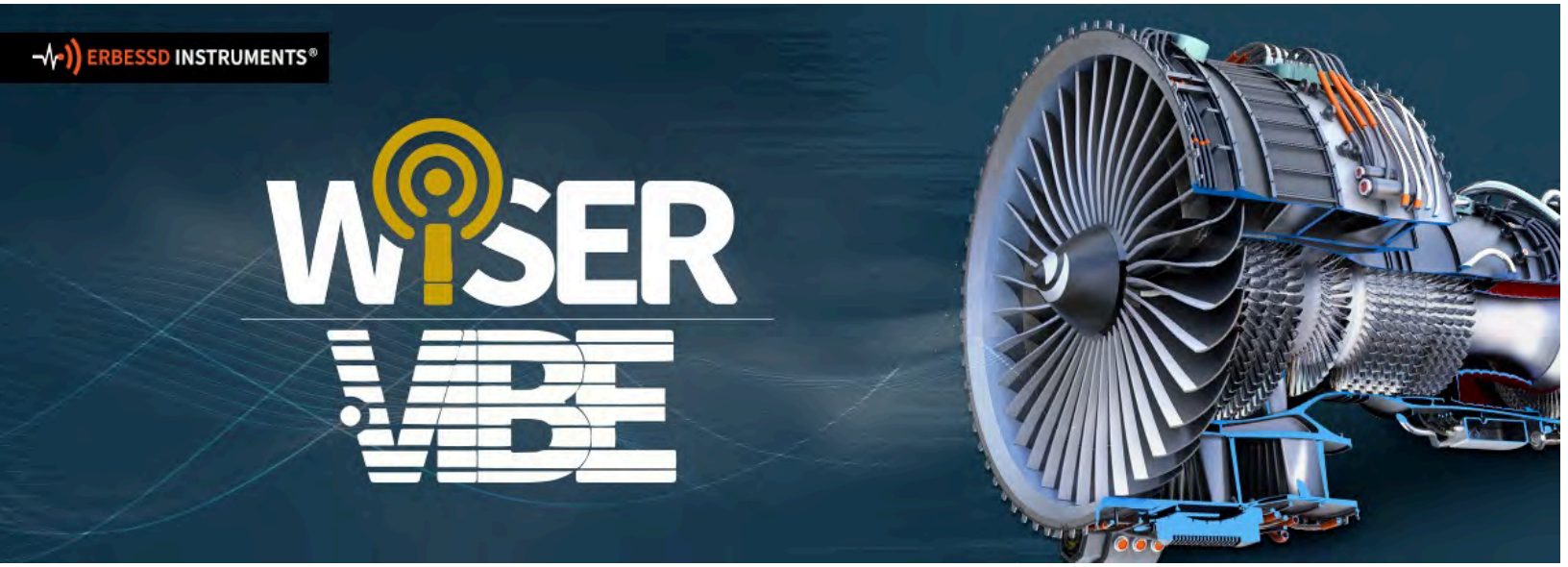

WiSER™ Vibe

Vibration Analysis App

Current to Version 2.15.3

User Guide

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Introduction

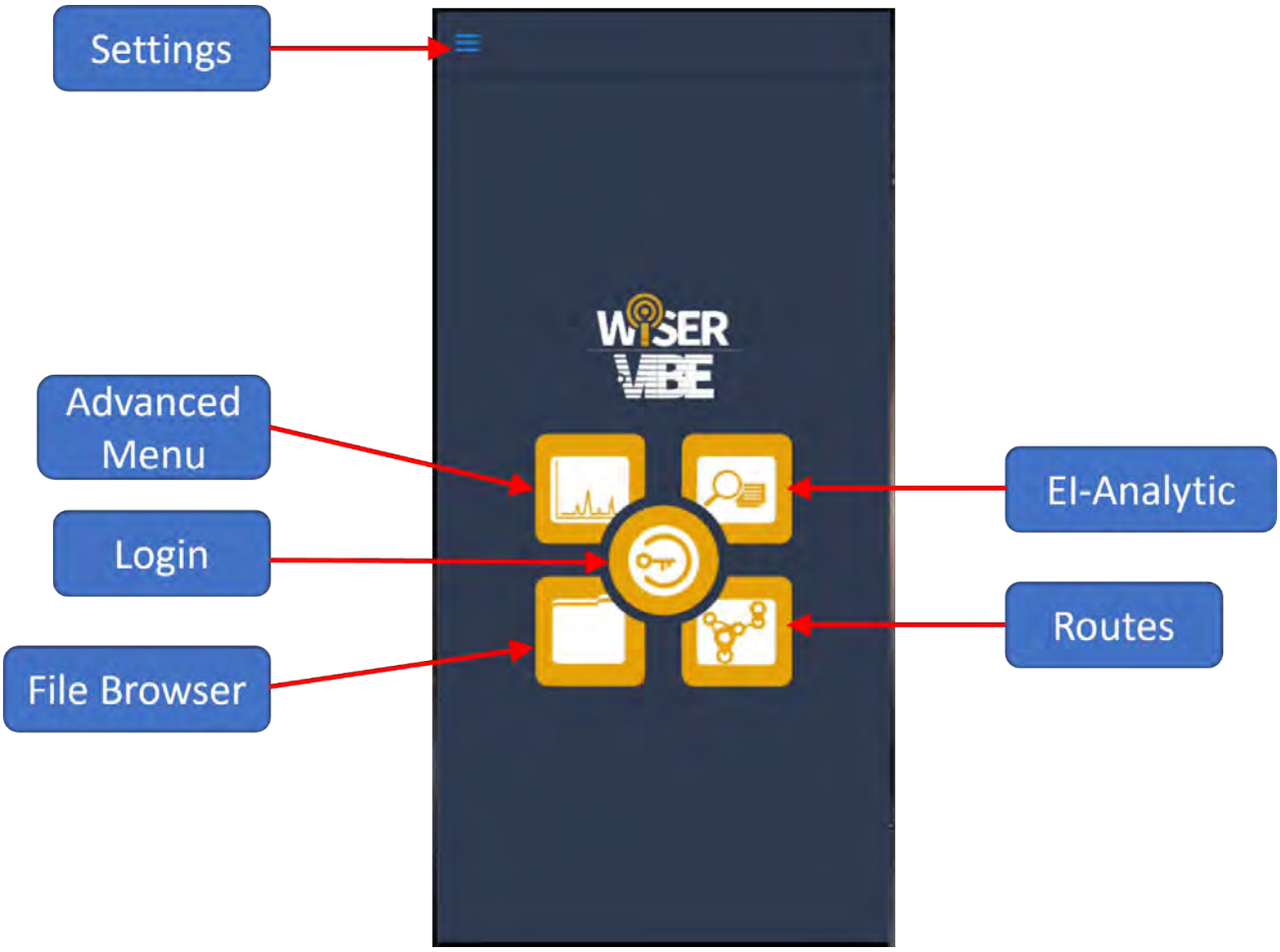
WiSER™ Vibe is a practical, portable and complete vibration analysis app, which can diagnose faults and implement predictive maintenance plans on rotating machines. This User Guide describes the features and functions of the application and how they work. For more information contact the Erbessd Instruments® Technical Support team.

Get the App

Download the WiSER Vibe application from the Google Play Store or Apple App Store. Search *Wiser Vibe* for quick access.

Install and launch the WiSER Vibe App.

The Home screen has 6 options:



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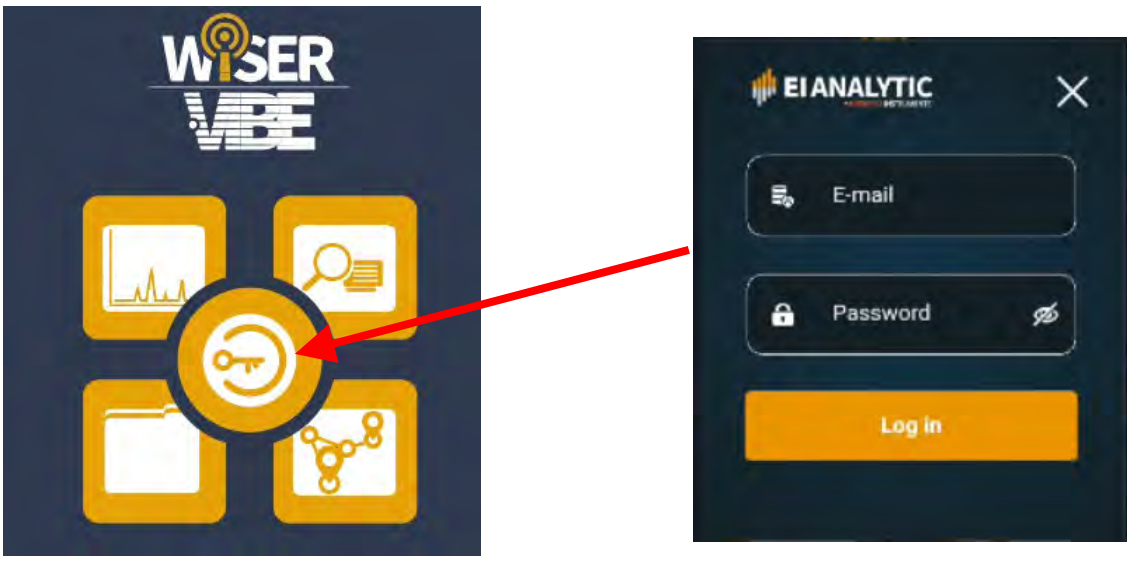
Login to EI-Analytic

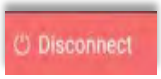
Connecting to an EI-Analytic™ account from WiSER Vibe is easy, just press the center button.



