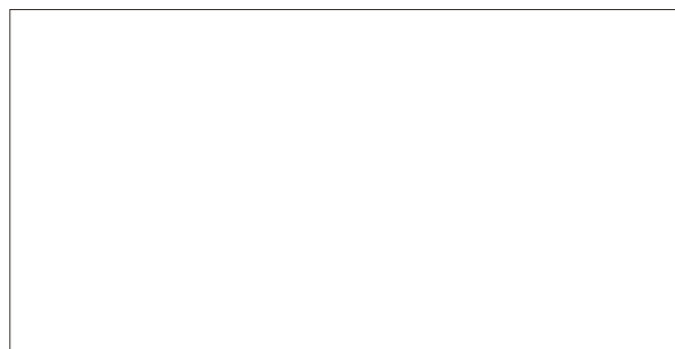




**IMV CORPORATION**

 <https://we-are-imv.com/en/>

\*The specifications and design are subject to change without notice.



March, 2024  
Cat NO. 2403@AIR2E.



WiFi Portable Vibrometer

# CardVibro Air2 Series



**CATCH THE VIBRATION**

- ▶ Operation with Android Tablet PC
- ▶ Reliable Wireless Data Collection (WiFi)
- ▶ Compact and Lightweight
- ▶ Low Power Consumption



Two applications for  
tablet / smartphone

**IMV CORPORATION**

# CATCH THE VIBRATION

Two application for tablet/smartphone



## CardVibro Air2

\*Operation is not guaranteed for smartphones.

## CardVibro Air2 Light

\*Operation is not guaranteed for tablet PCs.

Reliable Wireless Data Collection (WiFi)

(WiFi) Data Collection

▶ High speed signal communication using WiFi



Remote measuring using WiFi

Waveform Display Screen

\*Tablet PC is not included in a standard unit.

Compact and Lightweight

▶ Compact and lightweight



Weight about 145g (including a sensor)

88.6 mm

40.5 mm

41.5 mm

[Full Scale]

VM-2012



Compact design and fits easily into a breast pocket

Low Power Consumption

▶ Continuous 6 hour operation with 2 AAA batteries



6 hour operation

\*Only rechargeable battery

Rechargeable with USB connection

Operation with Android Tablet PC

▶ Measureable in Android OS

Easy measurement with Android tablet



Main menu screen

Waveform measuring screen

Route setting screen



Main menu screen

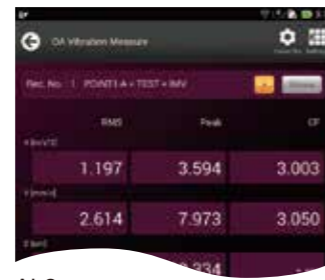
Trend graph screen

Setting Screen

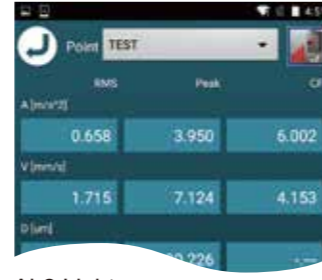
## CardVibro Air2 Light

## Air2 Air2 Light Simultaneous measurement

There are many functions to express characteristics of vibration in general, so vibrometers usually needed to be switched the mode every time to measure by each factor. However, if you only press a button, you can measure acceleration, velocity and displacement simultaneously by using Air2 function for simultaneous measurement. It can reduce the operating time and prevent miss-measurements.



Air2



Air2 Light

## Air2 Air2 Light Judgement function

CardVibro Air2 can quickly evaluate the condition of the rotational machinery such as blowers or motors at the site with its customized standard. CardVibro Air2 is located with the standard of the Vibration Severity ISO-10816 (JIS-B-0906), and the original criteria for bearing evaluation. So these function help to make easy and quick judgement.



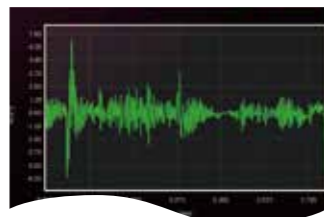
Air2



Air2 Light

## Air2 Waveform measuring

Beat or scratch on bearing can be recognized by watching its distinctive waveform displayed. Maximum 30 minute\* waveform can be recorded.  
\*Depends on a condition



Air2

## Air2 FFT analysis

If the measured vibration level is too large, FFT analysis is available for investigation. Provided with high resolution of 12,800 lines in such small size body. CardVibro Air2 is able to compare the bearing vibrations.



