

Specification

Frequency	Range	100kHz to 2900MHz
	Resolution	3.125KHz (Multiple of 3.125KHz)
	Accuracy	TXO: ±3PPM Display: ±1.5PPM
	Modulation Bandwidth	Wide FM: Apprx. 180kHz(-6dB) Narrow FM: Apprx 12.5kHz/ AM / SSB: Apprx 2.4kHz(- 6dB)
	Step Range	AM/SSB:2.5KHz fixed. FM : 6.25KHz
	Frequency Selection	Start, Stop, Center span setup
Amplitude	Measurement Range	-20dBm to -110dBm
	Average Noise Level	Wide FM: -100dBm Narrow FM / AM / SSB: -110dBm
	Amplitude Units	dBm, dBmV, dBuV
	Reference Level Accuracy	Typical 1.5dB (@20℃ to 25℃)
	Reference Level Ranges	+20dBm to -90dBm
	Log Scale	0.2 dB/DIV min. in 0.25 dB Steps (5 Display Division)
Sweep	Internal Atten	Max 35dB (Step : Min 1dB)
	Speed	500msec to 2000msec
	Trigger Source	Narrow FM / Wide FM / AM / SSB
	Trigger Mode	Free Run / Single Run / Continous Wave / Squelch Run
	Trigger Level	TTL Level
Memory	Marker Modes	Marker / Delta Marker / Peak Search / Marker to Center / Channel Power
	Trace Storage	Max 100 Waveforms
	Setup Storage	100 States
Display	Type	Mono STN LCD
	Display Resolution	192 x 192 pixels
	LCD BackLight	ON /OFF / AUTO
Input	RF Input Connector	N Type Female, 50 ohms
	Maximum Input Power	Max +10dBm, 5V RMS
Frequency Counter	Range	10MHz to 2900MHz
	RF Input Connector	BNC Type Female, 50 ohms (Standard)
General Specification	Operation Temperature	0℃ to 40℃
	Humidity	35 RH to 85 RH
	Storage Temperature	10℃ to 50℃
Power	Power Source	AA Type Ni-MH Rechargeable Battery x 6pcs
	Power Adaptor	SMPS Type AC Adapter DC 12V
	Car-adaptor DC 12V	
	Auto Power	OFF / 5sec / 10sec / 20sec / 30sec
Dimension & Weight	Size	102(W) X 229(H) X 45(D) mm
	Weight	Aprx. 2.2lbm / 700grams (Except Antenna)
	Speaker	0.5W into 8 ohms Speaker
Other	Antenna	Dipole Antenna (Receive Only)
	RS-232 Interface	9600 bps, 19200 bps, 38400 bps, 57600 bps, and 115200 bps 8-pin MINI-DIN Connector

Standard Accessories

Antenna (Receive Only), AA Type Ni-MH Rechargeable Batteries (1.2 2,500mAh), Coaxial Cable, RS-232 Cable, Carrying Case, Carrying Strap, Earphone, Manual, Software for PC Application.

Optional Accessories

Matching Pad (75 to 50), F-BNC Adaptor, AC Adaptor, Car Adaptor, AA Type Ni-MH Batteries (1.2V 2,500mAh) Mini Printer Cable, Block Voltage Unit



Protek

Handheld  
Spectrum Analyzer 2.9GHz



Compact,  
Lightweight,  
Portable,  
Cost-effective!

Protek 7830

HEADQUARTERS

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Specifications and other information shown on this product catalogue are subject to change without notice.



## Protek 7830

Since its foundation in 1972, Protek has continued to invest in the research and development of quality test and measuring equipment. As a result, we have achieved great success with the design and production of various innovative test instruments, all utilizing our own technology. Now, Protek is regarded as one of the best in the field of the general-purpose test and measuring instruments. As such, the end-user can select from a variety of Protek products including general-purpose test equipment, educational instruments, automotive and RF testers. At all times, we stress superior quality and intolerance to error.

# Price Performance Precision Portability

► Protek7830 Plus Handheld Spectrum Analyzer is the compact, lightweight, portable, and cost-effective equipment with various measurement functions such as Marker, Delta Marker, Peak Search, Channel Power measurement etc. So, it is the idea tool for field RF technicians to test, install and maintain Wireless Mobile Telecommunications Systems, Cable Systems, Satellite Antennas, RFID and Jammer Systems etc.

