

# Vibration Analyzer VA-14



— Single channel analyzer also capable of microphone connection —

# Beyond trust to a new frontier in measurement

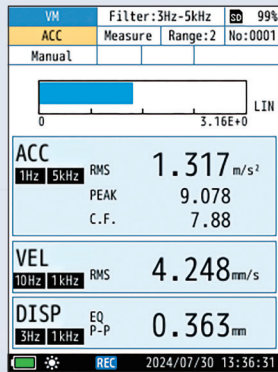
## RION's New Vibration Analyzer VA-14

### Vibration Meter Mode

Allows simultaneous measurement of acceleration, velocity, displacement, and acceleration crest factor

**New**

Filters (HPF, LPF) can be set for acceleration, velocity, and displacement, respectively

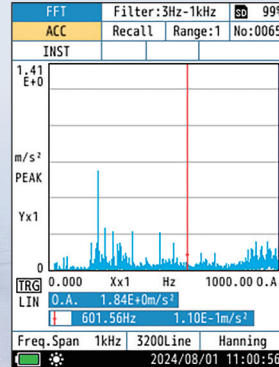


Vibration meter mode

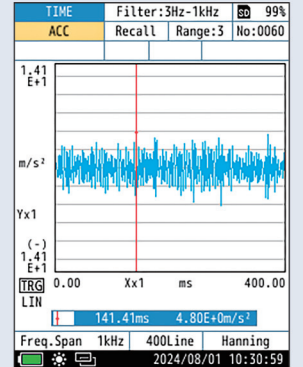
### FFT Analyzer Mode

- Real-time analysis frequency 20 kHz
- Time waveform display and spectrum display with up to 3 200 spectral lines. Envelope processing also supported.
- Simultaneous saving of linear average value and maximum value
- Two types of peak detection functions
  - Displays top 10 spectra with "TOP10"
  - Displays top 10 peaks with "PEAK10"

**New**  
**New**



Spectrum display (3 200 lines)



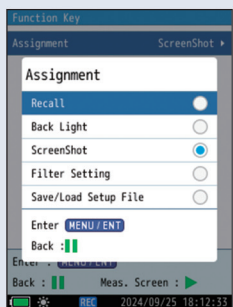
Time waveform display



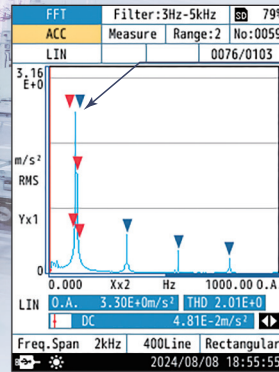
Piezoelectric Accelerometer PV-571 (Supplied)

**New**  
**Equipped with "function keys"**

Assign functions and perform operations with one push



Function Key



110 Hz

#### Peak detection example

- ▼ **TOP10**  
Detects spectra around 110 Hz
- ▼ **PEAK10**  
Detects spectra at odd multiples of 110 Hz

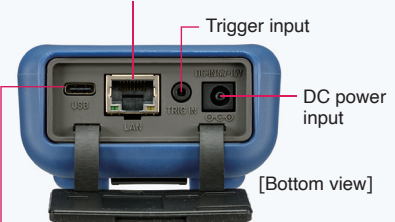
▼ are not displayed on the actual screens. It is only shown in the catalog.

**New**

#### LAN terminal

— Connect to the network —

Allows control of the device and transfer of files (CSV, WAVE) stored on the SD card  
\* VX-14S is required to obtain measurement data



[Bottom view]

**New**

#### USB Type-C connector

— Compatible with USB power supply —

Long-term measurements are possible even in locations without power outlets

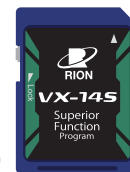
Easy to hold with one hand. Ideal for field measurements.

Achieved 30 % weight savings from previous model VA-12 Approx. 850 g → **Approx. 660 g**  
(Including supplied accessories and batteries)

# Take your VA-14 on-site for a wider range of use

New Features

Option program  
**Superior function program**  
**VX-14S**



After installation, it can be used as a 2 GB SD card.

## Installing the VX-14S adds the following function

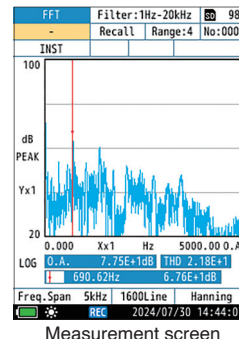


### Sound Measurement

(Operates in FFT mode)

#### [Microphone and preamplifier connection function]

Allows sound measurement by connecting a microphone. Covers both vibration and sound evaluation with just one VA-14 unit.



Usage Examples

FFT analysis separates noise and vibration. This can be used to evaluate the quietness of machines, detect abnormal noise, and consider countermeasures.

Target fields

Noise and vibration analysis of automobiles, home appliances, etc.