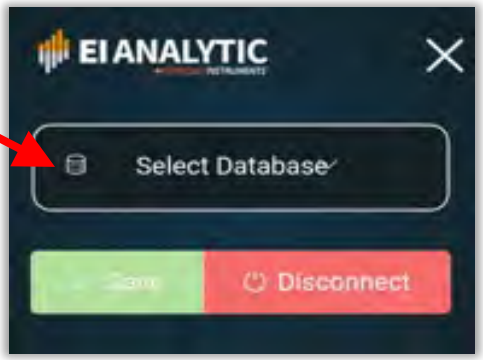
Input your account credentials, and press 

If you have more than one database, choose which one to load.

Tap 

to load it, or 

to log out.



A green ring around the Login icon indicates a successful connection to an EI-Analytic database. Login credentials will be saved, so subsequent logins will not require re-entering the Email address and password.

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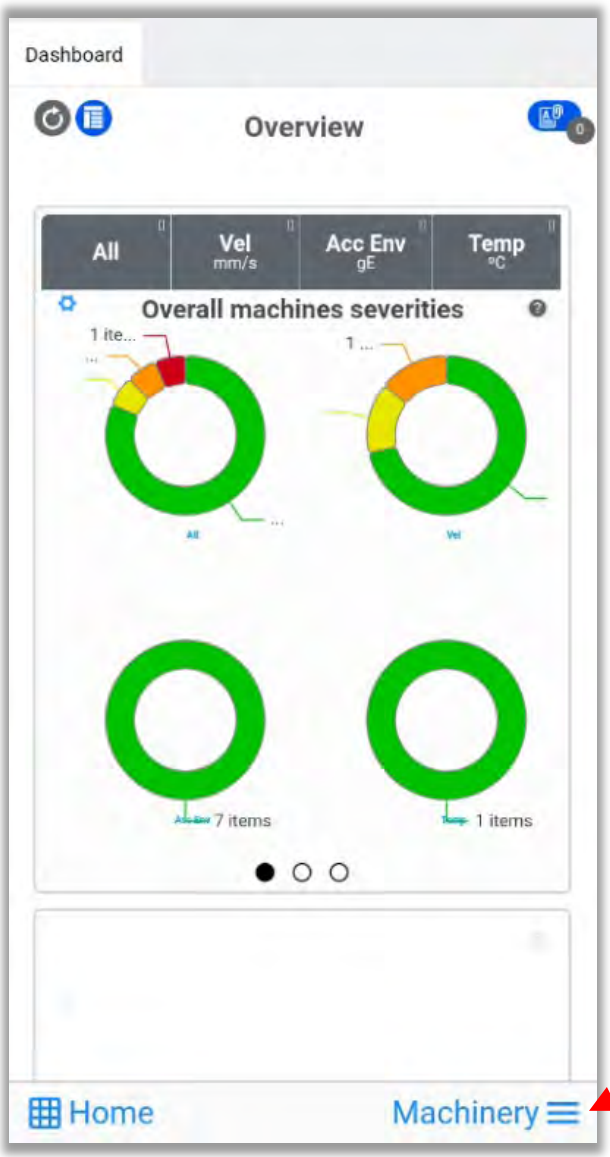
EI-Analytic

The EI-Analytic button opens the **Overview Dashboard**, which displays a summary of all Companies in the current database.

The Main Dashboard contains four charts. See Chart descriptions below.

- Overall Machines severities
- Severity Score
- Highest Rate of Asset Health Decline
- Bad Actors List



Database Window

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The Database Area

The Machinery button opens the Database window:

If you have multiple databases associated with your EI-Analytic account, the Database selector can be used to change the database.

Database selector

The default units used to determine the colors of the icons is Vibration. A Filter can be applied by tapping the Filter bar. The first section controls the source for the Severity colors shown in the Data Tree.

Filter

Data Tree

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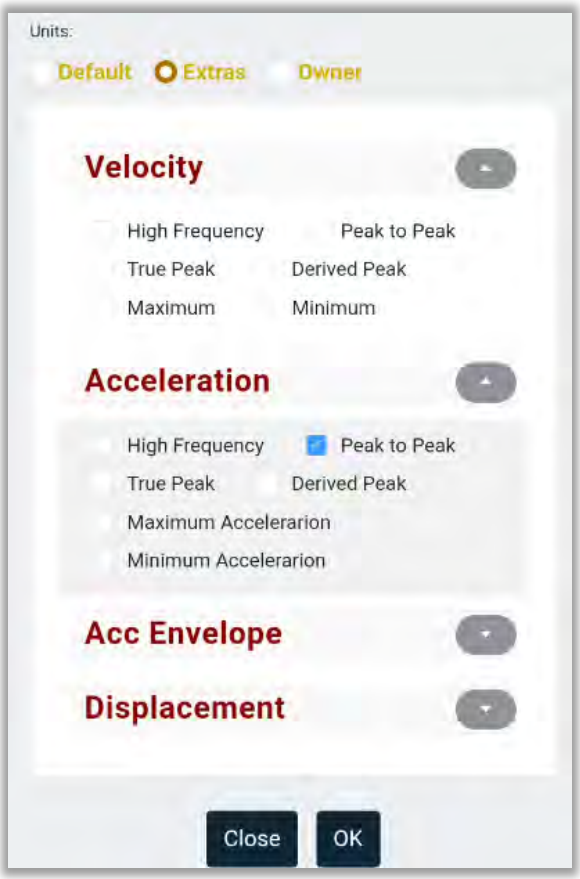
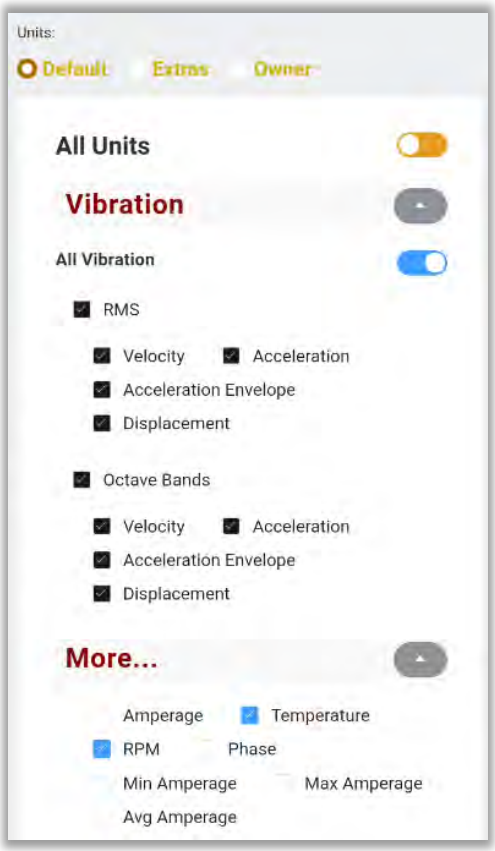
- **Default Machine Learning** - Severity colors are shown based on Machine Learning, if configured. If not, colors reflect User settings for alarm colors.
- **Default User** – Shows User settings as source for colors, if configured. If not, shows Machine Learning settings.
- **Only Machine learning** – shows Macine Learning only.
- **Only User** - shows User alarm colors only
- **Calculation for Companies and Areas**. – choose Average or Maximum Severity used to color the Companies and Areas in the Tree area.

The second section of the Filter screen allows changing the Data Tree view to see colors for specified units.

Tap the **Extras** button to change the units shown on the Data Tree. For example show peak-to-peak Acceleration instead of the default RMS.





