

# 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.

# GSP-730 & GRF-1300

#### **FEATURES**

## **GSP-730 SPECTRUM ANALYZER**

- Frequency Range: 150kHz ~ 3GHz
- Autoset Function
- Noise level : ≤-100dBm
- 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**

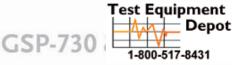
Waveform Support:
 Sine Wave: 0.1 ~ 3MHz
 Square Wave: 0.1 ~ 3MHz
 Triangle Wave: 0.1 ~ 3MHz

• 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

## 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 Mainteinance



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SPECIFICATIONS	5			
GSP-730				
FREQUENCY	Frequency Range Center Frequency Frequency Span Resolution Bandwidth SSB Phase Noise Inherent Spurious Response		150kHz ~ 3GHz 0.1MHz within ±50kHz (frequency span : 0.3GHz ~ 2.6GHz, 20 ±5°C) 1MHz ~ 3GHz within ±3% (frequency span : 0.3GHz ~ 2.6GHz, 20 ±5°C) 30KHz, 100KHz, 300KHz, 1MHz 0kHz offset, RBW : 30kHz, Sweep time : 1.5s, Span : 1MHz@1GHz) IBM Ref. Level (typical less than -50dBc)	
AMPLITUDE	Reference Level  Average Noise Level Frequency Characteristic Input	Input Range Accuracy Unit ≤ -100dBm (typical, cer within ±3.0dB@300MF within ±6.0dB@80 ~ 30 Input Impedance Input VSWR Input damage level Input connector		
SWEEP	Sweep Time	Setting Range Accuracy	300ms ~ 8.4s, auto (not adjustable) within ±2% (frequency span : full span)	
GENERAL	Communication Interface  VGA Output Power Source	Display RS-232C USB Connector Sub-D female 15 pins AC 100~240V, 50/60Hz	640 x 480 RGB color LCD Sub-D female-D 9 pins USB Host/Device full speed supported	
OTHER	Operating Temperature Operating Humidity Storage Temperature Dimensions Weight	$5 \sim 45^{\circ}\text{C}$ (Guaranteed at 25 ±5°C, without soft carrying case) Less than $45^{\circ}\text{C}$ / $90\%\text{RH}$ -20 $\sim 60^{\circ}\text{C}$ , less than $60^{\circ}\text{C}$ / $70\%\text{RH}$ 296 (L) $\times$ 153 (W) $\times$ 105 (H) mm Approx. 2.2kg		
GRF-1300		AL AND STA		
BASE BAND	Waveforms Frequency Range Amplitude Harmonics Distortion	Sine, Square, Triangle 0.1 ~ 3MHz; Step: 10kHz ≥ 1.5Vpp ≥ -30dBc		
RF/FM ANALYSIS	Frequency Accuracy Adjustable Range Power Range	±0.15MHz ≥45MHz (870M ~ 920MHz) ; Step: 1MHz ≥ -15dBm		
FM	Max Frequency Deviation	>3MHz		
AM	Peak Difference	≥-18dBm		
INTERFACE	USB	USB Device		
DIMENSIONS & WEIGHT		165(W) x 155(H) x 90(D)mm, 1.2kg		

Specifications subject to change without notice. SP-730GD1DH

ORDERING INFORMATION

GSP-730 GRF-1300 3GHz Spectrum Analyzer

RF and Communication System Trainer

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

Experiment text book of teacher version

FREE DOWNLOAD

PC Software Remote Monitor Software