

## Data sheet

# 2.0 GHz Handheld RF Field Strength Meter Model 2640



### Cost effective RF field strength meter with basic spectrum analyzer function

The B&K Precision model 2640 is a battery operated, hand-held RF Field Strength Meter capable of measuring RF levels and electric field strength. The synthesizer-based design provides you with reliable measurements across a wide reception range of 100KHz to 2000MHz, a remarkably low noise floor of -110 dBm to detect weak signals and basic spectrum analyzer functionality. The 2640 provides field technicians and engineers with a cost-effective measurement tool for basic signal investigations at only a fraction of the cost of a full-featured conventional spectrum analyzer.

The 2640's user-friendly interface combined with convenient presets such as predefined filter settings and other special functions (e.g. squelch) commonly used in analog communication systems make the 2640 easy to use. The B&K Precision 2640 supports RS 232C serial communication and includes software that can control the instrument from a personal computer. The user can save the instrument's measurement data on the PC for further analysis.

The handheld RF Field Strength Analyzer is an ideal tool for field testing, installing and maintaining Mobile Telecommunications systems

such as Cellular and Cordless Phone, CB Paging, Paging, Cable and Satellite TV Systems as well as performing antenna site measurements and maintenance.

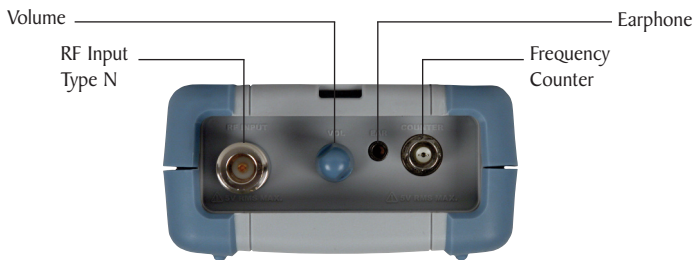
### Features

- Battery-operated portability
- 100KHz to 2GHz measurement range with a maximum display span of 400MHz
- Hand-held and battery operated portability
- Built-in 2GHz frequency counter
- Detects wide band (180KHz) and narrow band FM (12.5KHz), AM & SSB (2.4KHz) signals
- Phase-locked loop for precise frequency tuning
- Up to 160 channels may be scanned and displayed
- Audio output of the detected signal with built-in speaker
- Detachable antenna included
- Back-lit display
- Storable setups and displays
- RS-232 Interface

## Handheld RF Field Strength Meter Model 2640

### ▲ RF Field Strength Analyzer

- Spectrum: Peak Search, Marker to Center, Channel Power Function
- Internal Attenuation: The input range can be extended by enabling the internal 10 dB Attenuation function
- Sweep Mode: Single Run, Free Run, Squelch Run Selectable
- Squelch Function: The Squelch Level may be adjusted across the full dynamic range.



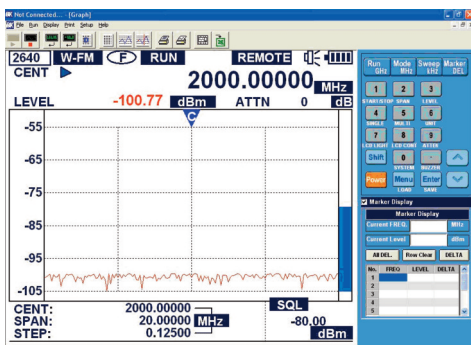
### ▲ Frequency Counter

The 2640's built in frequency counter is independent from the field strength analyzer and measures the signal applied to the external BNC connector

- Frequency range: 35 MHz to 2,000 MHz
- No. of digits: 7 digits
- Resolution: 1 kHz

### ▲ PC Software

The included AK2640 software and interface cable allows full control of the 2640 via a PC through the RS232C interface. The software allows the saving, recalling and analyzing of current and saved waveforms. The 2640 can save up to 100 waveforms and states in to it's internal memory.