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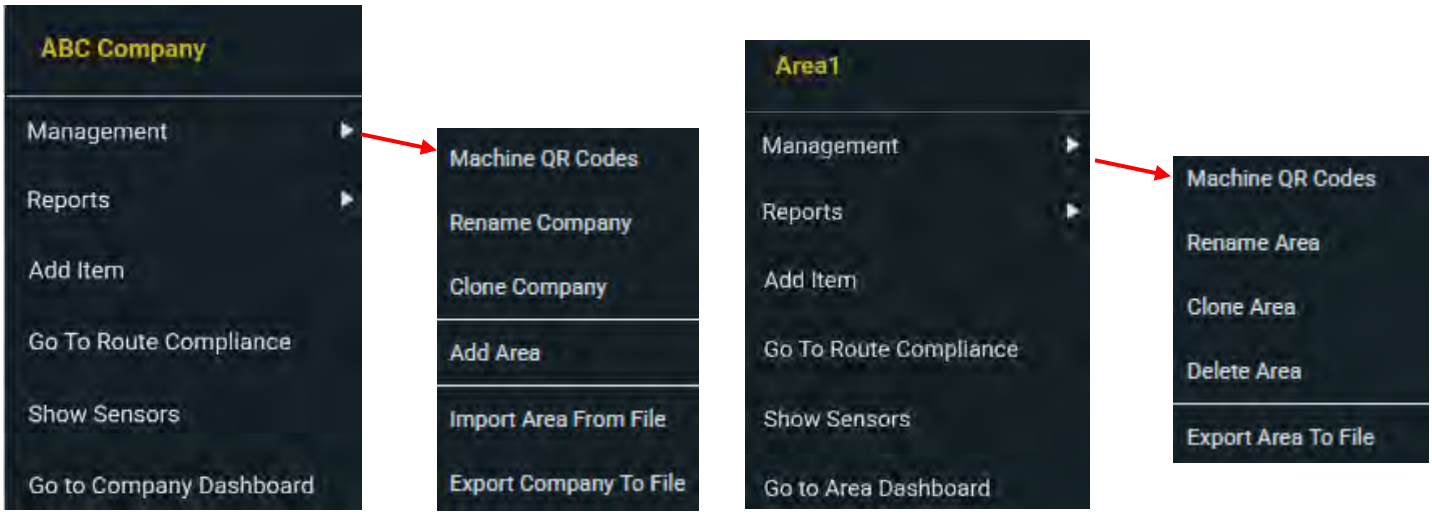
Tap a **Company** in the Data Tree to expand it and show the underlying **Areas**. Select an Area to expand and show the **Machines**, which in turn expands to show the **Points** and then **Axes**. Each level shows an associated Severity color.

Touch any Company, Area, Machine, Point, or Axis in the Tree to open its Dashboard for further analysis.

Click the Settings icon beside any entry for more functions. 

At the Company level, you can **Rename** the company and see all assigned devices (Show sensors) in addition to other functions. The Area settings include similar options:



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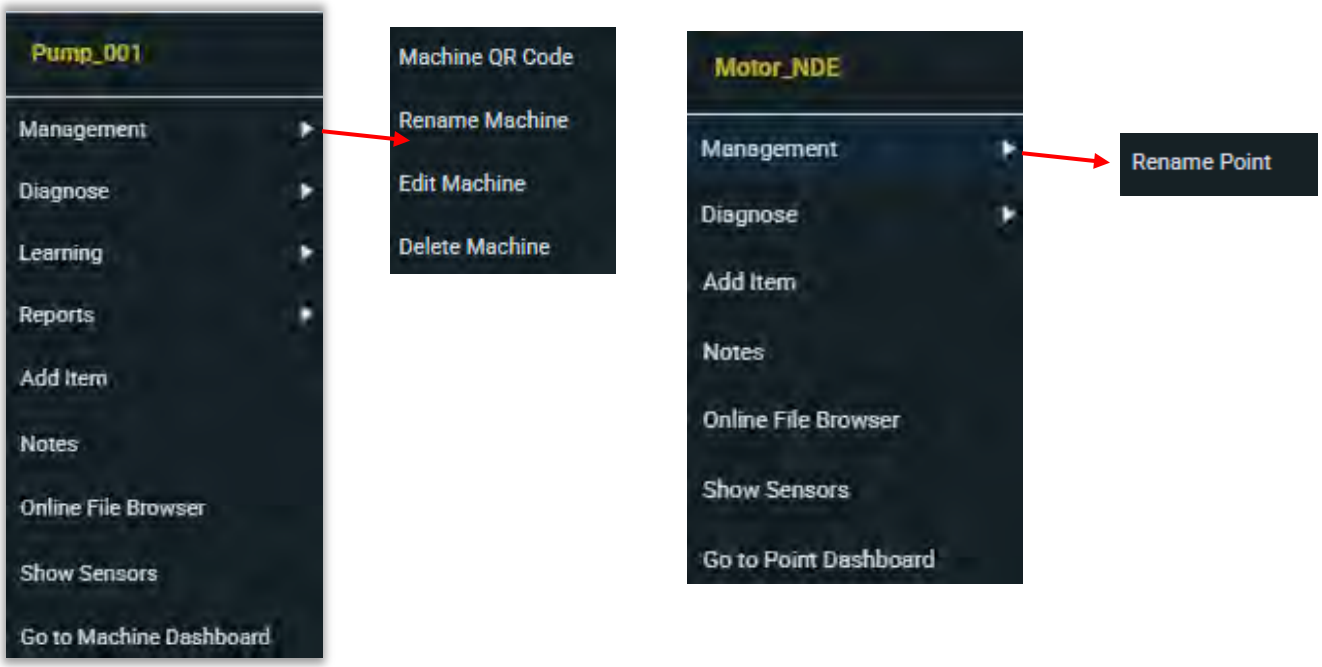
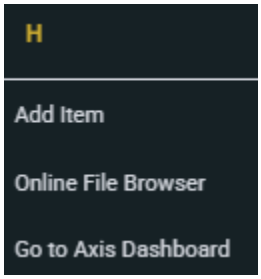
The Machine level menu allows access to common functions like Machine management as well as links to the Diagnose Manager feature and Machine Learning. Further details are included in this guide. Similar options are found in the Machine Point .





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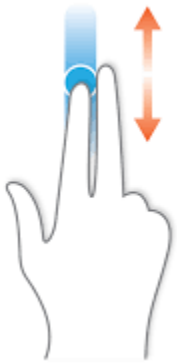
Main Dashboard Charts

Note - Use 2-fingers to scroll up/down through the Charts:



Overall Machine Severities

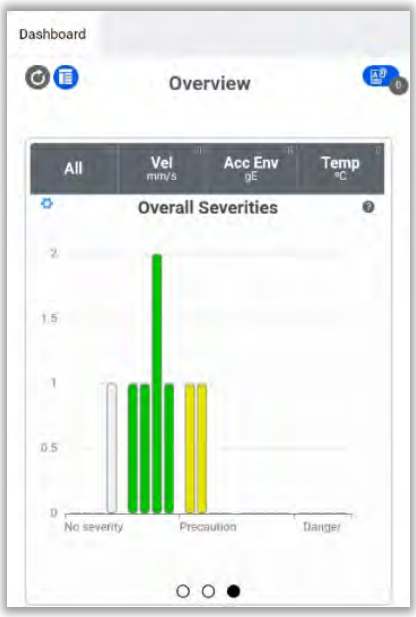
This chart contains three pages of Overall Severities. The colors shown range from Red, the highest severity, to Green, the lowest. Page 1 has four circle graphs representing a Severity summary for all **Companies**, **Areas** and **Machines** in the database:

- All – includes Velocity, Acceleration and Acceleration Envelope data combined.
- Vel(ocity)
- Accel(eration)
- Acc Env

Touch a graph to see a list of **Machines** used to determine the color.

On Page 2, the charts represent a summary for each **Company** in the database.

Page 3 is the same as page 2, but in bar graph format.



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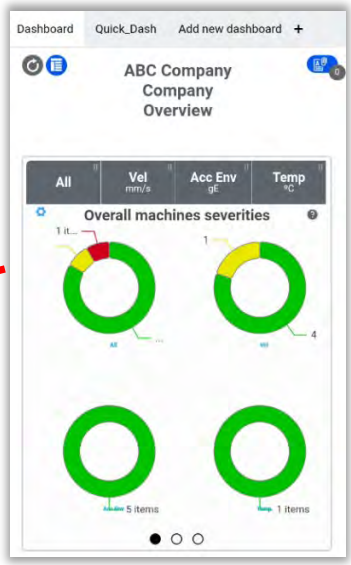
Tap the Settings icon at top left of any chart to access options for viewing the data in a table format and exporting.

Severity Score

The Severity Score chart displays a bar graph summary of the **score** calculated for each Area of all Companies. Score is a standardized value derived from different measurement parameters, created to assign a color code to a Company, Area, Machine, Point or Axis for quick visual status indication. For in depth information about **score**, please visit the Erbessd website at:

https://www.erbessd-instruments.com/tutorials/what-is-the-score-how-is-it-calculated

Tap anywhere on the bar graph, and the **Company** Overview screen will open.



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Highest Rate of Asset Health Decline

The slope represents the rate of change of the vibration parameter over time. Positive slopes indicate increasing values, and the steepness of the slope reflects the magnitude of the change. Analyzing the slope helps identify trends, patterns, and abnormalities in vibration data, aiding in diagnosing faults or anomalies.

Bad Actor List

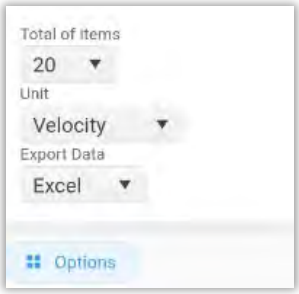
As the name describes, this is a list of the machine points with the highest amplitude of velocity, in descending order.

