



GSP-810 (150kHz~1GHz)

FEATURES

- * Frequency Range : 150kHz ~ 1GHz
- * Fully Digital Phase Locked Loop Technique Design
- * High Frequency Stability : ± 10 ppm
- * High Resolution of Span to Measure the More Detailed Signal : Zero, 2kHz~100MHz/div
- * RBW : 3k, 30k, 220k, 4MHz
- * High Input Protection Level : +30dBm, ± 25 VDC
- * Reference Level Range : -30dBm ~ +20dBm
- * Good Noise Floor Performance: -95dBm @30kHz, -100dBm Typical @220kHz RBW
- * Two Markers for Absolute and Relative Measurement
- * Functions: Max. Hold, Average(2 ~ 32 Traces), Freeze, Peak Search, Marker to Center Functions
- * 9 Memories of Save/Recall
- * RS-232C Interface and Software to get Trace from GSP-810 to PC
- * Options: Tracking Generator, Power Meter, Remote Control Software

SPECIFICATIONS

FREQUENCY	
Frequency Range	150kHz~1GHz
Aging Rate	± 10 ppm, 0~50 $^{\circ}$ C, ± 2 ppm/yr
Span Range	Zero, 2kHz~100MHz/div in 1-2-5 sequence
Phase Noise	-77dBc/Hz @ 1GHz 30kHz offset
Frequency Resolution	1kHz C.F. entry, 40Hz sweep resolution at 2kHz/div
Frequency Display	6 1/2 digit setting
Frequency Control	Digital phase locked
RESOLUTION BANDWIDTH	
RBW Range	3kHz, 30kHz, 220kHz, 4MHz
RBW Accuracy	15%
Video Bandwidth Range	1.6kHz/90kHz couple with RBW
AMPLITUDE	
Measurement Range	-100dBm~+20dBm
Overload Protection	+30dBm continuous, ± 25 VDC
Reference Level Range	-30dBm~+20dBm
Amplitude Display Range	75dB
Amplitude Accuracy	± 1.5 dB typical @ 0dBm, 80MHz
Frequency Flatness	± 1.5 dB over 100MHz, ± 2.5 dB typical over entire band/ ± 3 dB:150kHz~10MHz
Amplitude Level Linearity	± 1.5 dB over 70dB
DYNAMIC RANGE	
Average Noise Floor	-95dBm @30kHz RBW, -100dBm typical / -75dBm: 150kHz~10MHz
Third Inter-Modulation	<-70dBc, @-40dBm input, 2tones, 2MHz apart/ <-45dBc:150kHz~10MHz
Harmonic Distortion	<-40dBc, RF input < selected reference
Non-Harmonic Spurious	<-60dBc typical down from reference level, average, 5MHz/div
DISPLAY SYSTEM	
Display Device	CRT Display, 8 x 10 graticule, 6-inch waveform screen LCD Display, 4 line x 20 character data screen
Display Function	Center Frequency Control, Bandwidth, Reference Level, Span Range, Amplitude
FUNCTIONS	
Marker Mode	Absolute, relative, PK->marker, marker->center
Number of Markers	2
Marker Resolution	0.1dB, 1kHz
Marker Accuracy	0.1dB \pm amplitude accuracy
Memory	9 memorise of save/recall
Trace	Max. hold, average(2~32 traces), freeze(Hold)
Setup	Access parameters

Demodulator	WB FM, 120kHz deviation MB FM, 75kHz deviation NB FM, 30kHz deviation AM Outputs : Internal speaker, 3.5mm stereo jack, wired for mono operation 80MHz, -30dBm
Calibrate Signal Interface	RS-232C standard & remote display software (The software will be downloaded from GW Wed-Site.)
POWER SOURCE	AC 100V/120V/220V/230V $\pm 10\%$, 50/60Hz
ACCESSORIES	Instruction manual x 1, Power cord x 1
DIMENSIONS & WEIGHT	310(W) x 150(H) x 455(D) mm, Approx. 8.5kg

ORDERING INFORMATION

GSP-810	1GHz Spectrum Analyzer
OPTION	
Opt. 01 TRACKING GENERATOR	
Frequency Range	150kHz ~ 1GHz
Amplitude Range	0 ~ -50 dBm
Amplitude Resolution	1 dB
Amplitude Accuracy	± 1 dB @ 0 dBm, 80 MHz
Attenuation Accuracy	± 1 dB @ 50 MHz
Amplitude Flatness	± 1 dB @ 10 MHz/DIV ± 1.5 dB@0dB, entire band
Harmonics	< -30 dBc (<-25dBc, 150kHz ~ 10MHz)
Reverse Power	< +30 dBm
Impedance	50 Ω nominal
Return Loss	< 10 dB (VSWR < 2)
Connector	Type N female
Opt. 02 POWER METER	
Frequency Range	10MHz ~ 2 GHz, usable to 2.7GHz
Power Level Range	-20 dBm ~ +23 dBm, usable to +30 dBm
Power Level Overload	+40 dBm < 10% duty cycle, < 10 mS duration
Return Loss	< 1:1.35 VSWR into 50 ohms, < 1:1.25 typical
Readout Resolution	0.2 mW, 100 mW scale, 2 μ W, 1 mW scale; 0.1dB, Log scale
Accuracy	$\pm (10\% \text{ rdg} \pm 1 \text{ digit})$
Readout	mW or dBm
Opt. 03 REMOTE CONTROL SOFTWARE	
Connecting PC to get the trace and provide the control for setting	
OPTIONAL ACCESSORIES	
ADP-001:	Adaptor, BNC(J/F) ~ N(P/M)
ADP-002:	Adaptor, SMA(J/F) ~ N(P/M)
ADP-101:	Adapter, BNC(J/F) 75 Ω ~ BNC(P/M) 50 Ω
ATN-100:	10dB Attenuator, N(J) ~ N(P)
GAK-001:	Termination 50 Ω , N(P)
GAK-002:	Cap with chain, N(P)
ATA-001:	BNC Antenna
GTL-301:	Therefore cable assembly (RG223, N(P), 1000mm)
GTL-302:	Therefore cable assembly (RG223, N(P), 300mm)
GTL-303:	Therefore cable assembly (SMA(P), RD316, 600mm)
GTL-304:	Therefore cable assembly (RG223, N(P)-N(J), 300mm)