

3GHz SPECTRUM ANALYZER



GSP-830 (9kHz ~ 3GHz)

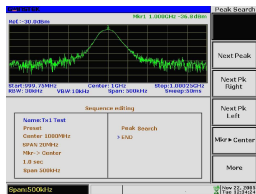


FEATURES

- * Low Noise Floor (-117dBm @1GHz, 3k RBW)
- * Sequence Programming Functions
- * ACPR, OCBW, Channel Power, N-dB, Phchse Jitter Measurements
- * Pass/Fail Test with Limit Line Editing
- * 5 Markers with Δ Marker, Peak Functions ; 10Markers with All Peaks Function
- * Split Windows Allow Separate Settings
- * AC/DC/Battery Multi-Mode Power Operation
- * USB/RS232/GPIB(Optional) Interface
- * Direct VGA Output
- * 6.4" TFT Color LCD, Resolution: 640 x 480
- * Compact Size, 330(W) x170 (H) x 340 (D)mm
- * Light Weight of 6kg Without Options
- * Optional Tracking Generator
- * Optional Preamplifier



Autoset
Signal is automatically measured and located at the display center with default or specified settings.



Sequence
Front panel operations can be automated with built-in Sequence programming functions.

GKT-006 EMI Probe Kit Set

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



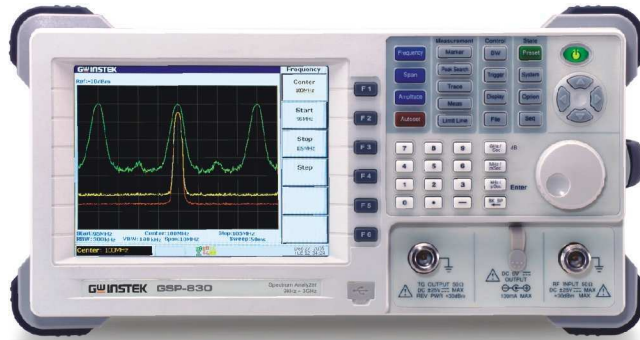
The newly announced 3GHz Spectrum Analyzer, GSP-830, inherits advantages of high performance, low cost, easy to use and varied portability. With GW Instek state-of-the-art design, GSP-830's outstanding noise floor level, -152dBm/Hz and -172dBm/Hz with GAP-801/802 preamplifier, presents extreme sensitivity for picking up weak signals. Thru Auto Sequence mode, professionals can define their own macros in 10 Sequence sets while additional Pause, Repeat or Single run mode can be selected for different applications. Further advanced features, as Auto Set, Split window, Power measurements, Pass/Fail, all make GSP-830 an ideal solution when it comes to spectrum analysis. The vast and advanced interfaces, as USB host/device, RS-232C, VGA, and GPIB (optional), make print-out, remote control and monitoring, as well as data transactions possible.

SPECIFICATIONS

FREQUENCY	
Frequency Range	9kHz ~ 3GHz
Aging Rate	± 10 ppm, 0-50°C, 5ppm/yr
Span Range	2kHz ~ 3GHz in 1-2-5 sequence, full span, zero span
Phase Noise	-80dBc/Hz @1GHz 20kHz offset typical
Sweep Time Range	50ms ~ 25.6s
RESOLUTION BANDWIDTH	
RBW Range	3kHz, 30kHz, 300kHz, 4MHz
RBW Accuracy	15%
Video Bandwidth Range	10Hz ~ 1MHz in 1-3 steps
AMPLITUDE	
Measurement Range	-103dBm ~ +20dBm, 1MHz ~ 15MHz, Ref.Level@-30dBm -117dBm ~ +20dBm, 15MHz ~ 1000MHz, Ref.Level \geq -110dBm -114dBm ~ +20dBm, 1000MHz ~ 3000MHz, Ref.Level \geq -110dBm (Span=50kHz, RBW=3kHz)
Overload Protection	Max. +30dBm, 25VDC
Reference Level Range	-110dBm ~ +20dBm
Accuracy	± 1 dB @100MHz
Frequency Flatness	± 1 dB
Display Range Linearity	± 1 dB over 70dB
DYNAMIC RANGE	
Average Noise Floor	<-135 \pm 1dBm/Hz, 1MHz ~ 15MHz, Ref. Level@ -30dBm <-149 dBm/Hz, typical -152dBm/Hz, 15MHz ~ 1000MHz, Ref. Level \geq -110dBm <-146 dBm/Hz, typical -149dBm/Hz, 1000MHz ~ 3000MHz, Ref. Level \geq -110dBm
Third Inter-Modulation	< -70dBc RF Input @ -40dBm, Ref. Level @-30dBm
Harmonic Distortion	< -60dBc RF Input <-40dBm, Ref. level @-30dBm
Non-Harmonic Spurious	< -93dBm, 1MHz ~15MHz, Ref. level -30dBm <-107dBm, 15MHz ~ 1000MHz, Ref. level -110dBm <-104dBm, 1000MHz~3000MHz, Ref. level -110dBm (Span=50kHz, RBW=3kHz)
GENERAL	
Display	640 x 480 high resolution TFT color LCD
Split Windows	Active Window : Upper, Lower or Alternate (two simultaneously sweeping windows)
Markers	10 Markers for peaks; 5 normal-delta marker pairs Functions : Delta, To Peak, To Minimum, Peak track, Peak Table, Peak Sort
Trace Detection	3 traces with Peak, Maximum hold, Freeze, Average, Trace math
Power Measurement	ACPR, OCBW, Channel power, N dB BW and Phase Jitter
Autoset Function	Auto tuning the measurement result for observation
Trigger	Conditions : Video, External(Positive-going + 5V-TTL ext. Signal)
Sequence	Modes : Normal, Single, Continuous Automated test by user-defined macros without any remote controller, 10 Sequential macro sets and 10 macros per each set, Variable delays and wait-to-go facilitate automated measurement, Do-Sequence links and nests different sequence sets.
CONNECTORS	
RF-Input	Type: N female, 50 Ω nominal RF input VSWR: <2:1 @ 0dBm Reference Level
External Reference	Type: BNC female,
Clock Input	1M, 1.544M, 2.048M, 5M, 10M, 10.24M, 13M, 15.36M, 15.4M, 19.2MHz
Reference Clock Output	Type: BNC female, 10MHz
DC Input (DC Power Operation)	Jack: 5.5mm, 12V
DC Output (for GAP-801)	Type: SMB male, outputs +9V/100mA Max.
INTERFACE	
RS-232C	Sub-D 9 pins female
USB Connector	USB Host/Device fully speed supported
VGA Output	Front panel : Type A receptacle for USB flash drives
Option : GPIB Interface	Fully programmable with IEEE 488.2 compliance
POWER SOURCE	
AC 100 ~ 240V, 50/60Hz	
DIMENSIONS & WEIGHT	
330(W) x 170(H) x 340(D) mm, Approx. 6kg	