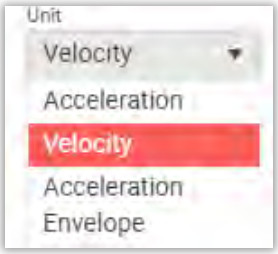
Press the + button beside any Machine name to expand the view to include Points

A Go to Diagnose link is provided in the Actions column. See the *Diagnose Manager* section of this guide for more information.

The Options button accesses the settings for :

- the number of items displayed
- the Unit
- Export format





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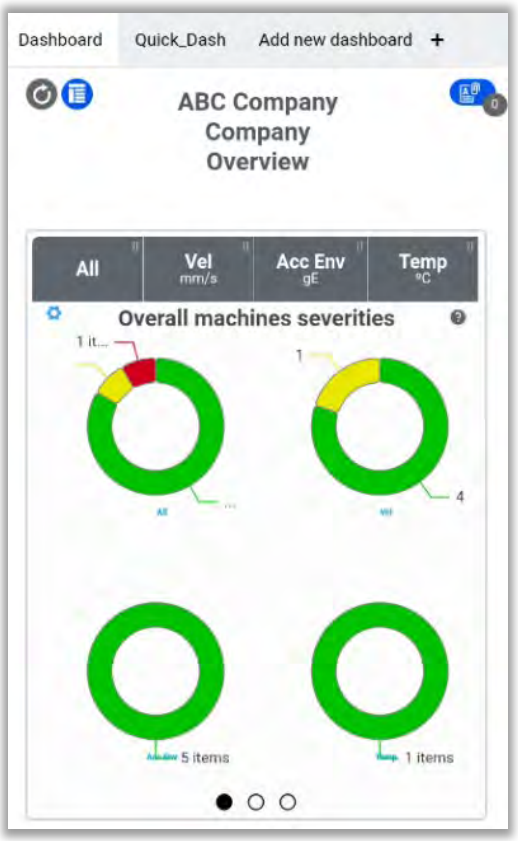
Company Dashboard Charts

Click on a Company in the Data Tree to see the Company level Dashboard. To customize the default dashboard, or create a new custom Dashboard, see the *Managing Dashboards* section of this guide.

Below the Overall Machine Severities are charts for:

- Severity Score
- Parameter value Bar graph
- Bad Actor List
- Last Measures of Children (Areas)
- Highest Rate of Asset Decline
- Octave Band Counters



Last measures

Shows a summary of the last measures for each Area of a Company.

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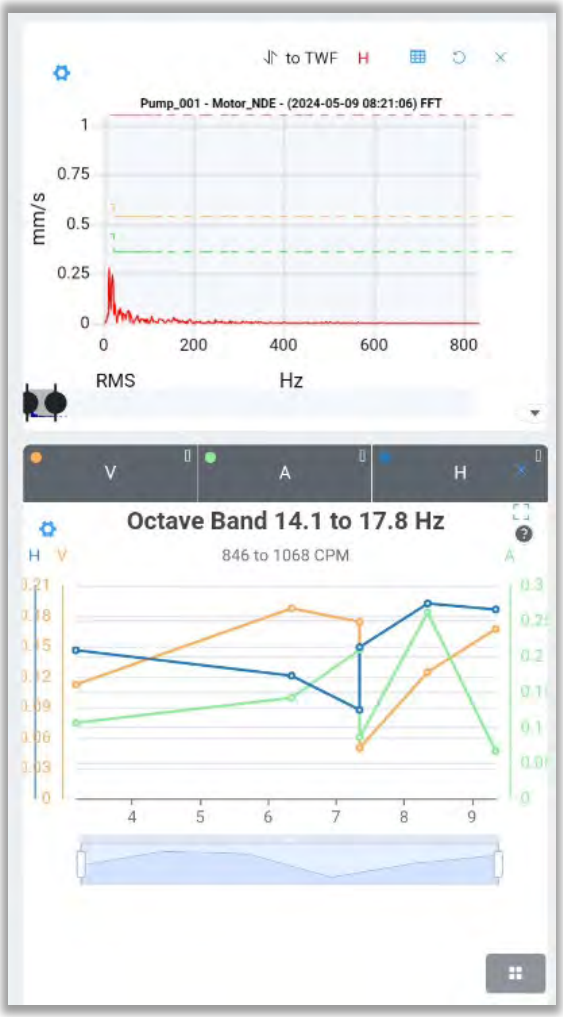
Octave Band Counters

This chart shows the alarmed color counts of the Octave Bands.

Press the + button beside any Machine name to expand the view to include Points, and further expand to Axis level by pressing + again. Clicking on the colored circle opens a more detailed view that includes a list of measurements, the FFT, and a Trend chart for the date range selected.



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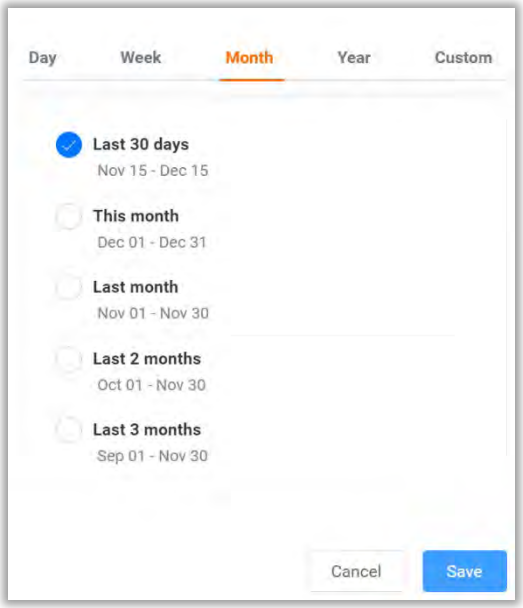
Use the Date Selector  to edit the date range, which defauts to the past 30 days.

The blue arrows increase/decrease the date range by one month.

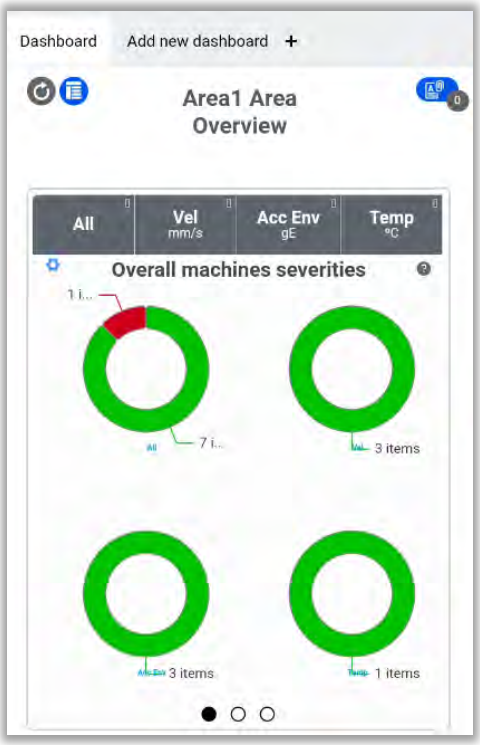
Clicking on the date display opens the Selector tool:



Area Overview Dashboard

The Area Overview Dashboard contains similar charts as the Company Overview. This Dashboard can be changed or new custom Dashboards added, see *Managing Dashboards* section of this guide for more details.

- Overall Machine Severities
- Paramater value Bar graph
- Severity Score
- Bad Actor List
- Highest Rate of Asset Decline
- Last Measures of Children (Areas)



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Machine Dashboard Charts

Click on a Machine in the Data Tree to see the Machine Overview dashboard. The default can be changed or new custom Dashboards can be created. See *Managing Dashboards* section of this guide for more details.

Charts in the Machine Dashboard include:

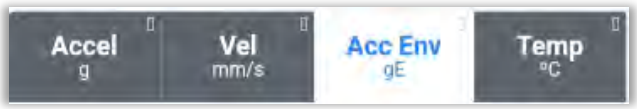
- Machine Overview
- Trend graph
- FFT/TWF
- Overall Severities
- Parameters Severity Score
- Severity Score
- Online File List
- Octave Band Counters

The Machine Overview chart contains analog style gauges and shows data for the past week. To add units such as peak-to-peak acceleration to this chart, edit the **Default Units** tab of the **DB Settings** for the EI-Analytic account.

