CHARACTERISTICS

Frequency range.....	30 MHz to 3,000 MHz Standard
Tuning resolution.....	1 KHz steps
Internal frequency accuracy.....	±1.0 ppm (-20 to +60°C)
RF output power.....	-85 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	
- 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.....	-123 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.....	8 oz
Size.....	3 x 6 x 0.9 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)

OPTIONS

Operating humidity.....	10 to 95% non-condensing
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- Opt 1 Rugged metal case
- Opt 2 Battery tray (small) for AA battery pack - order battery pack separately (4 hours typical battery life)
- Opt 3 Battery tray (large) for C battery pack- order battery pack separately (14 hours typical battery life)
- Opt 4 Frequency extension to 10 GHz (0 dBm output)
- Opt 5 MMCX Connector replaces SMA output connector

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