Air2

## Air2 Route setting function

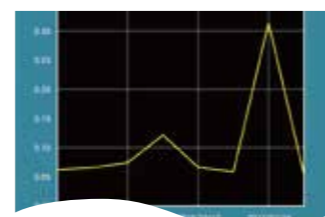
If the measurement point and order are specified in advance, the data will be displayed in the order. Data management is possible by machine name, measurement point, or registration number.  
\* Data management software (option) is needed.



Air2

## Air2 Light Trend graph function

Trend graph is displayed solely by Air2 Light without using data management software. The graph is also converted into CSV file and can be attached to e-mail.



Air2

## Other features

Practical Waterproof (IP65)



Can be attached to a strap



Connector type is compatible to other optional sensors.



\*Connecting image with low frequency vibration measurement sensor of VP-2012PS1



\*Connecting image with charge amplifier CA-2012 and small sensor VP-02S

## 3 types of measurement methods

### Direct measurement



With dedicated sensor probe, it can measure vibration directly, and no need to worry about a cable pulled into a rotating machine with wireless Air2.

### Hands-free measurement



By attaching the magnet, you can take measurements without having to hold both hands.  
\*Small magnet is optional item.

### Measurement via USB cable



Measurement is stable even when WIFI signal is weak.

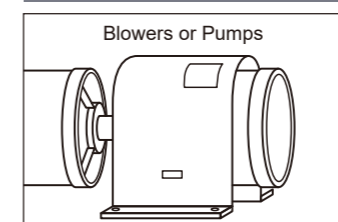
## Function table

Terminal software function	Detail	Air2	Air2 Light
OA value measurement	Simultaneous measurement and indication of acceleration, velocity and displacement is available	●	●
Judgement function	Good/Bad judgment can be made on the spot based on measurement results.	●	●
FFT/waveform analysis	Analyze the condition from FFT function or waveform structure	●	—
Monitoring function	Continuous display of vibration waveform like an electrocardiogram	●	—
CSV data saving	Data are saved in the terminal in Excel format	—	●
Trend graph	Measurement value is displayed in time series	—	●
Communication with optional software	Connected with data management software and equipment diagnosis software	●	—

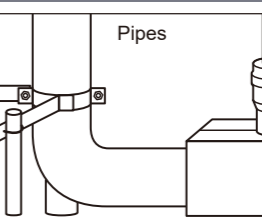
## Wireless CardVibro Air 2 is available at any measuring situation

CardVibro Air2 is of course capable in the conventional use and other severe condition places with WiFi and powerful data processing function.