Screenshot of the AK2640 software

The screenshot shows a CSV file export of the measurement data. The table contains columns for 'No.', 'Freq (MHz)', and 'Level (dBm)'. The data points are as follows:

No.	Freq (MHz)	Level (dBm)
1	1990.0000	-99.75
2	1990.1250	-99.61
3	1990.2500	-100
4	1990.3750	-99.86
5	1990.5000	-99.64
6	1990.6250	-101.62
7	1990.7500	-100.42
8	1990.8750	-100.21
9	1991	-99.69
10	1991.1250	-101.14
11	1991.2500	-99.76
12	1991.3750	-99.67
13	1991.5000	-100.29
14	1991.6250	-100.29
15	1991.7500	-99.89
16	1991.8750	-100.21
17	1992	-103
18	1992.1250	-99.64
19	1992.2500	-103.96
20	1992.3750	-99.69
21	1992.5000	-103
22	1992.6250	-101.14
23	1992.7500	-103.68
24	1992.8750	-99.64
25	1993	-99.79
26	1993.1250	-100.79
27	1993.2500	-102.61
28	1993.3750	-99.72
29	1993.5000	-99.23
30	1993.6250	-100.36
31	1993.7500	-100.62
32	1993.8750	-101.04

Screenshot of the exported CSV data

## Specifications

model

2640

### Frequency

Frequency Range	100 kHz to 2,000 MHz
Resolution	Min. 6.25 kHz Multiples
Accuracy	± 4.5 PPM
W-FM / N-FM / AM / SSB	Wide FM : Approx. 180 kHz @-6 dB Narrow FM : Approx. 12.5KHz @-6 dB AM/SSB : Approx. 2.4 kHz @-6 dB
Step Range	AM, SSB, Narrow FM : 6.25 kHz, 12.5 kHz Wide FM : 6.25~125 kHz (Multiple of 6.25 kHz) 125~2500 kHz (Multiple of 125 kHz)
Span Range	AM, SSB, Narrow FM : 1 MHz, 2 MHz Wide FM : 1~20 MHz (Multiple of 1 MHz) 20~400 MHz (Multiple of 20 MHz)
Frequency Selection Mode	Center, Start/ Stop, Span

### Amplitude

Measurement Range	-45 dBm to -110 dBm
Average noise Level	Wide FM : -100 dBm Max. Narrow FM : -110 dBm Max. AM/SSB : -100 dBm Max.
Amplitude Units	dBm, dBmV, dBuV
Reference Level Accuracy	± 3.0 dB (Typical) @ 400 kHz to 600 kHz ± 2.0 dB @ over 600 kHz
Reference Level Range	0 dBm to -80 dBm
Log Scale	0.2 dB/DIV min, in 0.25 dB Span (5 Display Division)
Internal Attn	10 dB
Internal Attn Accuracy	± 1.0 dB (@25)

### Sweep

Speed	Min. 500 msec
Trigger Source	Narrow FM / Wide FM / AM / SSB
Trigger Mode	Free Run / Single Run / Continuous / Wave Squelch Run
Trigger Level	TTL Level
Marker Mode	Marker / Delta Marker

### Memory

Trace & Setup Storage	Max 100 Waveforms and 100 States
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### Display

Type	Mono STN LCD
Display Resolution	192 Pixels X 192 Pixels
LCD Light	On / Off

### Frequency Counter

Frequency Range	35 MHz to 2,000 MHz
Resolution	7 Digits
Accuracy	± 50 PPM ± 1 COUNT
Sampling Time	1 sec
Input Sensitivity	35 MHz to 2,000 MHz : 150 mVrms 20 MHz to 1,000 MHz : 100 mVrms
Input Impedance	50 Ω
Max. Input Voltage	5 Vrms Max.

### Spectrum Input Port

RF Input Connector	N type Female, 50Ω
Max Input Level	Max. +10 dBm, 5V rms

### Operation Environment

Operating Temperature	0° C to 40° C
Humidity	35% RH to 85% RHP
Storage Temperature	10° C to 50° C

### Power Source

Battery Power Source	AA Type Ni-MH Rechargeable Battery × 6 PCS
Battery Specification	AA Type 1.2 V, 2,700 mAh Rechargeable Nickel Metal Hydride Battery
Adapter	SMPS Type AC Adapter (DC 12 V Output) Car-Adapter (DC 12 V Output)
Auto Power On/Off	Off/ 5 min./ 10 min./ 20 min./30 min.

### Physical Specifications

Dimension	4 "(W)×9 "(H)×1.8 "(D)
Weight	Approx. 0.66 kg(1.45 lbs) (including Antenna, except Battery)

**One Year Warranty**

### Accessories

Supplied: Antenna (Receive Only), SMPS Type AC Adapter, Fuji-AA type NI-MH Rechargeable Battery (6 PCS, 1.2 V 2,700 mAh), Manual, Coaxial Cable, Earphone, Carrying Case, Carrying Belt, RS-232C Cable, Adapter(N-BNC), Software for PC Application

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