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## 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.

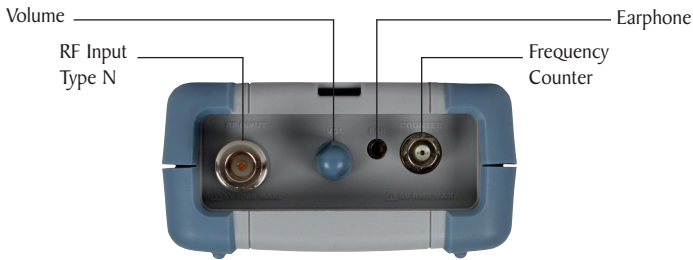
### Features

- 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.



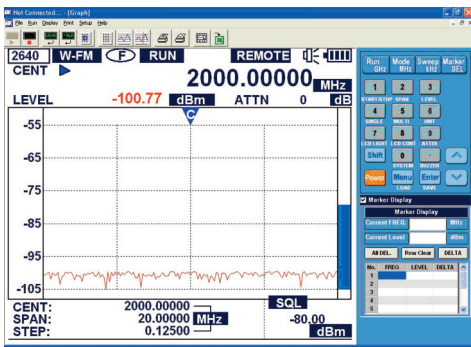
## ▲ Frequency Counter

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

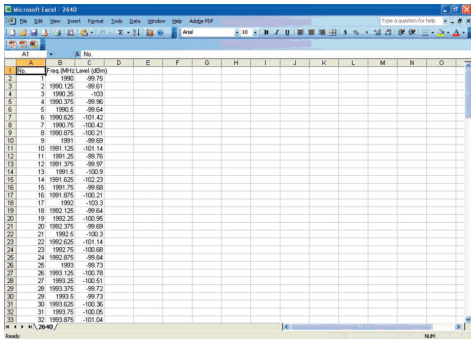
- Frequency range: 35 MHz to 2,000 MHz
- No. of digits: 7 digits
- Resolution: 1 kHz

## ▲ 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



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<br>Narrow FM : Approx. 12.5KHz @-6 dB<br>AM/SSB : Approx. 2.4 kHz @-6 dB                      |
| Step Range               | AM, SSB, Narrow FM : 6.25 kHz, 12.5 kHz<br>Wide FM : 6.25~125 kHz (Multiple of 6.25 kHz)<br>125~2500 kHz (Multiple of 125 kHz) |
| Span Range               | AM, SSB, Narrow FM : 1 MHz, 2 MHz<br>Wide FM : 1~20 MHz (Multiple of 1 MHz)<br>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.<br>Narrow FM : -110 dBm Max.<br>AM/SSB : -100 dBm Max. |
| Amplitude Units          | dBm, dBmV, dBuV                                                                |
| Reference Level Accuracy | ± 3.0 dB (Typical) @ 400 kHz to 600 kHz<br>± 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 |
|-----------------------|----------------------------------|

## 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<br>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)<br>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)<br>(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