

## Hand-Held 2.9GHz RF Signal Strength Analyzer

- Hand-Held and battery operated
- 100KHz to 2900MHz measurement range
- 125 Ch/sec scan rate
- Built-in 2.9GHz frequency counter
- High sensitivity (-117 dBm max)
- Detects Wide band and Narrow band FM, AM and Single Sideband Signals
- Phase lock loop for precise frequency tuning
- RS-232 interface (includes software and cable)
- Up to 160 channels may be scanned and displayed
- Audio output with built-in speaker
- Detachable antenna included
- Back-lit display
- All functions are menu selected
- Instrument setups & display data may be stored in memory
- Hard copy printer output of spectrum and bar graph displays
- Ideal for IEEE 802.11 applications, Cellular Telephones, RF paging systems, Indoor repeaters, Surveillance applications



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### SPECIFICATIONS ■

#### Frequency

Frequency Range: 100KHz to 2900MHz

Frequency Step: 5KHz to 9995KHz in multiples of 5KHz or 6.25KHz

Ref. Oscillator Accuracy:  $\pm 3$  PPM

Frequency Marker Accuracy:  $\pm 25$  PPM

Frequency Measurements: Narrow Band FM, Wide Band FM, AM and Single side band

#### Input

Input Impedance: 50 $\Omega$

Maximum Input Volts: 5V RMS (+27dBm)

Measurement Units: dBmV, dB $\mu$ V, dBm

Attenuation: 0dB or -10dB internal; 0dB to 60dB with external Attenuator

#### Narrow Band FM

Level Measurement Range:

-117dBm to -67dBm (300MHz to 1800MHz)

-107dBm to -67dBm (1MHz to 300MHz and 1800MHz to 2900MHz)

Resolution:  $\pm 0.5$ dB; Accuracy:  $\pm 3$ dB

Bandwidth: 12.5KHz

#### Wide Band FM, AM & SSB

Level Measurement Range:

-107dBm to -57dBm (300MHz to 1800MHz)

-97dBm to -57dBm (10MHz to 300MHz and 1800MHz to 2900MHz)

Resolution:  $\pm 0.5$ dB; Accuracy:  $\pm 3$ dB

#### Bandwidth:

Wide band FM: Approx. 180KHz

AM and SSB: Approx. 2.4KHz

BFO Frequency Range:  $\pm 1.5$ KHz

Reception Sensitivity: 0 to 6dB $\mu$ V EMF with supplied antenna

Antenna Reception S/N Ratio: N-FM: 10 dB; W-FM: 12 dB

#### Display

Display Modes: Spectrum, Bar graph, Frequency counter

Spectrum Display: Displays 160 channels

Bar Graph Displays: Multi channel (2, 5, 10, 20, 40, 80, 160 bar graphs per display), Single Channel and 2 Channel difference

Sweep Modes: Single, Normal, Free run

Spurious Signals: (internally generated) -35dBc for W-FM

-45dBc for N-FM (typical below full scale signal level)

#### Scan Mode

Mode: Manual, Channel (memory scan) and Search scan

Scan Rate: 125 Ch/Sec

#### Memory

Data Memory: Stores 10 displays of up to 160 CH per display

Setup Memory: Stores 10 setups for each scan mode

#### Frequency Counter

Bandwidth: 9MHz to 2900MHz

Resolution: 1KHz

Accuracy: 50PPM  $\pm 1$  count

Input Impedance: 50 $\Omega$

Max Input Volts: 5V RMS

Response Time: 0.512 sec

#### Input Sensitivity:

9MHz to 2060MHz: 120mV

20MHz to 1500MHz: 50mV

2MHz to 2800MHz: 500mV

2800MHz to 2900MHz: 750mV

Data Memory: Stores 10 Readings

#### Miscellaneous

LCD: 192 x 192 Pixels, Light green

Back Light: LED. Back light will shut off 5 seconds after the last key depression

Interfaces: Std RS-232 interface with female 8 pin mini Din connector. Baud Rates of 1200, 2400, 4800 or 9600 BPS are menu selected. The software supplied is a Windows<sup>®</sup>-based program, which runs under Windows 95/98/ME/XP/2000.