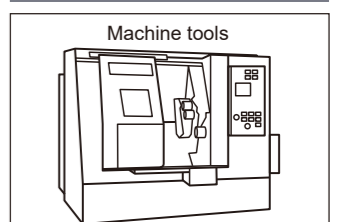
### Maintenance of rotating machineries



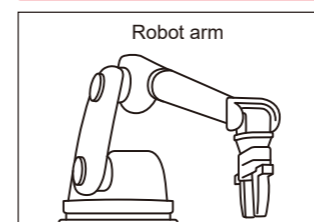
### Vibration condition check



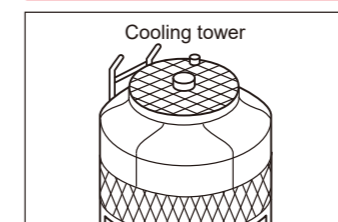
### Measurement of small displacement



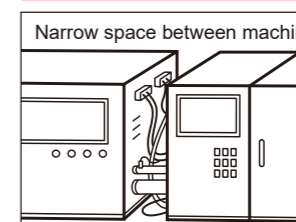
### Wildly vibrating place



### High palce



### Narrow space



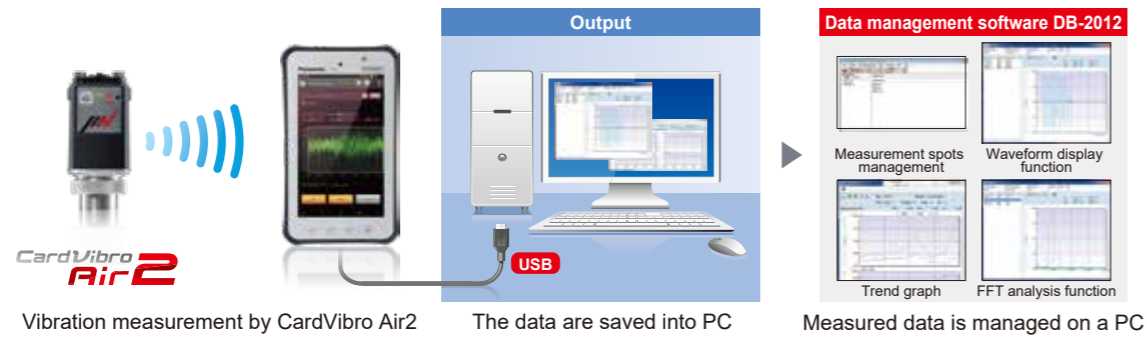
### Partitioned place



## Data management software (DB-2012)

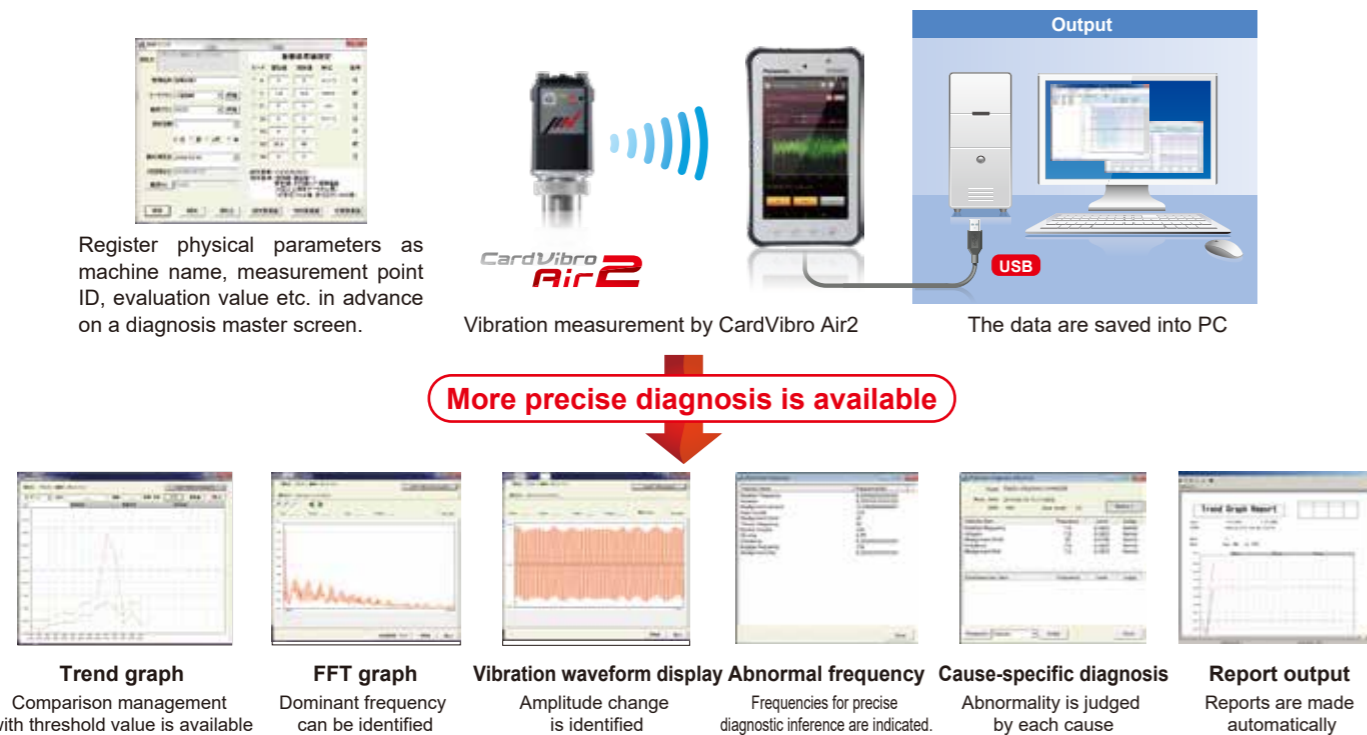
### ▶ Feature

Data management software is of to use the data acquired by CardVibro Air2. SQ Light is employed as data base and communication is available through USB. It is an application for management of the data taken in PC to make trend graph or waveform display.



## Equipment diagnosis software (DS-2013Tr)

Equipment diagnosis software DS-2013Tr display abnormality on frequency or makes cause-specific diagnosis using pre-registered physical equipment parameters.



### Features

#### ▶ Data management software DB-2012

- Data transfer or synchronization between tablet PC and PC is easily available.
- Measurement point management, trend graph, waveform display, FFT analysis function
- Graphed data can be printed out in Microsoft Excel file format.
- FFT data, waveform data are obtained as CSV format output
- Language : Japanese, English, Korean and Chinese

#### ▶ Equipment diagnosis software DS-2013Tr

- The function of DS-2005Tr is succeeded.
- Bearing data, judge criteria etc. can be set by master registration.
- Trend management is available by simple diagnosis function. Itemized diagnosis for imbalance or misalignment is available by precision diagnosis function.
- Reports are made automatically.
- Language: Japanese and English

