



## GSP-730 & GRF-1300

### FEATURES

#### GSP-730 SPECTRUM ANALYZER

- Frequency Range : 150kHz ~ 3GHz
- Autoset Function
- Noise level :  $\leq -100\text{dBm}$
- RBW Range : 30kHz, 100kHz, 300kHz, 1MHz
- ACPR/CHPW/OCBW Measurement
- 3 Traces in Different Colors
- Split Window Function
- Limit Line Function
- Remote Control Software
- Presentation Material for Training Courses
- Support Interface : USB Device/Host, RS-232C
- 5.6" TFT LCD with VGA Output

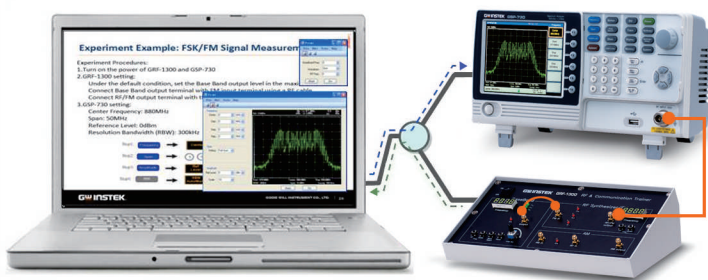
#### GRF-1300 COMMUNICATION TRAINER

- Waveform Support :  
Sine Wave : 0.1 ~ 3MHz  
Square Wave : 0.1 ~ 3MHz  
Triangle Wave : 0.1 ~ 3MHz
- RF Frequency : 870 ~ 920MHz
- AM Modulation & FM Modulation
- 5 On/Off Switches and 5 Test Points to Simulate 8 Failure Conditions for Trouble-Shooting Study
- USB Interface to Provide Remote Control

## Turn-key Solution for RF and Communication Experiment Courses

GW Instek GSP-730 is a 3 GHz Spectrum Analyzer developed mainly to fulfill the demands of RF Communication educations. The budget constraint and the lack of teaching tools are normally the two hurdles for schools to draw back from providing good courses for RF communication experiments. GSP-730, featuring full functions a moderate spectrum analyzer should provide, along with GRF-1300 training kit possesses a unique position in the field as an **economic turn-key solution** for 3GHz RF Communication Experiment courses.

With its components, GSP-730 Spectrum Analyzer, GRF-1300 Trainer and a PC, properly connected, a tangible system is integrated for performing on-the-fly experiments while the lecture is being given. Using a PC, the teacher can present teaching material with ppt. files and at the same time control GSP-730 and GRF-1300 to perform experiments and get spectrum displays and parameter readings on the PC screen. A ppt. file teaching material, a remote control software, a student's textbook, and a teacher's textbook are available to support this E-teaching system.



Fully-electronic RF Training System

The combination of GSP-730 and GRF-1300 forms a fundamental training system for RF communication and telecommunication classes in the universities, colleges, vocational schools, and the training centers of military and private companies. GSP-730 and GRF-1300 together provide an economic solution to clear away two obstacles, budget constraint and the lack of teaching tools, for the installation of an expensive training system.

### APPLICATIONS

- Education, Training
- Fourier Theory Investigation
- Motherboard Circuit Measurement
- Wireless Communication Signal Measurements
  - GSM, 3G, 4G Mobile Phone
  - Bluetooth, Zigbee, Wi-Fi
  - AM/FM Modulation
- Remote Controller Maintenance