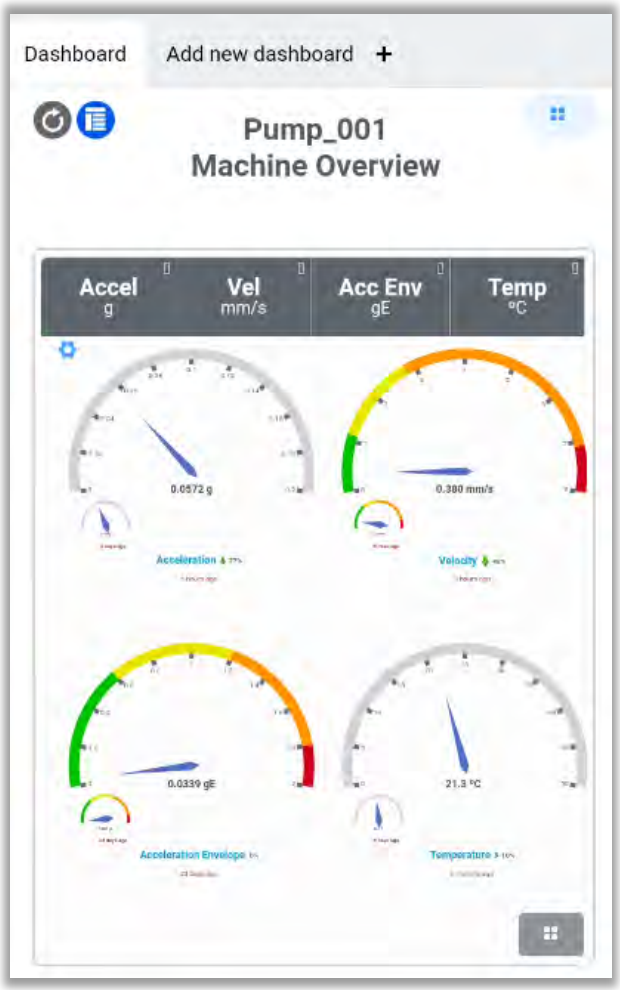
Four Units are displayed:

- Acceleration
- Velocity
- Acceleration Envelope
- Temperature

Any of these can be toggled on/off by touching the associated tile at the top.



The  button controls the date range for the data displayed.



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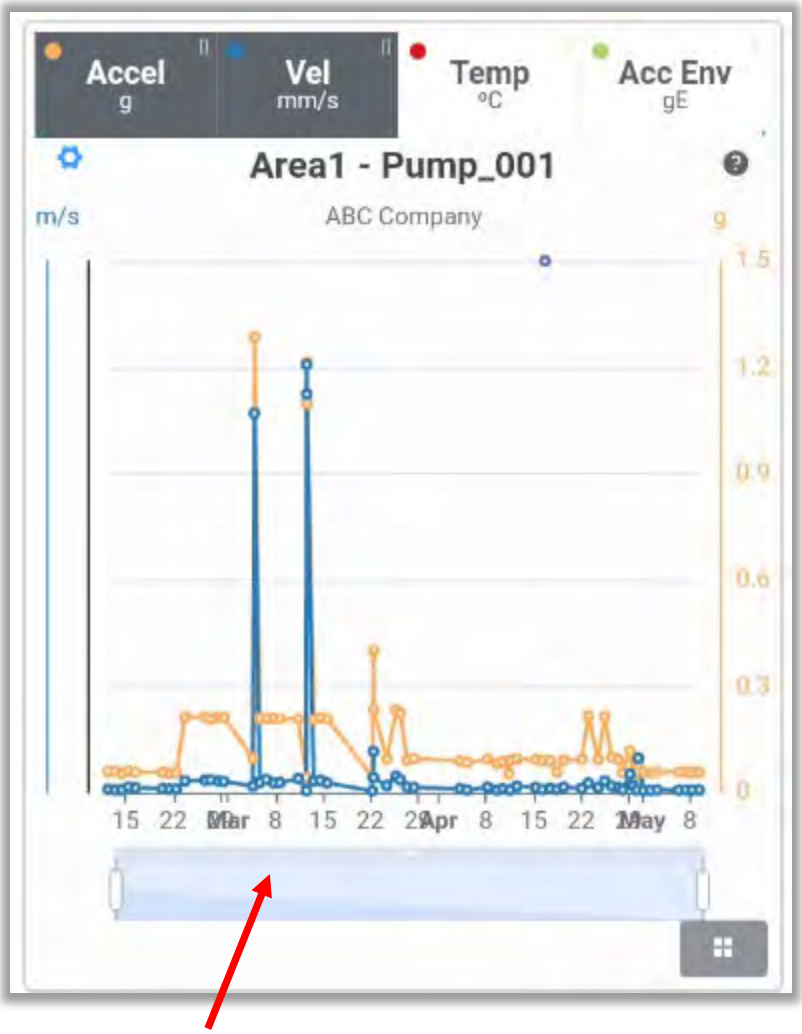
Trends Chart

The Trends chart displays information for Acceleration and Velocity. Temperature(internal) and Acceleration Envelope may be added by clicking the white tile. **NOTE** - Additonal units such as peak-to-peak velocity may be added to the Trends Graph by changing the **Default Trend Units** in the EI-Analytic Account **DB Settings**.



Hover the cursor over the graph to see info for each measurement:

Click on a point in the Trend graph to open the associated FFT in the FFT window

The slider below the graph can be used to adjust the date range.

The  button also changes the date range and the Increment (hour, day, week, etc). The **reason** for data collection can also be filtered via the drop-down field. The four selections in blue are the defaults.

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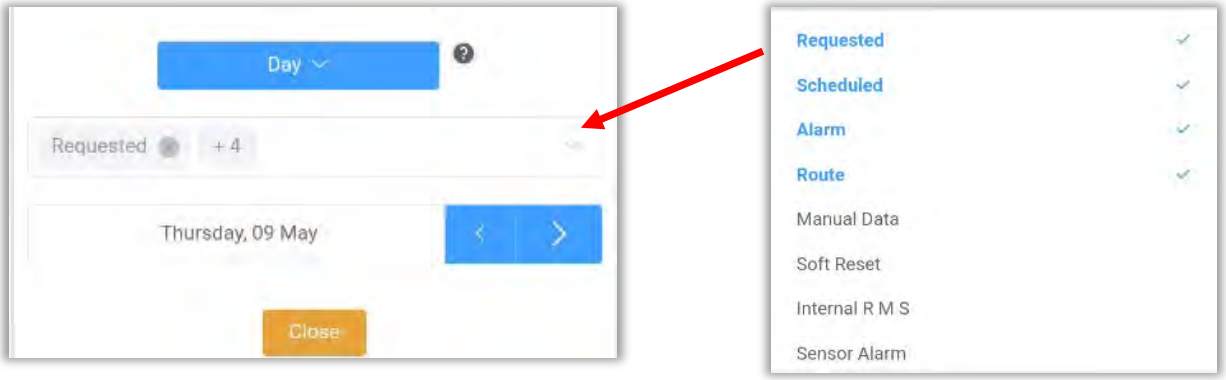
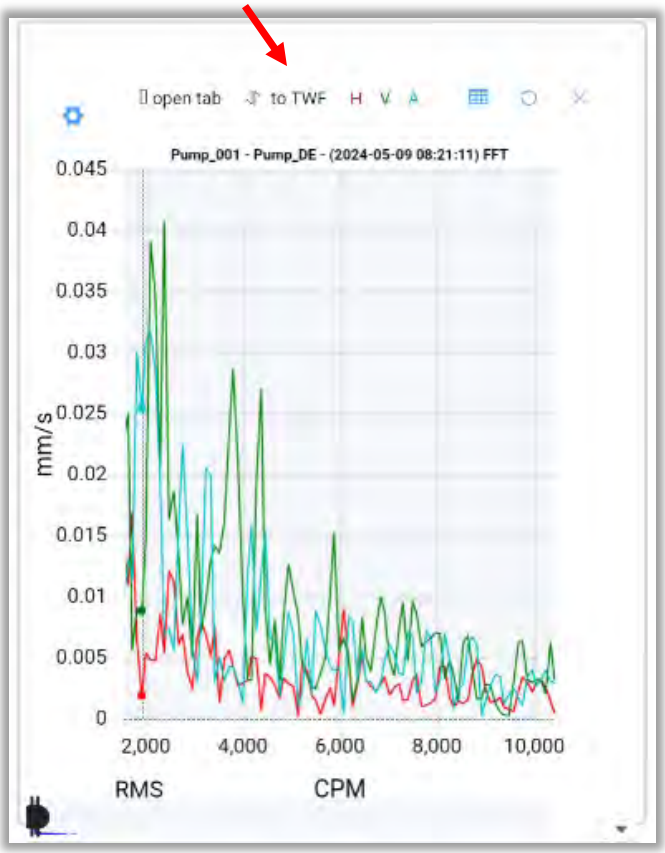


FFT

Below the Trend graph, the FFT chart is displayed. All analysis tools described in the *FFT tools* section can be used here. The Time Waveform can be opened by tapping Switch to TWF. See *TWF tools* section for more details.