Note: Need to Collocate the Optional Accessories.

SPECTRUM ANALYZERS



GSP-830

ORDERING INFORMATION

GSP-830 3GHz Spectrum Analyzer

ACCESSORIES :

User manual x1 , Power cord x1, USB cable (Type A plug to type mini-B plug) x 1

OPTION

Opt. 01 Tracking Generator

Frequency Range	9kHz ~ 3GHz	Harmonics	<30dBc typical
Amplitude Range	-50dBm ~ 0dBm	Reverse Power	+30dBm
Amplitude Accuracy	±1dB@100MHz, 0dBm	Impedance	Type: N female, 50Ω nominal
Amplitude Flatness	±1dB@0dBm	RF Output VSWR	< 2 : 1

Opt. 02 Battery pack

11.1V Li-Ion battery pack x 2

Opt. 03 ±1ppm Stability

±1ppm , 0 ~ 50°C, ±1ppm/yr

Opt. 04 300Hz RBW

RBW 300Hz, 3dB bandwidth ; RBW accuracy : 20%

Opt. 05 9kHz & 120kHz RBW(*)

RBW selections : 9kHz and 120kHz, 6dB bandwidth ; RBW accuracy : 15%

Opt. 06 10kHz & 100kHz RBW(*)

RBW selections : 10kHz and 100kHz, 3dB bandwidth ; RBW accuracy : 15%

Opt. 07 AM/FM Demodulator & 10kHz & 100kHz RBW(*)

Demodulation : AM , FM ; Output : internal speaker, 3.5mm stereo jack wired for mono operation
RBW selections : 10kHz and 100kHz, 3dB bandwidth ; RBW accuracy : 15%

Opt. 08 GPIB Interface

IEEE 488 bus

NOTE : 1. (*) Only one option can be selected between Opt. 05,06,07 2. All options are factory-installed except opt.02.

OPTIONAL ACCESSORIES

ATA-001 BNC Antenna (An additional ADP-001 is needed for fitting GSP spectrum analyzers)

GAP-801 Preamplifier

Preamplifier with 10dB(typical) 9kHz ~ 6GHz

GAP-802 Preamplifier

Preamplifier with 20dB(typical) 9kHz ~ 3GHz

RLB-001 Return Loss Bridge

RLB Frequency Range 10MHz ~ 1GHz

GKT-001 General Kit set

ADP-002: adaptor, SMA(J/F) ~ N(P/M) x 2
ATN-100: 10dB attenuator, N(J/F) ~ N(P/M) x 1
GTL-303: RF cable assembly(SMA(P/M),RD316,600mm)x2
GSC-002: Kit box x 1

GKT-002 CATV Kit set

ADP-001: adaptor, BNC(J/F) ~ N(P/M) x 2
ADP-101: adaptor, BNC(J/F) 75Ω ~ BNC(P/M) 50Ω x 2
GTL-304: RF cable assembly(RG223, N(P/M)-N(J/F), 300mm)x2
GSC-003: Kit box x 1

GKT-003 RLB Kit set

GAK-001: termination 50Ω, N(P/M) x 1
GAK-002: Cap with chain, N(P/M) x 1
GTL-302: RF cable assembly(RG223, N(P/M), 300mm)x2
GSC-004: Kit box x 1

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

GRA-404 Rack Adapter Panel

Rack Mounting (19", 4U)

GSC-001 Soft Carrying Case

GTL-301 RF Cable

RG 223 N(P/M), 1000mm

GTL-401 DC Power Cord

DC power cord with DC Jack and lighter plug, Current 5A

Rear Panel



GRA-404 Rack Adapter Panel

For : GSP-827/830, Rack Mounting (19", 4U)



GSC-001 Soft Carrying Case

For : GSP-827/830



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

GAK-001
GAK-002
GTL-302
GSC-004

For:GSP-810/827/830



GAP-801/802 Preamplifier

GAP-801 Preamplifier with 10dB (Typical 9kHz ~ 6GHz)
For: GSP-830

GAP-802 Preamplifier with 20dB (Typical 9kHz ~ 3GHz)
For: GSP-830

