

Cost-efficient GPS Signal Generator

- Very accurate one-channel GPS signal generator
- Ideal for GPS receiver production test purposes
- Wide RF output power range enables both conducted and air-to-air testing
- Fully programmable with easy to use I/O protocol
- Communicates via USB or RS232
- Affordable

GSG-L1

The GSG-L1 is a GPS signal generator that emulates a single GPS L1 signal. The main application is a simple but very fast manufacturing test, to assure that the assembly is correct, that the antenna is properly connected, and that the receiver can receive and identify a satellite signal.

GSG-L1 provides a fast and cost-effective solution for production test of GPS-receivers in e.g. mobile phones with integrated GPS-receivers. Thanks to the wide RF level range

Specifications

RF signal:	<i>GPS L1</i>
<i>Number of output channels:</i>	1
<i>Data format/Frame structure:</i>	50 bps (GPS) or 250 bps (SBAS)
<i>Spurious transmission:</i>	<30 dBc
<i>Output signal level:</i>	-70 to -150 dBm calibrated (± 1 dBm); (-150 to -170 dBm uncalibrated); 0.1 dB resolution
Internal timebase:	<i>TCXO (standard), OCXO (optional)</i>
Frequency:	<i>1575.42 MHz (L1)</i>
Freq adjust range / Doppler range:	<i>+/-1 kHz (OCXO); +/-5 kHz TCXO, 1Hz resolution</i>
Interface:	<i>RS232 and USB (via supplied converter)</i>
Settings controlled via RS232/USB	
<i>Satellite PRN number:</i>	1-37 (GPS) or 120-158 (SBAS)
<i>Zcounts (timestamp of message info)</i>	
<i>Navigation/Ephemeris subframe message (user definable)</i>	
<i>RF mode:</i>	OFF, continuous, un-modulated, pulsed (RTCM 104)
Dimensions	
<i>WxHxD:</i>	140 x 140 x 70 mm (5.5" x 5.5" x 2.8")
<i>Weight:</i>	approx 1 kg (approx. 2 lb)
Environmental	
<i>Temperature:</i>	-20°C - +65°C (operating) -55°C - +85°C (storage)



from -70 to -170 dBm (-70 to -150 dBm calibrated), the sensitivity of all types of GPS receivers can be verified with a minimum of delay.

The GSG-L1 GPS Signal Generator generates an RF-signal, an L1 carrier that is BPSK modulated with the C/A code and navigation signal. The navigation data is transferred to the GSG-L1 via the RS232 interface port from a host computer SW. A PC control program is supplied, with an utility able to generate GPS subframes from existing RINEX files.

Power

100-240V, 50/60 Hz, ± 10 %

Included with instrument

*Antenna cable, 1,5 m
PC control program (Windows Vista/XP/2000)
RS232 cable
USB to RS232 converter*

Ordering information

*GSG-L1: GPS Signal Generator; 1 channel
Options: Antenna
OCXO (instead of TCXO)*

Specifications subject to change without notice

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- Experts in time & frequency calibration, measurement and analysis

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