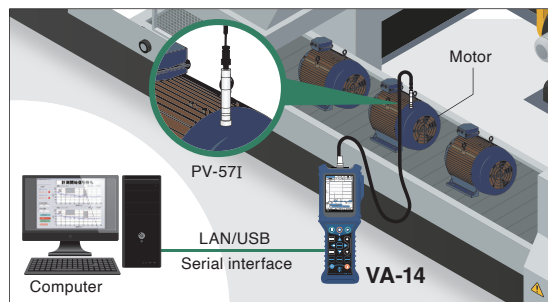
### Enhanced connection with communication devices

#### [Communication function (LAN/USB)]

By connecting via either USB or LAN, communication with a computer is possible, and control of the device along with the following functions can be used via commands:

- Acquisition of display values (vibration value, time waveform, FFT analysis value)
- Continuous acquisition of instantaneous values (vibration value: 100 ms/1 s, FFT analysis value\*)
- Acquisition of calculated values (vibration value: calculation cycle 10 s/1 m/user setting, FFT analysis value: after calculation)

\* Available when connected to LAN



Usage Examples

Utilize measurement data from VA-14 to build pass/fail evaluation systems on production line and vibration monitoring systems. \*Software for the computer is required separately.

Target fields

Quality assurance and production technology for automobiles, home appliances, etc.



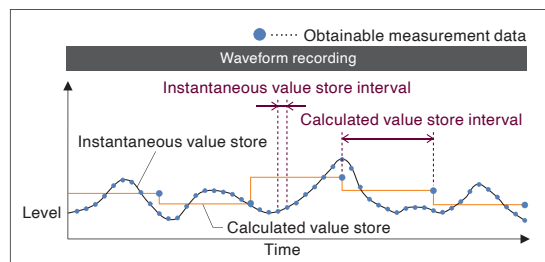
### Long time vibration recording (Operates in vibration meter mode)

#### [Auto store function]

Instantaneous values and calculated values can be recorded continuously at the same time. Allows measurement of time-based changes in vibration values.

#### [Long time waveform recording function]

Records vibration waveforms in WAVE format. (Select one from acceleration, velocity, or displacement) Recorded data can be used to perform frequency analysis on a computer. Maximum recording time: 200 hours



Usage Examples

Evaluate changes in vibration and the effects of vibration when load conditions, such as the rotational speed of equipment and pump water volume are changed.

Target fields

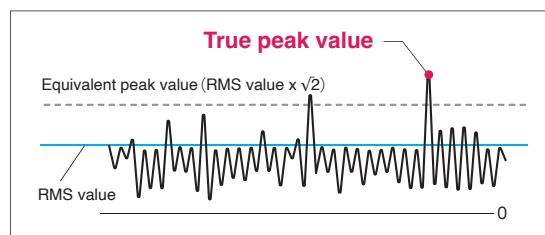
Design and development of equipment and machinery, quality assurance



### Accurate evaluation of machinery condition

#### [Peak calculation function]

Calculates true peak values not only for acceleration but also for velocity and displacement. In addition to the equivalent peak value which is calculated from RMS multiplied by  $\sqrt{2}$ , the true peak value of the vibration waveform can be calculated, allowing for more accurate evaluation.



Usage Examples

Helps detect machine and equipment failures in early stage, improving production efficiency

Target fields

Equipment maintenance, machine design and development

Related Products (Connection Configuration Example)

**With integrated preamplifier**

Piezoelectric Accelerometer PV-57I (Supplied) (With magnet attachment) — Curled cable VP-51KI (Supplied) (Length 50 to 100 cm)

Piezoelectric Accelerometer PV-91C/91CH etc. — Accelerometer Cable VP-51 series — BNC Adapter VP-52C

Piezoelectric Accelerometer PV-85/90B etc. — Accelerometer Cable VP-51 series — Charge Converter VP-40

**VX-14S is required for microphone connection**

Microphone UC-52/59 — Preamplifier NH-22A — BNC-BNC coaxial cable EC-90 series

SD card (Supplied)


Vibration Analyzer VA-14

Computer

USB Cable (Type-C) Commercially available

**Calibrator for Field Measurements**


**Calibration Exciter VE-10**



Calibration of Piezoelectric Accelerometers and Vibration Meters

Specifications	
Calibration frequency	159.2 Hz
Calibration Level	10 m/s <sup>2</sup>


**Sound Calibrator NC-75**



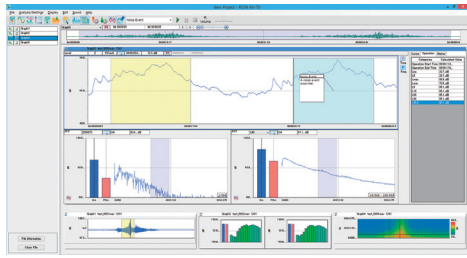
Calibration of microphones and sound level meters (JCSS calibration certificate included as standard)

Specifications	
Calibration frequency	1 kHz
Calibration Level	94 dB

**Waveform Analysis Software AS-70**




Capable of reading WAVE files, graph display, normalization processing, frequency analysis (FFT analysis, octave analysis), file output, and playback.



**Optional accessories**

**Carrying Case**



**Hand Strap**



**AC adapter NE-21P**





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