

Wireless Reading in Windows with Dial-Reading®



Wireless Dial-Reading for Windows is a data collection tool for users to wirelessly connect, read, and record readings from Motionics wireless measurement devices on their Windows PC desktop or laptop. The software can simulate keyboard input, allowing data to be directly loaded onto any software product that accepts keyboard entry, such as Excel, text documents, and most SPC software.

Features:

- Multiple device connectivity (each dongle connects to up to 8 wireless devices)
- Multiple dongles can be added for more devices
- Each gage is assigned its individual panel for display and control
- Simultaneous data collection for all connected devices
- Continuous data recording and single reading capturing options
- Multiple continuous reading rates available
- Data keyboard entry to Excel, text and most SPC software



Data keyboard entry to Excel, text, and most SPC software



Reading in LabVIEW

Dial Reading VI is available to wirelessly connect and read from Motionics WiMER and BlueDial in LabVIEW on PC. The VI covers all the procedures to search nearby devices, pair, and update readings. Users can freely add more controls for data collection and analysis, customize the VI for a specific application, or integrate it into an existing software.

Motionics, LLC 8500 Shoal Creek Blvd Building 4 Suite 209 Austin, TX 78757 www.motionics.com info@motionics.com The software & hardware can be customized. Contact Motionics for details.



Wireless Reading on iOS and Android Devices with MultiGage®



MultiGage Reader app is able to connect to multiple Motionics Bluetooth measurement devices (14 on iOS, 8 on Android) and receive readings from all of them at the same time. Each device will be assigned an individual panel to display measurement reading, max, min, and TIR.

MultiGage Reader provides two options for data recording: continuous recording at up to 10 samples/sec, or one-by-one capturing through button tapping. Recorded data can be plotted in a user-interaction-enabled graph, saved in a database, and exported as a CSV file for further assessment.

Additionally, there are many more innovative features in the app, such as analog probe meter, cloud data streaming, custom calculator, and so on, to make dimensional measurement faster and easier.

Features:

- Simultaneous reading of multiple devices
- Data plotting on iPhone/iPad/Android •
- Continuous or single data point recording
- Max, Min, TIR measurement
- Remote zeroing from the app
- GO/NG judgment with green/red color indication Apple Watch support
- Real-time cloud data streaming worldwide (iOS only)
- Custom formula calculator (iOS only) •
- Large analog probe meter with adjustable range
- Data saving in local database
- Data export in CSV via email and cloud drives



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VibraTestPro is a vibration analysis tool on iPhone/iPad. It reads and processes vibration signal from Motionics wired 2-CH kit accelerometers and single channel kit accelerometer via lightning port or Motionics VibeSense wireless accelerometer via Bluetooth Low Energy. VibraTestPro features ISO10816 based vibration meter, real-time TWF and FFT spectrum viewer, vibration signal recorder and local vibration data manager.



Universal on iPhone & iPad

VibraTestPro is universal on iPhone and iPad, turning your mobile device at hand into a competent portable vibration analyzer.



ISO-10816 based Vibration Meter

VibraTestPro includes an ISO-10816 based vibration meter to allow users to evaluate machine overall vibration severity at one glance.

- Severity test based on ISO10816-3 standard or custom thresholds
- Interactive ISO-10816 vibration severity table
- Enlarged severity bar with 4 color zones for better view
- Machine type and support type selections
- RMS data and color code save to local data manager



Real-time TWF & FFT Spectrum Viewer

VibraTestPro features a real-time TWF & FFT spectrum viewer to display collected vibration signal in time waveform and FFT spectrum on iPhone and iPad.

- 2-CH simultaneous display
- Real-time waveform and FFT spectrum
- Interactive signal viewer with pan and pinch to move and zoom spectrum
- Customizable graph appearance: background color, line color, line thickness, dynamic grids
- Linear and log axis scale
- Full screen display
- Velocity and acceleration readings
- Metric and Imperial units
- Vibration signal information including overall RMS, major frequency and top 5 peaks
- Auto peak detection cursor and manual peak cursor
- Movable distance cursors to analyze two points in spectrum
- Harmonic cursors to show vibration harmonics
- Sideband cursors with options to define center frequency, number of sidebands and frequency interval



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Raw Vibration Signal Recorder

Users have the option to record raw vibration signal on VibraTestPro, save it to local data manager to access later or export in a CSV/WAV file.

- Raw vibration signal recording
- User defined recording sampling rate and length
- Recording manual or auto stop
- Recorded data export in CSV/WAV file via AriDrop, Email, Dropbox
- Recorded data save to local data manager



Local Data Manager

Records from vibration meter, spectrum viewer and raw data recorder can be saved in a local data manager to access in the future. Data manager uses Plant-Machine-Test Point structure to help users to quickly locate a testing record.

