PTS PRECISION TEST SYSTEMS

7830: 100 kHz – 2.9 GHz
Handheld Spectrum Analyzer

Features

- Size 102 mm x 229 mm x 45 mm
- Weight < 1 kg
- Continuous 100 kHz to 2.9 GHz Frequency Range
- -20 dBm to -100 dBm amplitude measurement range
- 192 x 192 pixels LCD Display
- Memory stores 100 waveforms / set-ups
- Built-In AM/FM/SSB Receiver with loudspeaker
- Delta / Peak / Peak search markers
- Frequency Counter Input
- Internal Rechargeable Batteries
- Optional AC Adapter
- RS232 Interface
- Windows Software

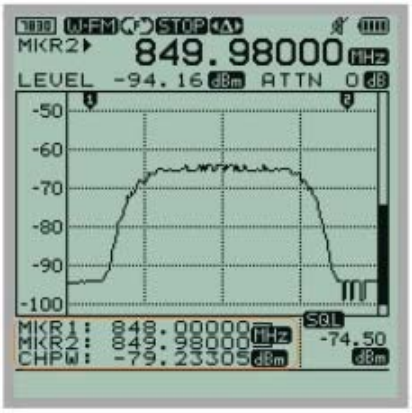
The 7830 is a hand-held portable spectrum analyzer. It incorporates phase lock tuning for precise frequency tuning. The frequency range is from 100 kHz to 2.9 GHz without any gaps. A built in receiver with loud-speaker allows demodulation and listening to AM, FM and SSB type signals. Extensive marker functions allow measurements to be easily made.

The 7830 has many applications including:

- Field Wireless Installation and Maintenance
- Cable Installation and Maintenance
- RFID Tag RF Measurement
- Jammer Detection for hospitals and the Military
- Satellite Antenna Installation and Maintenance
- Hidden Camera Detection
- Manufacturing

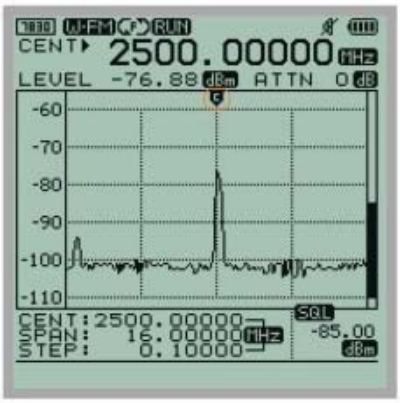
7830 Spectrum Analyzer - Typical Waveforms

Channel Power



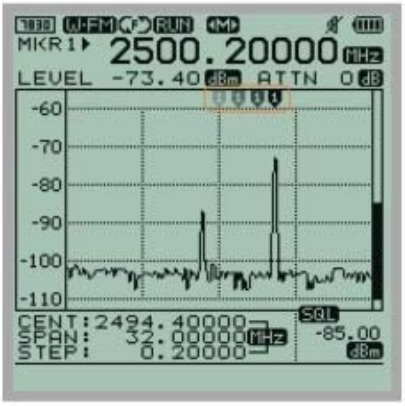
The Channel power Measurement Function is for determining the power in a transmission channel specified by the user. In the case of CDMA with 849.98MHz channel width at 1.25MHz from the carrier.

Continuous Wave



7830 has a CW Measurement in the range from 100KHz to 2.9GHz. It helps to test signal strength and density including the signal level.

Peak Search

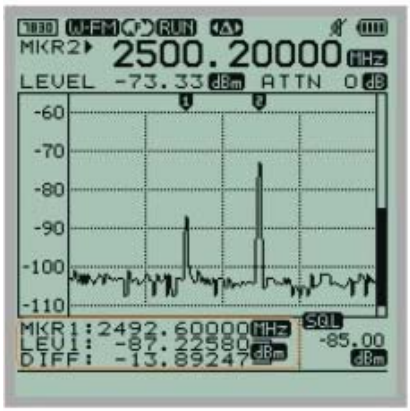


This function detects a peak for each sweep, and always moves the marker to that peak. The marker is always displayed on the peak.

