

Specific Application Signal Source Overview

GW Instek also offers a range of signal sources for specific applications, including FM/AM Signal Generator - GSG Series, RF Generator - GRG Series and Audio Generator - GAG Series.

The GSG-120/122 is the signal source for AM/FM broadcast system which cover the frequency range up to 110MHz. The GRG-450B is a radio Frequency generator with maximum 450MHz (third tone of 150MHz). The GRG-450B is an economical RF signal generator which produces audio signals for professional users.

SIGNAL GENERATOR

MODEL	Description (Main Function)	Reference Page
GSG-120/122	110MHz FM/AM Signal Generator	C18
GRG-450B	150MHz RF Generator	C19
GAG-809/810	Audio Generator	C20



GSG-120 (110MHz, MONO)



GSG-122 (110MHz, STEREO)



GRC-1201 (Remote Controller)

FEATURES

- \* Freq. Range 100kHz ~ 110MHz
- \* Output Level -19 ~ + 99 dBu
- \* All Operations are Controlled by Microprocessor
- \* Memory Stored from 10 Points in one Block Can be up to 100 Continuous Points in Blocks and 4 Output Levels
- \* Memory Data Copied
- \* Back Space key
- \* Remote Controlled
- \* FM Stereo Modulation (GSG-122 only)

The GSG-Series are FM/AM standard signal generators providing CW, AM, and FM signals from 100kHz to 110MHz with the calibrated output levels from -19dB to 99dB in 1dB step. The intuitive user interface of the GSG-Series enables free combinations of frequency, output level, and modulation. Output settings can be stored and recalled easily; 10 points in one block up to 100 continuous points, with 4 independent output levels. Remote controlling is available with the optional GRC-1201 unit which enhances the memory recall function from a distance. All these superior features of GSG-Series cover most of the applications in receiver manufacturing and maintenance industries.

SPECIFICATIONS	
<b>FREQUENCY</b>	
Range	100kHz ~ 110MHz
Display	6 digits 0.5" LED display
Resolution	100Hz (0.1 ~ 34.999MHz), 1kHz (35 ~ 110MHz)
Accuracy	$\pm 5 \times 10^{-5} \pm 1$ count
<b>OUTPUT</b>	
Range	-19dBu ~ +99dBu, 1dBu steps (0dB: 1 $\mu$ V for open end)
Display	2 digit LED display
Resolution	1dB
Attenuator Accuracy	20 ~ 99dBu $\pm 1.5$ dB 19dBu ~ -10dBu $\pm 2$ dB, -11dBu ~ -19dBu $\pm 3$ dB
Spurious	-30dB or less
Impedance	50 $\Omega$ (VSWR < 1.2)
Frequency Response	$\pm 1.5$ dB
<b>RESIDUAL MODULATION (S/N)</b>	
Post-Detection BW	50Hz ~ 20kHz
FM Component	< 200Hz
AM Component	> 50dB
<b>MODULATION</b>	
Internal Modulation	400Hz, 1kHz, 3kHz ( $\pm 3\%$ ) (GSG-120) 400Hz, 1kHz ( $\pm 3\%$ ) (GSG-122)
EXT Input Impedance	Approx. 10k
<b>FREQUENCY MODULATION</b>	
Frequency Deviation	0 ~ 100kHz
Display	3 digit LED Display
Meter Accuracy	$\pm 10\%$
Distortion (at 75kHz Deviation)	< 0.1%, < 0.05% (10.7, 65 ~ 110MHz)
EXT MOD. Freq. Response	20Hz ~ 100kHz $\pm 1$ dB (REF 1kHz) (GSG-120) 50Hz ~ 15kHz $\pm 1$ dB (REF 1kHz) (GSG-122)
Separation	> 55dB (GSG-122 only)
Pilot Frequency	19kHz $\pm 2$ Hz (GSG-122 only)
<b>AMPLITUDE MODULATION</b>	
MOD. Depth	0 ~ 60%
Display	3 digit LED display
Accuracy	$\pm 5\%$
Distortion (30% AM)	< 0.5% (0.1 ~ 30MHz), < 1.5% (30 ~ 110MHz)
EXT. Bandwidth	20Hz ~ 10kHz $\pm 1.5$ dB (REF 1kHz)
Input Level	3Vpp $\pm 2\%$
Preset Function	100 sets, Four presetting output levels can be stored
<b>POWER SOURCE</b>	
AC100V/120V $\pm 10\%$ , 60Hz; 220V/240V $\pm 10\%$ , 50/60Hz	
<b>DIMENSIONS &amp; WEIGHT</b>	
430(W) x 110(H) x 250(D) mm, Approx. 6.5kg	

ORDERING INFORMATION	
GSG-120	110MHz MONO FM/AM Signal Generator
GSG-122	110MHz STEREO FM/AM Signal Generator
ACCESSORIES :	
User manual x 1, Power cord x 1, Test lead GTL-110 x 1	
<b>Option</b>	
GRC-1201	Remote Controller