TWF



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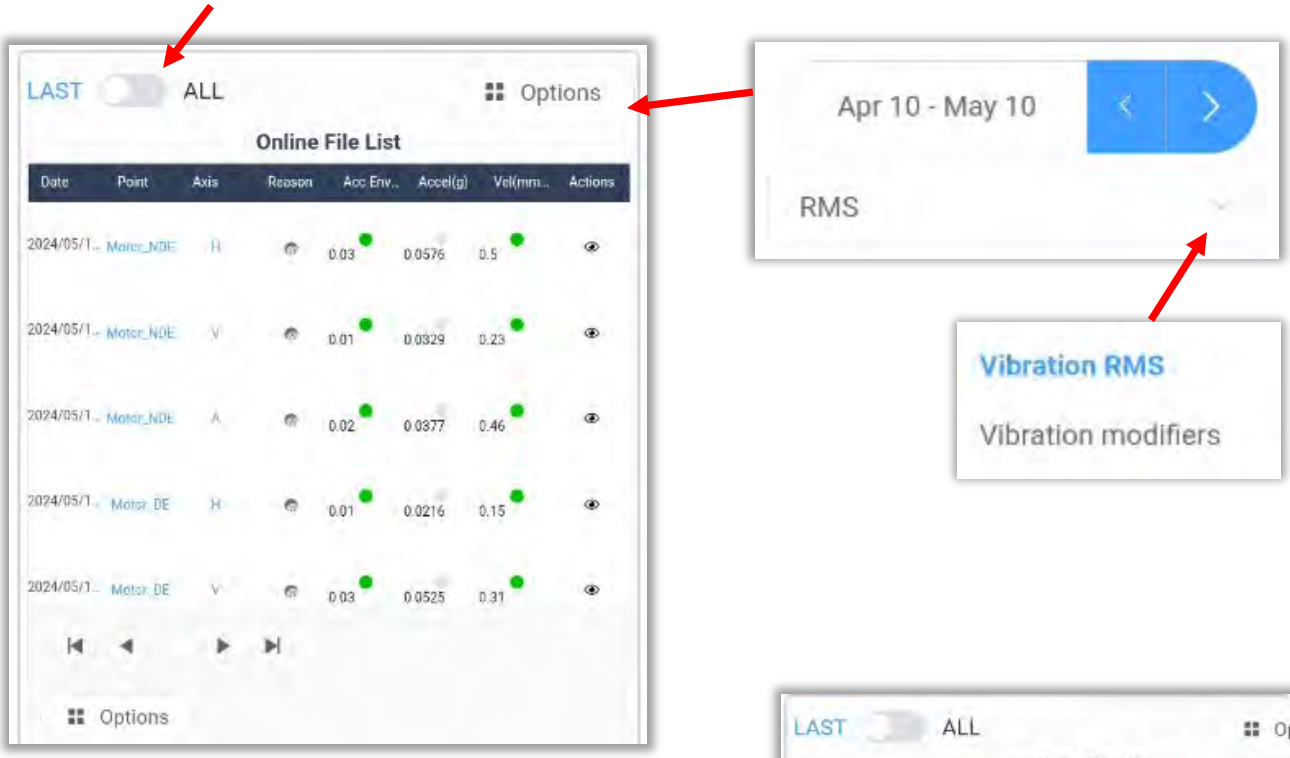
Online File List

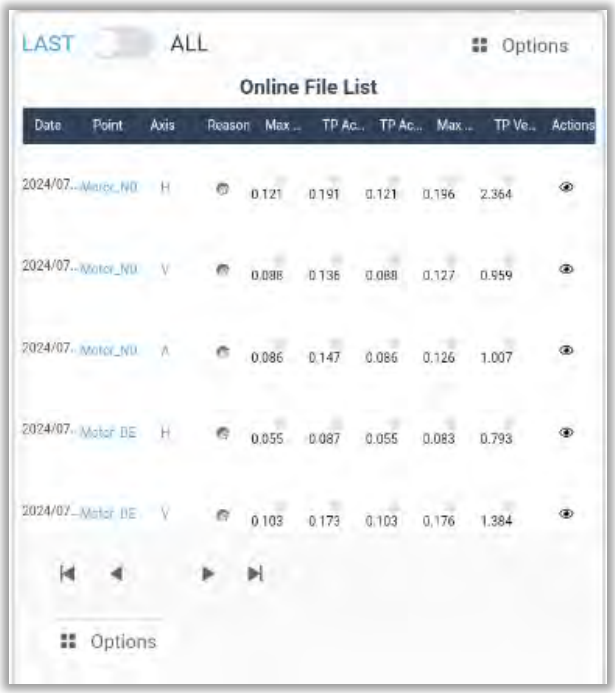
This Chart provides access to a list of RMS and full signal files in the database for the selected Machine, shown by Point and Axis. By default only the last record in the database is displayed.

To see all files, change the slider to **ALL**.



When **Vibration Modifiers** is selected, additional units of vibration are displayed (e.g., True peak acceleration)

Click on the Icon in the Actions column to open a signal file.



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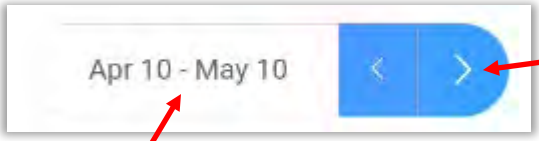
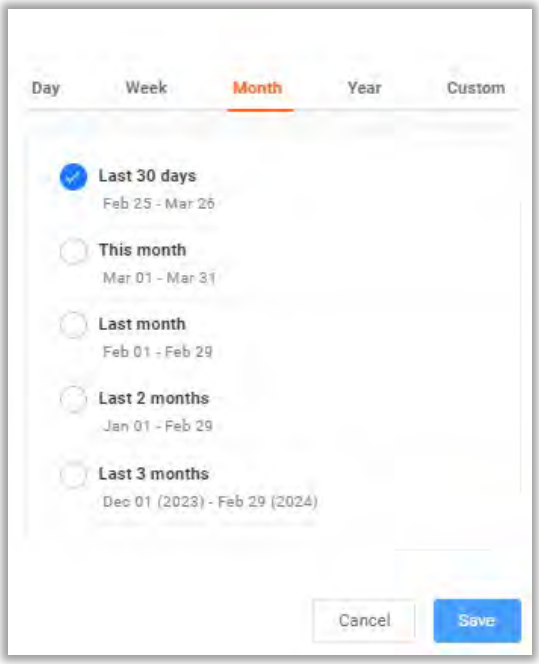
Set the slider to **ALL** at top left to open Historic mode.

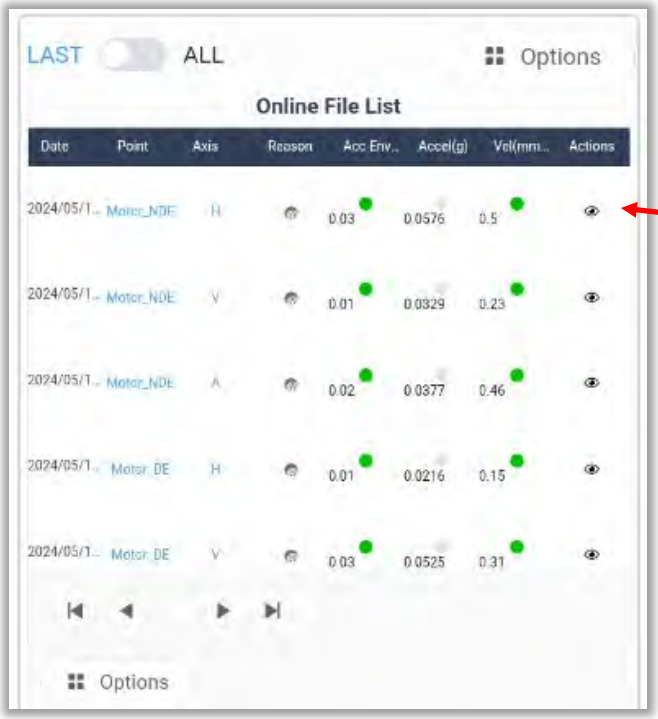


Click the blue arrows to go forward or back 30 days

Click here to open the Date Selector

Make a selection and press Save.





Click the **show data** Icon to open a signal file in the FFT window of this Dashboard

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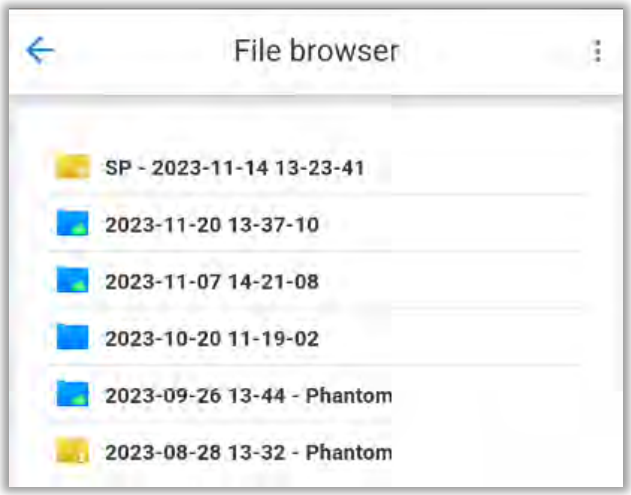
File Browser

The File Browser can be accessed from the Home screen, or the Settings menu.

Files are saved from data collections made using WiSER 3X, WiSER Mini or Phantom sensors.

Blue folders contain signal files that were saved in a Route, but not uploaded to the Cloud.

The yellow folders are those files saved from on-demand(off-Route) data collections from the Analysis tab. Folders prefixed with **SP** are from Single-Plane balancing sessions.



