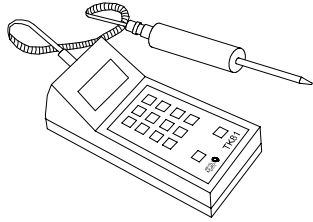


## Specifications and Ordering Information

# TK81 Tunable Filter/Vibration Meter



## Description

The TK81 Tunable Filter/Vibration Meter is a portable handheld instrument for basic vibration measurements. It can display vibration in both unfiltered (overall) and filtered modes. It accepts inputs from displacement, velocity, and acceleration transducers but does not provide power for them.

Its filtering capability is particularly useful for diagnosing vibration problems occurring at particular frequencies on all types of machinery.

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## Specifications

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### Inputs

<i>Signal:</i>	Accepts displacement, velocity, or acceleration.
<i>Maximum Input:</i>	10 V peak-to-peak.
<i>Scale Factor:</i>	Selectable from 5 to 9999 mV per engineering unit.
<i>Input Impedance:</i>	95 k $\Omega$ .

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### Signal Conditioning

<i>Frequency Response:</i>	1.66 Hz to 1,666 Hz (100 to 100,000 RPM).
<i>Integration:</i>	Single integration is available for frequencies above 10 Hz (600 RPM).

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### Filter

<i>Operating Range:</i>	1.66 Hz to 1,666 Hz (100 RPM to 100,000 RPM).
<i>Type:</i>	Digital, approximates an analog filter with a Q of 11.

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### Outputs

<i>Display:</i>	4 line by 16 character LCD
<i>Display Units:</i>	Selectable Metric or English, peak-to-peak, zero-to-peak, or rms**. ** RMS readings may fluctuate @ < 10 Hz (600 RPM).
<i>Accuracy:</i> Within 5%	* Non-Filtered, Non-Integrated Signals @ Full Freq Range * Non-Filtered, Integrated Signals @ 10-16.67k Hz (600-100k RPM)
Within 10%	* All RMS Measurements * Filtered, Non-Integrated Signals @ Full Freq Range * Filtered, Integrated Signals @ 10-16.67k Hz (600-100k RPM)

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## Power Requirements

*Battery:* 9-Volt alkaline transistor battery.  
(NEDA 1604A).

*Battery Life:* 20 hours nominal.

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## Environmental Limits

*Operating Temperature:* +0°C to +40°C (+32°F to +104°F).

*Storage Temperature:* -20°C to +70°C (-4°F to +158°F).

**Note:** A battery stored above +104°C (+219°F) or below 0°C (+32°F) will have a reduced shelf life.

*Relative Humidity:* To 90% noncondensing.

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## Physical

### Size

*Height:* 191 mm (7.5 in)

*Width:* 102 mm (4.0 in)

*Depth:* 58 mm (2.3 in)

*Weight:* 316 g (0.7 lb)

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## Ordering Information

**80649-01**

**TK81 Tunable Filter/Vibration Meter**

### Option Description

*Includes:*

- 1 TK81
- 1 9200-09-01-01-00 Velocity Seismoprobe®
- 1 Seismoprobe® Cable and extension rod
- 1 Magnetic base
- 1 Soft carrying case
- 1 Manual
- 2 Batteries (1 spare)

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## Accessories

<b>80466-02</b>	TK81
<b>88737-01</b>	User Manual
<b>9200-09-01-01-00</b>	Velocity Seismoprobe®
<b>7989-01</b>	9200 Velocity Seismoprobe® Extension rod
<b>46000-01</b>	Magnetic Base
<b>46122-01</b>	Quick Connect
<b>80705-01</b>	Interconnect Cable
<b>04160151</b>	Soft Carrying Case
<b>04160152</b>	Strap
<b>03282910</b>	Foam insert

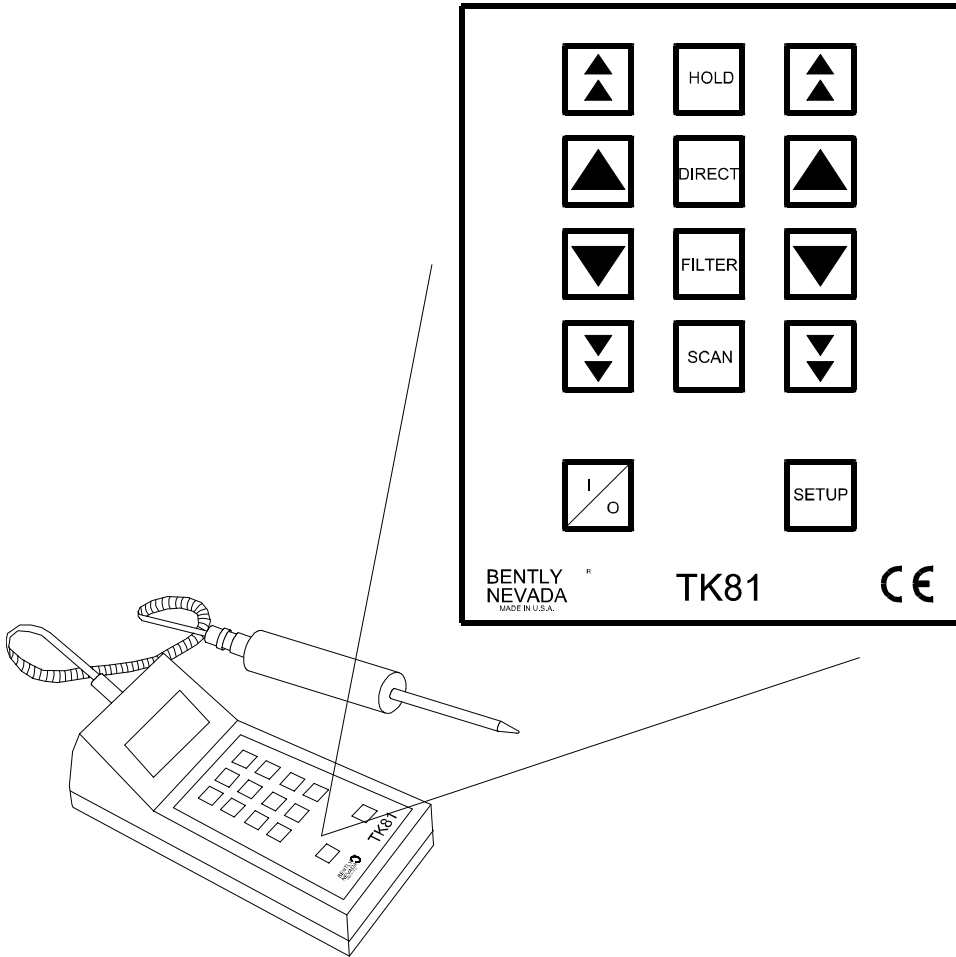


Figure 1: Close-up of the TK81 Keypad