

1GHz SPECTRUM ANALYZER



GSP-810 (150kHz~1GHz)



The GSP-810 Spectrum Analyzer is a digitally synthesized, easy-to-use RF measurement instrument with a frequency range up to 1GHz. It uses a state-of-the-art design with a phased-locked RF system that combines measurement quality and performance with an affordable price. For flexibility and versatility, the GSP-810 has a number of options and optional accessories such as a factory installed tracking generator or the extensive probe kit options. The GSP-810 is also designed for rugged use with a 1-watt input protection. The small size and light weight of the GSP-810 make it easy to carry and stow anywhere.

The GSP-810 includes free software (Windows 2000/XP compatible) for displaying, saving and printing results via the standard RS232 interface. Optional software is also available for full PC remote control at additional cost.

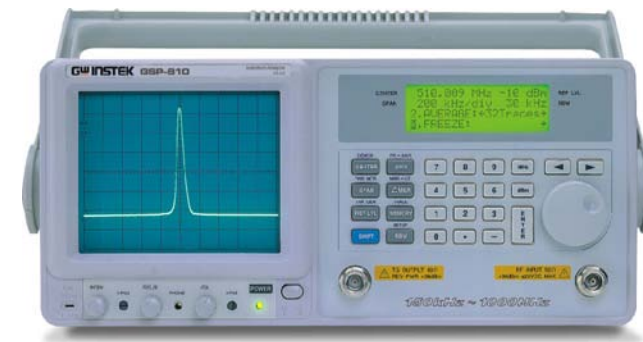
All these functions and features make the GSP-810 an affordable, expandable, and high quality instrument suitable for a variety of applications.

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 °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	10 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
Calibrate Signal	Outputs : Internal speaker, 3.5mm stereo jack, wired for mono operation 80MHz, -30dBm
INTERFACE	
RS-232C standard & remote display software (The software will be downloaded from GW Website.)	
POWER SOURCE	
AC 100V/120V/220V/230V $\pm 10\%$, 50/60Hz	
DIMENSIONS & WEIGHT	
310(W) x 150(H) x 455(D) mm, Approx. 8.5kg	

Note: Need to Collocate the Optional Accessories.



GSP-810

ORDERING INFORMATION

GSP-810	1GHz Spectrum Analyzer	
ACCESSORIES :	User manual x 1, Power cord x 1	
FREE DOWNLOAD		
PC Software	Remote Display Software	
Programming Labrary	DLL file for Programming Use	
OPTION		
Opt. 01 TRACKING GENERATOR (Factory Installed)		
Frequency Range	150kHz ~ 1GHz	
Amplitude Range	- 50 dBm ~ 0dBm	
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 (Factory Installed)		
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		
ATA-001 BNC Antenna	(An additional ADP-001 is needed for fitting GSP spectrum analyzers)	
ATA-002 Near Field Probe	(An additional ADP-001 & GTL-110 is needed for fitting GSP spectrum analyzers)	
RLB-001 Return Loss Bridge	RLB Frequency Range 10MHz ~ 1GHz	
GTP-3000 Passive touch Probe Set	PR-03 Passive touch probe, SMA(F) ADP-002 Adaptor, SMA(J/F) ~ N(P/M)	
GTL-303RF Cable Assembly	SMA(P/M), 600mm	
GKT-001 General Kit set	ADP-002: adaptor, SMA(J/F) ~ N(P/M) x 2 GSC-002: Kit box x 1 ATN-100: 10dB attenuator, N(J/F) ~ N(P/M) x 1 GTL-303: RF cable assembly(RD316),SMA(P/M),600mm) x 2	
GKT-002 CATV Kit set	ADP-001: adaptor, BNC(J/F) ~ N(P/M) x 2 GSC-003: Kit box x 1 ADP-101: adaptor,BNC(J/F) 75 Ω ~BNC(P/M)50 Ω x 2 GTL-304: RF cable assembly(RG223,N(P/M)-N(J/F),300mm)x2	
GKT-003 RLB Kit set	CAK-001: termination 50 Ω , N(P/M) x 1 GSC-004: Kit box x 1 CAK-002: Cap with chain, N(P/M) x 1 CTL-302: RF cable assembly(RG223,N(P/M),300mm)x2	
GKT-006 EMI Probe Kit set	ANT-01: 6cm Loop, H-Field Probe x 1 Test Lead: BNC(P/M)~BNC(P/M) RF Cable x 1 ANT-02: 3cm Loop, H-Field Probe x 1 Test Lead: SMA(P/M)~SMA(P/M) RF Cable x 1 ANT-03 6mm Stub tip, E- Field Probe x 1 ADP-01: N(P/M)~BNC(J/F) Adapter x 1 PR-03: Touch Passive Probe x 1 ADP-02: N(P/M)~SMA(J/F) Adapter x 1	
GTL-301 RF Cable	RG 223 N(P/M), 1000mm	

GKT-001 General Kit Set

ADP-002
ATN-100
GTL-303
GSC-002
For:GSP-810/827/830



GKT-002 CATV Kit Set

ADP-001
ADP-101
GTL-304
GSC-003
For:GSP-810/827/830



GKT-003 RLB Kit Set

CAK-001
CAK-002
GTL-302
GSC-004
For:GSP-810/827/830



GKT-006 EMI Probe Kit Set

ADP-01 Test Lead: BNC(P)~BNC(P) RF Cable x 1
ADP-02 Test Lead: SMA(P)~SMA(P) RF Cable x 1
ANT-01
ANT-02
ANT-03
PR-03
For:GSP-810/827/830



RLB-001 Return Loss Bridge

10MHz ~ 1GHz
For: GSP-810/827/830