- Plant-Machine-Test Point structure for easy data management
- Save machine image to record
- Save test note to record
- Offline spectrum
- Export vibration signal



Wireless Sensor Support

VibraTestPro supports Motionics VibeSense Wireless Vibration Sensor to offer a wireless solution for condition monitoring of rotating machinery.



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iVibraMeter App (iPad)

Vibration Analysis



iVibraMeter is an iPad application that connects to Motionics 2-CH DAQ box or single channel accelerometer and collects in real time the vibration signal. It displays the overall acceleration/velocity RMS value together with a severity bar based on different industry standards to show machine conditions. It also includes a library of common industrial machines including motor, fan pump, etc and allows users to quickly collect vibration readings at pre-defined test locations by a single tap. A real-time time waveform/FFT spectrum viewer updates vibration signal continuously, helping user to identify machine condition abnormality.

After each test, the user can quickly generate a PDF test report in iVibraMeter App to include machine information, vibration levels, severity bar, map location, pictures from library or camera, signature and notes. Test report can be saved locally in the plant-machine structured test report manager for future evaluation or exported via AirDrop, Email, wireless printing and cloud storage (Dropbox, Google Drive, OneDrive, etc).

Features:

- Real-Time overall RMS values
- Vibration signal spectrum/waveform
- Touch cursor on spectrum
- · Vibration in velocity (ips or mm/s) or acceleration (G's)
- ISO 10816 and customized vibration severity thresholds
- · One-tap data capturing at predefined test points on common industrial machines, including: motor, fan,

pump, etc

· One button calibration for accelerometer input

· Generate reports with machine information, vibration levels, severity bar, map location, pictures from

library or camera, signature and notes

• PDF report export via AirDrop, Email, wireless printing and cloud storage (Dropbox, Google Drive,

OneDrive, etc)

Local report manager



iRotorBalancer App (iPad)

Vibration Analysis and Rotor Balancing

iRotorBalancer is a technical tool for field balancing of rotating machinery in single-plane and two-planes. The iPad application connects to the Motionics 2-CH DAQ box mounted on iPad case, collects the vibration amplitude and phase with an accelerometer and a laser tachometer, and calculates the correction balancing weights and their angular positions for the testing machines.

After each balancing work, the user can quickly generate a PDF test report in iRotorBalancer App to include test information, balancing data, machine vibration before and after balancing, map location, pictures from library or camera, signature and notes. Test report can be saved locally in the plant-machine structured test report manager for future evaluation or exported via AirDrop, Email, wireless printing and cloud storage (Dropbox, Google Drive, OneDrive, etc.).



mStionics







Motionics, LLC

8500 Shoal Creek Blvd Building 4 Suite 209 Austin, TX 78757

www.motionics.com info@motionics.com

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Single-Plane and Two-Plane Balancing

iRotorBalancer uses different methods to cover both single-plane and two-planes balancing for different machine configurations.

- Single-Plane balancing using the Vector-Method (Amplitude & Phase Measurements)
- Single-Plane balancing using the Four-Runs-Method (Amplitude Measurement)
- Two-Plane inbound balancing using the Influence Coefficients Method (Amplitude & Phase Measurements)
- Two-Plane overhung balancing (Amplitude & Phase Measurements)

Various Balancing Tools

iRotorBalancer provides various handy tools to make balancing work easy even for users without any experience.

- Real-time signal waveform and FFT spectrum display
- Automatic select 1x peak amplitude and phase
- Polar plot to show graphic location of trial and correction weights
- Convenient calculator to estimate trial weight
- Angular mass distribution calculator to help distribute mass if correction weight location is not available
- Weight removal calculator to help determine drill bit size and depth for material removal
- Interactive permissible residual imbalance determination to quickly evaluate balancing quality

Balancing Report

Users can easily create PDF report after each balancing work in the App and save reports in local report manager for future reference.

- PDF report with test information, balancing data, machine vibration before and after balancing, map location, pictures from library or camera, signature and notes
- Local report manager to save test reports
- PDF report export via AirDrop, Email, wireless printing and cloud storage (Dropbox, Google Drive, OneDrive, etc)





Multigage Multiple Wireless Displacement Measurement Devices Reader

iPhone/iPad/Apple Watch

MultiGage Reader is an app developed for users to simultaneously connect and read from multiple Motionics wireless measurement devices on an iOS device.



This app works with our Wireless Crankshaft Deflection Test package to wirelessly capture sensor readings at 5 testing positions on the crankshaft and automatically calculates vertical and horizontal deflections.



DialReadPad is the iPad version of DialRead, connecting to our BlueDial/WiMER and reading digital instrument measurements.



Multigage Multiple Wireless Displacement Measurement Devices Reader

Android

MultiGage Reader is an app developed for users to simultaneously connect and read from multiple Motionics wireless measurement devices on an Android device.



Runout works with our Wireless Runout Kit, synchronizes displacement and angle measurements, and provides a convenient tool to inspect rotor runout on iPad.