### Specification

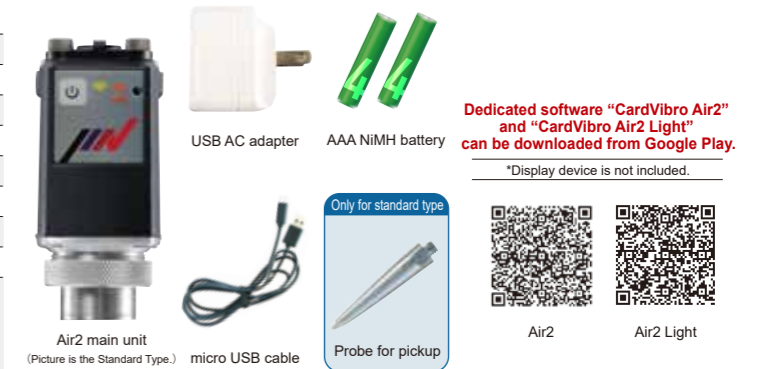
	PC	Tablet
OS	Windows11	Android 7.0 or later
Interface	USB Windows media player is needed for communication with tablet PC. (Version 12 is recommended)	USB MTP connection function are needed for communication with tablet PC.
Software	Microsoft Excel is needed. (2010 is recommended)	—
Memory	2 GB or more	1 GB or more

## Specifications

### ▶ Common specifications

Item	Specification
Interface	Wireless LAN: IEEE802.11b, WiFi conformed, 128 bit WEP, WPA/WPA2
Wireless communication mode	Infrastructure mode
Built-in memory capacity	4Mbit × 16bank
Power supply	2 pcs. of AAA battery
Current consumption	During measurement (on WiFi use): approx. 150 mA
Operational temperature range	+5 °C to 50 °C (Guaranteed by attached battery only)
Operational humidity range	30 to 90 % (Non-condensing)
Sampling frequency	Maximum 76.8 kHz
AD resolution	16 bit
Operational Tablet OS	Android 7.0 or later *Only approved by IMV *Refer to IMV website for the latest recommended tablet information.

### Standard Composition



### ▶ CardVibro Air 2 Standard Type VM-2012 (Built-in sensor)

Item	Specifications
Mass	Approx. 145 g
Size	D41.5 mm × W40.5 mm × H88.6 mm
Sensor	Piezoelectric accelerometer
Acceleration frequency range	10 to 10000 Hz
Velocity frequency range	10 to 1000 Hz
Displacement frequency range	10 to 150 Hz
Maximum measurement acceleration	500 m/s <sup>2</sup>

### ▶ CardVibro Air 2 Connector Type VM-2012C (External sensor)

\*Connector type needs to connect with an optional sensor.

Item	Specifications
Mass	Approx. 130 g (excluding a sensor)
Size	D41.5 mm × W40.5 mm × H88 mm
Applicable sensor	Voltage output sensor, ICP sensor
Voltage output port	-5 V, +5 V
ICP port	+24 V (2 mA)
Voltage input port	±2.5 V
Sensor input IF	HR10A (round type 6 pin)

### ▶ Option

		Standard Type	Connector Type
▶ Data management software	DB-2012 For data management on PC	●	●
▶ Equipment diagnosis software	DS-2013Tr Itemized diagnosis for imbalance or misalignment is available by precision diagnosis function.	●	●
▶ Carrying case	B-2012 To store Air2 main unit or other compositions	●	●
▶ Small size magnet	MH-202R To fix the sensor on a measurement point	●	—
▶ Small size magnet (for spherical surface)	MH-203R To fix the sensor on a spherical surface such as of pipes <b>Recommended</b>	●	—
▶ Long probe	PI-2001 In case of use a long sensor probe (Length 185 mm)	●	—
▶ Long cable	3 m CE-2012- 3 m 10 m CE-2012-10 m In case of extending the sensor cable. Applicable to all input sensors.	—	●
▶ Piezoelectric accelerometer	VP-2012A For acceleration measurement. The feature is as same as of standard type	—	●
▶ Low frequency vibration measurement pickup	VP-2012PS1 For low frequency vibration measurement (3 to 100 Hz). Put double-sided tape on the spot. Piezo-resistive type, straight out cable extension 2.5 m	—	●
▶ Charge amplifier	CA-2012 Use for general purpose piezoelectric accelerometers. BNC connector input, low noise cable between sensor and CA-2012 is additionally needed.	—	●
▶ Sensor input cable	CO-2012I For ICP sensor connection	—	●
▶ Sensor input cable	CO-2012V For voltage input	—	●
▶ USB plug bracket	PB-2012 For USB cable drop prevention	●	●

\*Please contact us if you like to use your own optional product.