Once a folder has been uploaded to an EI-Analytic database, a cloud symbol is added to the folder icon. Data collections from Phantom sensors are denoted by the folder name that is auto-generated when a file is saved. Selecting a folder shows the individual .anl files. Tapping on the file opens it in the analysis window.

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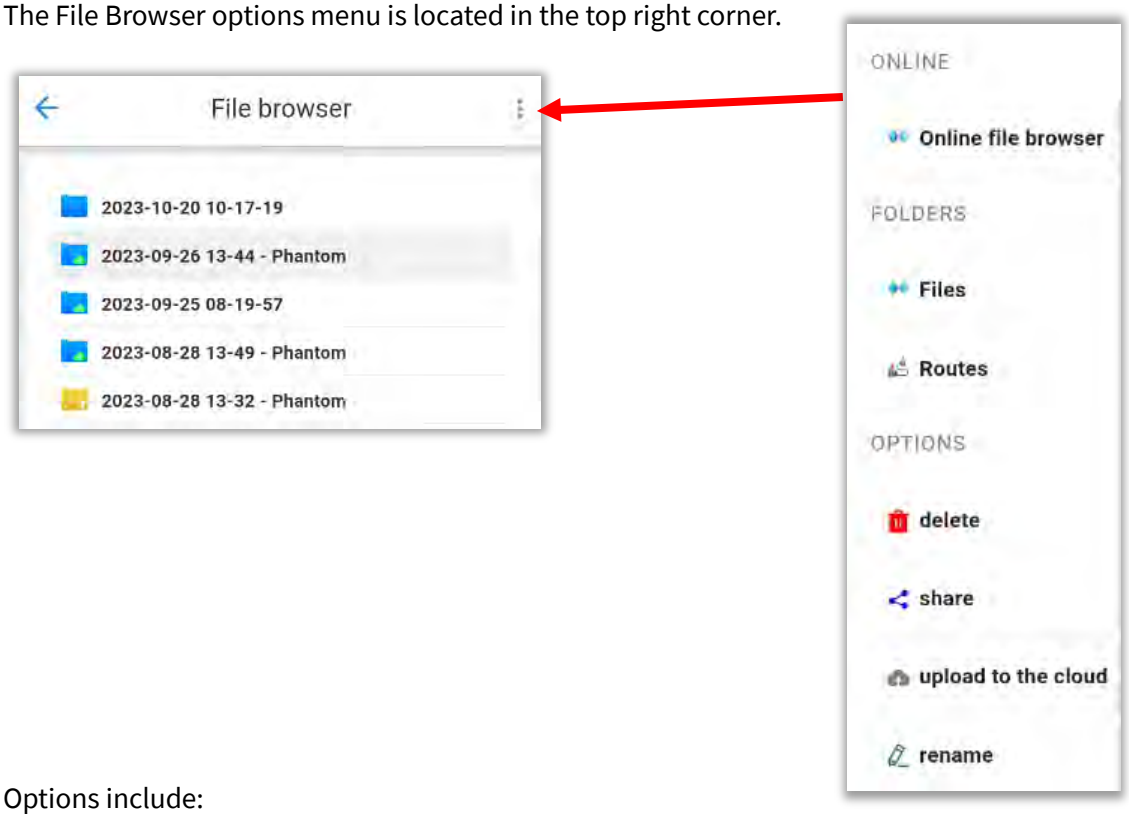
The File Browser options menu is located in the top right corner.



Options include:

- **Online File Browser** – accessible when logged into an EI-Analytic database, see below.
- **Files** – This is the default view when the Files tab on the Home screen is opened.
- **Routes** – Accesses the Routes function, the same as pressing the Routes button on the Home screen. – see *Routes* section of this guide for more information.
- **Delete** – Deletes the selected files.
- **Share** – Export a signal file (.anl file) via media such as email, text, WhatsApp, etc., see Routes section of this guide for more information.
- **Upload to the cloud** – Upload selected file to the EI-Analytic cloud database service. See *Routes* section of this guide for more information.
- **Rename** – Change a file name.

Online File Browser

The Online File Browser provides access to all sensor data stored in the EI-Analytic cloud database, categorized as vibration or thermal image files , and sorted by date.

Click the Date field to open a range selector or use the blue arrows to move ahead/back one month at a time.

Choices range from Day to Year, or set a Custom date

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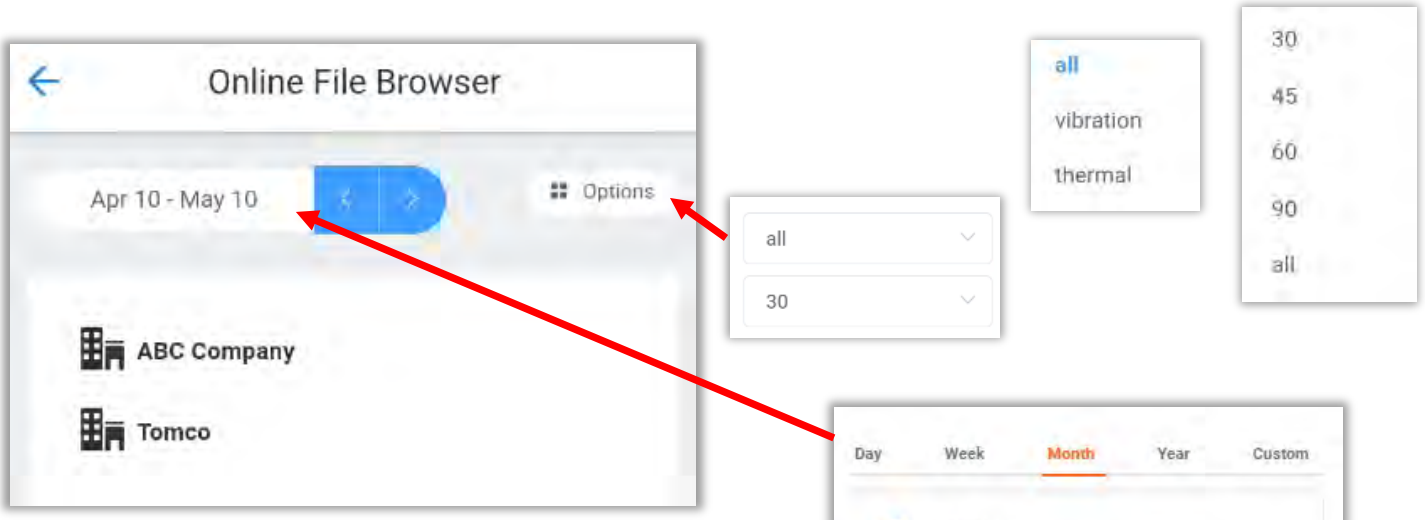
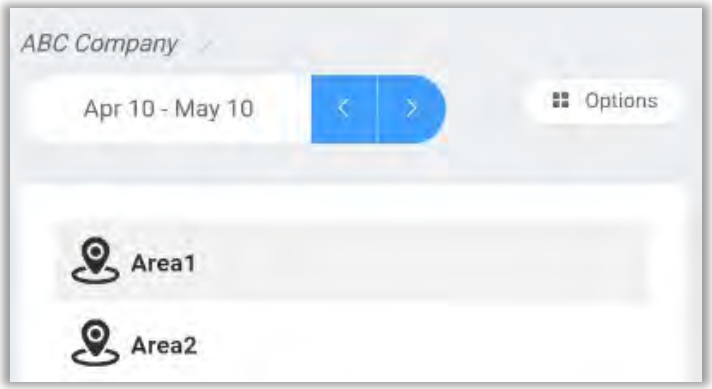


Files may be filtered by vibration, thermal images or both.

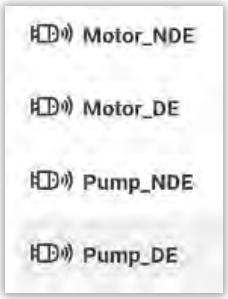
The number of files to open may also be selected.

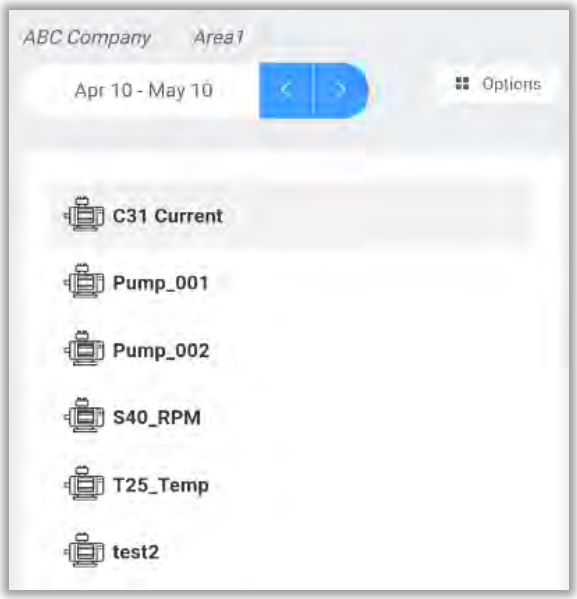
The highest level of the database is presented by default, the **Company**. Selecting a Company then opens the **Areas**.



Click on an **Area** to see all the **Machines**.