## Features

- 100kHz to 2.9GHz measurement range
- Measures and demodulates W-FM /N-FM/ AM / SSB signals
- Sweep mode (Free Run, Single Run, Squelch Run)
- PLL tuning system for precise frequency tuning
- 100 Saves and loads for waveforms and settings
- Enhanced Accuracy for Signal Level
- Marker / Delta Marker / Squelch Adjustment Function
- Peak Search Function
- Marker To Center Function
- Channel Power Measurement Function
- RS-232 Interface
- User-friendly Icon Display

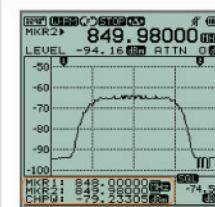
## Applications

- Field wireless Equipment Installation and Maintenance
- General field use for Communications Installation and Maintenance
- Cable Installation and Maintenance
- RFID Tag RF Strength Measurment
- Jammer (for hospital, theater and military) Performance Test
- Satellite Antenna Installation and Maintenance
- Tapping, Hidden Camera Detection

# Handheld Spectrum Analyzer Protek 7830

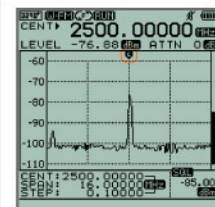
Protek is ready to provide you with good solution and good service that you need anytime and anywhere.

## Channel Power



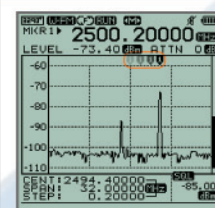
The Channel Power Measurement Function is for determining the power in a transmission channel specified by the user. In the case of CDMA with 849.98MHz channel width at 1.25MHz from the carrier.

## Continuous Wave



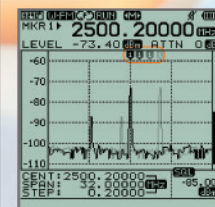
Protek 3290Plus has a CW Measurement in the range from 100 kHz to 2.9GHz. It helps to test signal strength and density including the signal revel.

## Peak Search

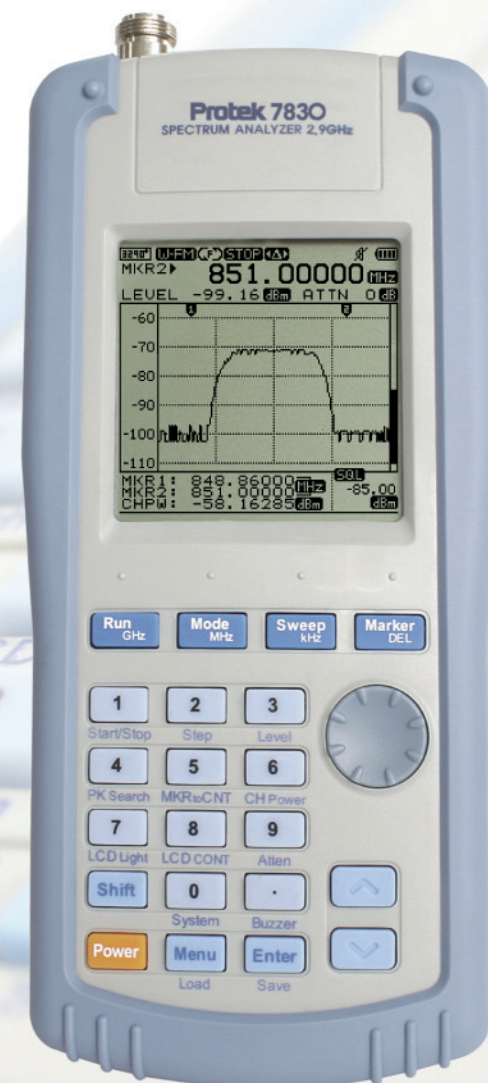
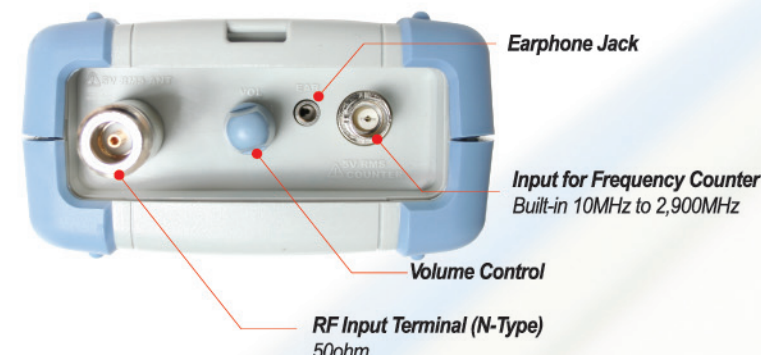