Auto Power Off: 5, 10, 20 or 30 minutes after the last key depression (user selected).

Audio Output :120mW into 8 $\Omega$  Speaker

Power Requirements: (6) AA NiCd or Alkaline Batteries, 12 volt car adapter or 11V to 16V 500 mA Max AC to DC adapter

#### General Specifications

Operating Temperature: 0°C to 40°C

Relative Humidity: 35% to 85%

Storage Temperature: -10 to 50°C

Size: 9.5" H x 4.0" W x 1.8" D

Weight: 1.4 lbs

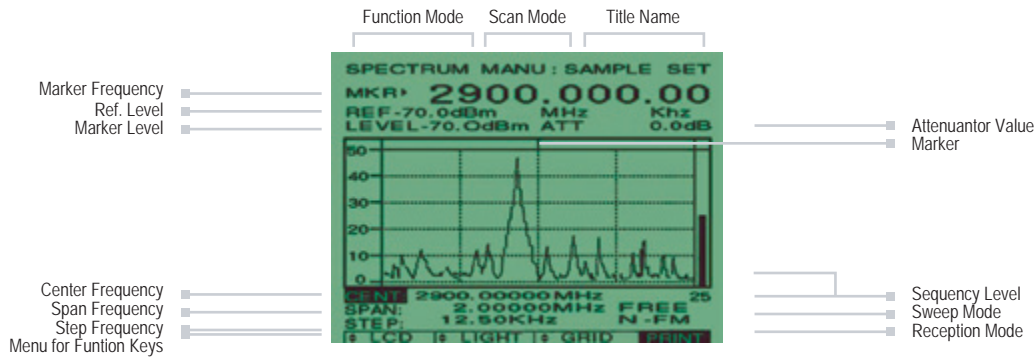
Supplied Accessories: Manual, (6) 1.5V AA NiCd Batteries, Detachable 9" whip antenna, RS-232 Cable, Carrying case, Earphone, Carrying strap and Software, Vehicle power adapter, AC/DC converter.

# Hand-Held 2.9GHz RF Signal Strength Analyzer

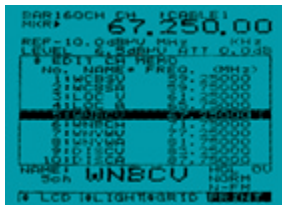
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## DISPLAY

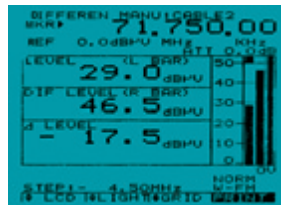


SPECTRUM ANALYZER DISPLAY



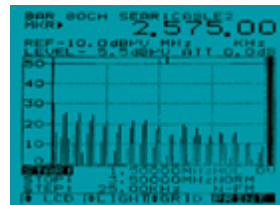
### CHANNEL EDIT MODE

Up to 1600 channels may be stored in any order, then scanned and identified by 9-digit freq. and 5-letter title. Useful for Cable TV, Cellular phone, and other field applications where repetitive measurements need to be made.



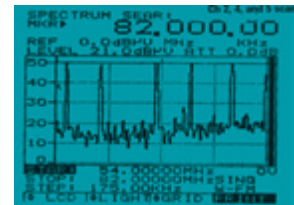
### TWO CHANNEL DIFFERENCE MODE

This Mode displays 2 carrier levels and their difference. A key application verifies that a TV or Cable channel's video and audio carriers are within specifications.



### BAR-GRAPH DISPLAY

This feature makes level readings easy and "cleans up" each frequency (compared to a spectrum display). Patterns may be readily seen, for example: this display of computer monitor radiation.



### SPECTRUM DISPLAY

This Mode scans and displays 160 channels. Squelch level may be set above or below carrier level in order to pause scan and detect the signal. Detection modes are AM, NFM, WFM and SSB.