## SPECIFICATIONS

### GSP-730

<b>FREQUENCY</b>	<b>Frequency Range</b>	Setting Range	150kHz ~ 3GHz
	<b>Center Frequency</b>	Setting Resolution	0.1MHz
	<b>Frequency Span</b>	Accuracy	within $\pm 50$ kHz (frequency span : 0.3GHz ~ 2.6GHz, 20 $\pm 5^\circ$ C)
	<b>Resolution Bandwidth</b>	Setting range	1MHz ~ 3GHz
<b>SSB Phase Noise</b>	<b>Inherent Spurious Response</b>	Accuracy	within $\pm 3\%$ (frequency span : 0.3GHz ~ 2.6GHz, 20 $\pm 5^\circ$ C)
		Setting Range	30KHz, 100KHz, 300KHz, 1MHz
			-85dBc/Hz (typical, 500kHz offset, RBW : 30kHz, Sweep time : 1.5s, Span : 1MHz@1GHz)
<b>AMPLITUDE</b>	<b>Reference Level</b>	Input Range	+20 ~ -40dBm
	<b>Average Noise Level</b>	Accuracy	Within $\pm 2$ dB (1GHz) ; SPAN : 5MHz
		Unit	dBm, dBV, dB $\mu$ V
			$\leq -100$ dBm (typical, center frequency : 1GHz RBW : 30kHz)
	<b>Frequency Characteristic</b>		within $\pm 3.0$ dB@300MHz ~ 2.6GHz
			within $\pm 6.0$ dB@80 ~ 300MHz, 2.6 ~ 3GHz
	<b>Input</b>	Input Impedance	50 $\Omega$
Input VSWR		less than 2.0@input att $\geq 10$ dB	
Input damage level		+30dBm (CW average power), 25VDC	
Input connector		N connector	
<b>SWEEP</b>	<b>Sweep Time</b>	Setting Range	300ms ~ 8.4s, auto (not adjustable)
		Accuracy	within $\pm 2\%$ (frequency span : full span)
<b>GENERAL</b>	<b>Communication Interface</b>	Display	640 x 480 RGB color LCD
		RS-232C	Sub-D female-D 9 pins
		USB Connector	USB Host/Device full speed supported
	<b>VGA Output</b>	Sub-D female 15 pins	
<b>Power Source</b>	AC 100~240V, 50/60Hz		
<b>OTHER</b>	<b>Operating Temperature</b>	5 ~ 45°C (Guaranteed at 25 $\pm 5^\circ$ C, without soft carrying case)	
	<b>Operating Humidity</b>	Less than 45°C / 90%RH	
	<b>Storage Temperature</b>	-20 ~ 60°C, less than 60°C / 70%RH	
	<b>Dimensions</b>	296 (L) x 153 (W) x 105 (H) mm	
	<b>Weight</b>	Approx. 2.2kg	

### GRF-1300

<b>BASE BAND</b>	<b>Waveforms</b>	Sine, Square, Triangle
	<b>Frequency Range</b>	0.1 ~ 3MHz ; Step : 10kHz
	<b>Amplitude</b>	$\geq 1.5$ Vpp
	<b>Harmonics Distortion</b>	$\geq -30$ dBc
<b>RF/FM ANALYSIS</b>	<b>Frequency Accuracy</b>	$\pm 0.15$ MHz
	<b>Adjustable Range</b>	$\geq 45$ MHz (870M ~ 920MHz) ; Step: 1MHz
	<b>Power Range</b>	$\geq -15$ dBm
<b>FM</b>	<b>Max Frequency Deviation</b>	$> 3$ MHz
<b>AM</b>	<b>Peak Difference</b>	$\geq -18$ dBm
<b>INTERFACE</b>	<b>USB</b>	USB Device
<b>DIMENSIONS &amp; WEIGHT</b>		165(W) x 155(H) x 90(D)mm, 1.2kg

Specifications subject to change without notice. SP-730GD1DH

### ORDERING INFORMATION

**GSP-730** 3GHz Spectrum Analyzer  
**GRF-1300** RF and Communication System Trainer

### ACCESSORIES

**GSP-730** Quick start manual x 1, User manual CD x 1, Power cord x1  
**GRF-1300** Experiment text book of student version, Power point file and remote control software CD, RF cable x 3, Antenna x 1, N to SMA adaptor connector, Power cord x 1

### OPTION

Experiment text book of teacher version

### FREE DOWNLOAD

**PC Software** Remote Monitor Software

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