This function detects a peak for each sweep, and always moves the marker to that peak. The marker is always displayed on the peak.

## Marker to Center



This function sets the marker at peak within the search range, and the marker frequency (at the peak point) is then set to center frequency.



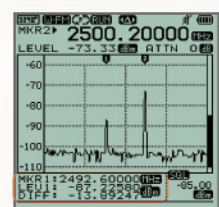
**LCD Display**  
Bright, easy-to-read,  
192 X 192 pixels, up  
to 160 channels

**Dial Knob**  
Fast one-hand  
selection of menu  
item and freq.  
maker

**RS-232C Connector**  
Printer or computer  
connection  
(software included)

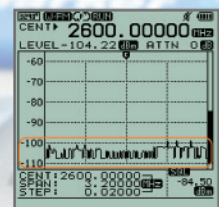
**DC Input Jack**  
Accepts AC/DC adaptor,  
car adaptors; and battery  
charger (included)

## Delta Marker



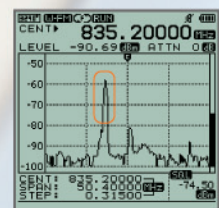
The Delta Marker is displayed on the same position as that of the normal marker. The frequency and level value of this marker are relative to those of the normal marker.

## Noise Level



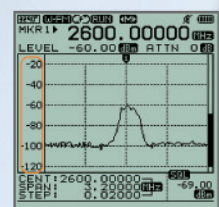
Protek 3290Plus supports -110dBm of low displayed average noise level. Noise is extremely important for measurements on frequency-processing equipment or when searching for interference signals.

## Mobile Phone Signal



Protek 3290Plus enhances to measure wireless communication signals such as CDMA, GSM, Cellular Phone and Cordless Phone.

## Dynamic Range



The Dynamic Range can be set automatically when the frequencies are measured. And also user can set the ranges from -20dBm to -110dBm.



## Level Accuracy

Protek 7830 guarantees basic accuracy typ. 1.5dB at all ranges



## Frequency Range

It has a wide band reception of 100 kHz to 2.9GHz



## Marker Functions

Varieties of marker functions such as Peak Search, Marker to Center and Delta Marker will help to measure more detailed levels of signals



## Power Measurement

You can use Protek 7830 when you check channel powers of signals for base stations that used in wireless communications such as CDMA and WCDMA



## Demodulation

It supports demodulations of wide FM, Narrow FM, SSB and AM signals



## Save up to 100 Memories

It can store and recall up to 100 traced waveforms and setup status



## 0.5W Internal Speaker

It has a 0.5W of internal speaker that can output a demodulated signal from modulated signals



## Durable Operation Time

It can be used for 10 hours without the power line at field service because it builds in Ni-MH batteries



## As Light As a Feather

Protek 7830 is an ultra lightweight of spectrum analyzer. It only weighs about 700g without batteries



## The Smallest Spectrum Analyzer

Protek 3290Plus is an ultra small size of hand-held spectrum analyzer



## RS-232C Interface

All of functions supported on the unit can be controlled through the serial communication with RS-232C. The GUI software program will provide more powerful functions to handle the Protek 3290Plus



## Firmware Upgrade

User can upgrade new firmware directly through our web site after purchasing this unit. Variable applications of new field will be provided from this solution



## Car Adaptor

It can be used in a car and recharged by car adaptor