This app records deflection and pressure during pile load tests using our wireless indicator and pressure sensor.



DialFace takes digital instrument readings from our BlueDial/WiMER and allows users to view results in various interactive analog dial faces.



DialReading is developed for users to wirelessly connect to and read from WiMER and BlueDial on an Android device.





PowerReader reads analog DC signals through WiFi channels of the iPad from any of our iWMD devices, suitable for power monitoring, temperature sensing, etc.



The BlueClamp app reads the TRUE RMS current measurements from WiClamp and shows the readings in tables and real-time plots.

Apps ibration, Balancing, & Alignment





iVibra Meter

Real-Time Overall Vibration Measurements and Severity Judgement

iPad & DAQ System

Wibra Meter provides real-time overall vibration measurements and severity judgment based on different standards, using the iPad with our DAQ system.



Vibra Pad Real-Time Vibration

Analysis & Training App

iPad & DAQ System

VibraPad is a vibration analysis tool, specially designed for determining the most common vibration frequencies of machine faults.



Vibra Units Vibration Units Conversion Application

iPhone/iPad/iPod Touch

VibraUnits is a vibration units conversion calculator. It converts typical vibration amplitude and frequency units.



Real-Time Overall

Vibration Measurements and Severity Judgement

iPhone/iPad/iPod Touch

Shale Shaker analyzes the vibration and motion of an industrial shale shaker.

Balance Vision A Tool that Uses the Camera

to Fine the Angular Positions on a Rotor During Balancing

iPhone/iPad/iPod Touch

BalanceVision is designed to use a camera to help the user locate angular positions on a rotor in balancing procedures.



iAlignCalc Application to Calculate

Corrections iPhone/iPad/iPod Touch

iAlignCalc is for machine shaft alignment, including several alignment methods and a thermal growth calculator.

Vibra Test Pro is an iOS vibration analysis tool featuring ISO 10816 vibration meter, FFT spectrum viewer, raw signal recorder and test data manager.

Vibration Severity Test

Based on ISO 100816

with DAQ Input

VibeSpectra

A Reference Guide for



VibeSpectra is a reference guide for rotating machinery predictive maintenance, including



Calculates Rolling Element Bearings' Fundamental

REByibe calculates vibration fundamental frequencies of roller element bearings from its geometry or model.



Motor Vibration Real-Time Overall Vibration

Measurements and Severity Judgement

Motor Vibration is custom made for Siemens to conduct vibration tests.



iRotorBalancer Single-Plane & Two-Plane Real-Time Rotor

Balancing App

iPhone & iRB DAQ System

iRotorBalance uses different methods for calculating the correction weights for rotor balancing in single-plane or 2-planes.



iAlignTest provides common reference tables, specifications and charts for shaft alignment tolerance.



Vibra Test Vibration Severity Test of Rotating Machinery Based on ISO 10816-03

iPhone/iPad

Vibra Test is an iSO 10816-based vibration meter to conduct vibration severity tests on rotating machinery.



Vibra Calc Vibration Severity Test Based on ISO 10816 with DAQ Input

iPhone and DAQ System

Vibra Calc calculates vibration frequencies of induction motors, gears, rolling element bearings, pumps, fans, journal bearings, and belts.



Summi

CAT Services Crankshaft Deflection Test

Function that Works with Motionics WiMER

iPad & DAQ System

CAT Services is custom-made for Caterpillar to conduct engine vibration tests and crankshaft deflection tests.

Summit Vibe

Real-Time Overall Vibration Measurement and Severity Judgement

iPad & DAQ System

Summit Vibe is custom-made for Summit to conduct vibration tests.



RotorBalance is a technical tool for calculating the correction weights for rotating machinery balancing in a single plane or two planes.

Vibration Analysis iPhone/iPad/iPod Touch/Android

spectra for various machine faults. REBvibe Frequencies

iPhone/iPad/iPod Touch





ThreadKing provides all the information for Metric/UN taps, Course/Fine threads, thread dimensions, drill sizes for cutting/forming taps, and much more.



4Machining is a quick machining reference tool, providing turning/milling/drilling speed & feed calculation, thread and drill size charts, and CNC G&M codes to machinists.



iGearbox is the ideal tool for training and learning the basics of regular and planetary gearboxes. It also calculates de gear ratio and gear speeds.



GCoderOD is a handy tool to generate CNC G-code for various OD machining processes.



Strobe Light A Tool that Turns an iPhone into a Strobe Light to Measure Machine RPM

iPhone

Strobe Light makes your iPhone a strobe light tachometer to measure the speed of rotating machines.



iWindTurbine Training and Learning Tool for Regular and Planetary Gearboxes

iPhone/iPad/iPod Touch

iWindTurbine calculates the estimated output power of wind turbines, based on its geometry and basic wind parameters.