Marker to Center

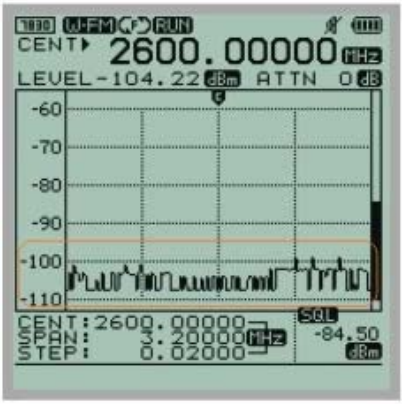
This function sets the marker at peak within the search range, and the marker frequency (at the peak point) is then set to center frequency.

Delta Marker



The Dalta 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 nomal marker.

Noise Level



7830 supports –110dBm of low displayed average noise level. Noise is extremely important for measurements on frequency–processing equipment or when searching for Interference signals.

7830 Specifications

Specification Parameter	Specification	Comments
Frequency		
Frequency	100 kHz to 2.9 GHz	50 Ω N Connector on top panel
Frequency resolution	3.125 kHz	
Impedance	50 Ω	
Accuracy	± 3 ppm	
Demodulation Bandwidth	Wide 180 kHz, Narrow 12.5 kHz	
Step Size	6.25 kHz	
Frequency Selection	Start, Stop, Center, Span set-up	
Amplitude		
Amplitude Units	dBm, dBmV, dBµV	
Reference Level Range	-20 dBm to -110 dBm	
Reference level Accuracy	Typically ± 1.5 dB	
Log Scale	0.2 dB/div to 10 dB/div in 1:2:5 sequence	
Internal Attenuator	10dB, 20 dB, 30 dB, 35 dB	
Sweep		
Speed	Min 500 ms	
Trigger Source	Narrow FM, Wide FM, AM, SSB	
Trigger Mode	Free Run, Single Run, Continuous Wave	
Markers	Delta, Peak Search, Marker to center	
Memory		
Waveforms and States	100 of each	
Display		
Type and resolution	Mono STN LCD, 192 x 192 pixels	
LCD Backlight	On / Off	
Input		
RF Input Connector / Max Input	N type female, 50 Ω / +10 dBm	
Frequency Counter		
Frequency Range	35 MHz to 2.9 GHz	
RF Input Connector	BNC type 50 Ω	
General Specifications		
Operation Temperature / Humidity	0 °C to 40 °C, 35-85% RH	
Power Source	AA type Ni-MH Rechargeable battery	6 pieces. Also external 12 VDC
Power Adapter (optional)	AC to 12 VDC	Car Adapter optionally available
Dimensions	102 mm (wide) x 229 mm (high) x 45 mm	
Weight	< 1 kg	Excluding Antenna
Interface	RS232 @ 9600 to 115200 baud	
Antenna	Dipole type for receive only	

Precision Test Systems			
Head Office - UK	**South Africa**	**USA**	**Represented locally by:**
Precision Test Systems LTD 40 Holkham Avenue, South Woodham Ferrers Essex, CM3 7AU, England Tel: +44 (0) 845 052 0920 Fax: +44 (0) 870 135 4973 Email: uksales@ptsyst.com Web: www.ptsyst.com	Precision Test Systems cc 183 Edison Crescent Hennops Park X7 Pretoria South Africa Tel: +27 (0) 12 653 5848 Email: sasales@ptsyst.com Web: www.ptsyst.com	Precision Test Systems Suite # 981 14781 Memorial Dr. Houston, TX 77079 Tel: 1 888 876 4804 Fax: 1 413 410 1112 Email: usasales@ptsyst.com Web: www.ptsyst.com	

Full specifications available from www.ptsyst.com. Specifications and features subject to change without notice (211206)