Select a Machine to see all **Points**.





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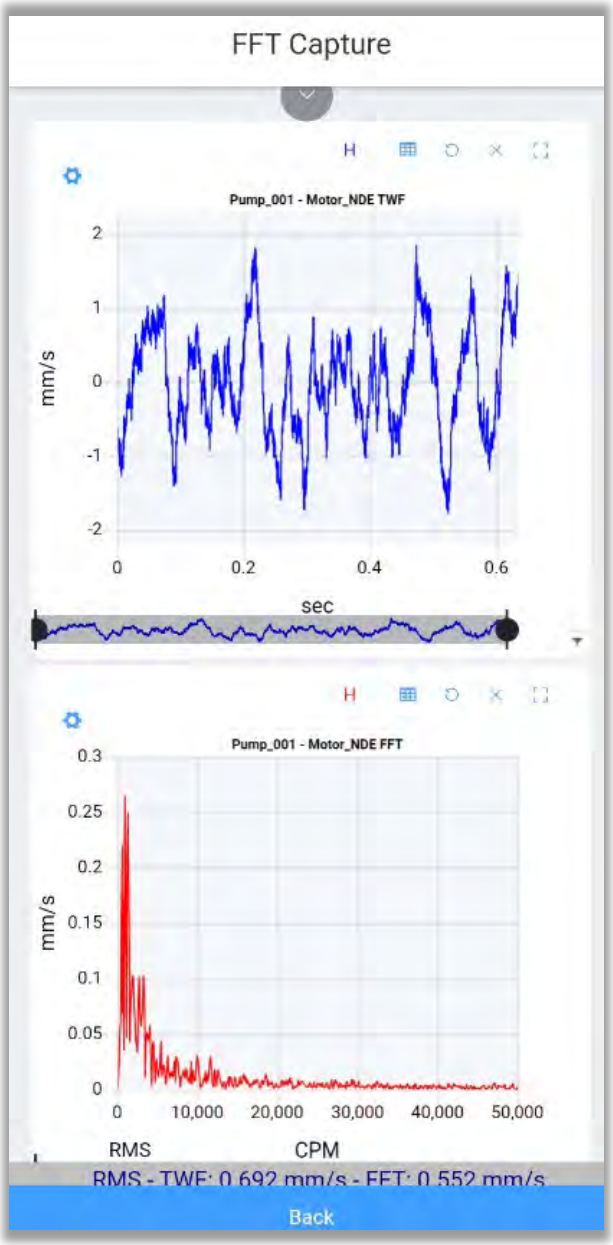
Click a Point to see the **Axes.**

The icon indicates a signal file is available to open for analysis.

Select a file to open the Time Waveform and FFT.



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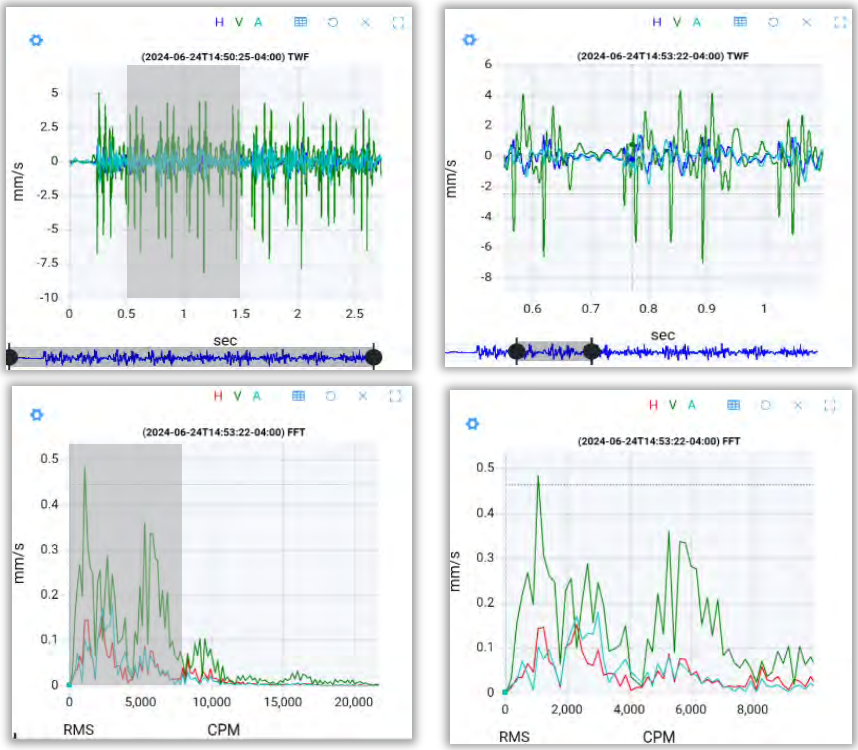
Visualization Tools

There are several tools available to help analysis of TWF and FFT graphs:

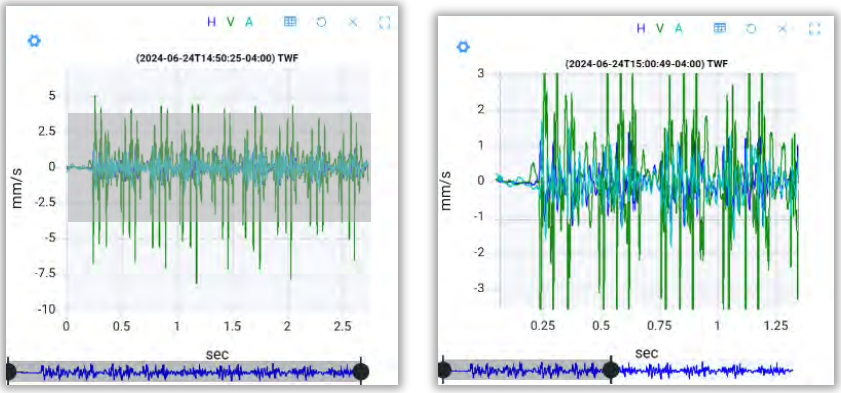
Horizontal and Vertical zoom

Horizontal or vertical zoom is supported by drawing with the cursor on the area of the signal you want to observe. The zoom bar below the TWF and FFT can also be used to zoom horizontally on the graph, however you cannot use this bar to zoom vertically.

Horizontal zoom:



Vertical Zoom:



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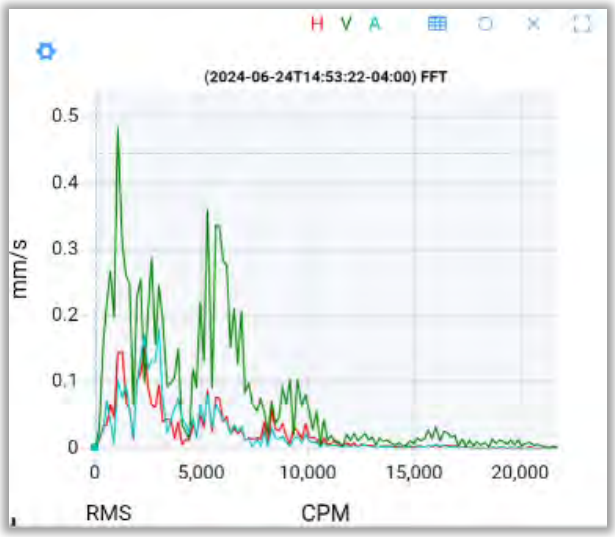
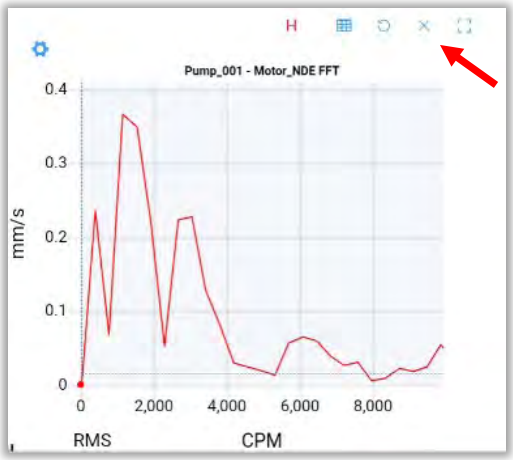
Zoom out

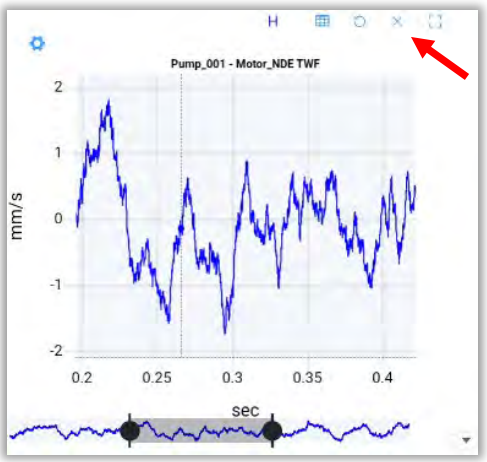
The Undo tool deletes the last zoom that was made, vertical or horizontal.



Delete Zoom

This tool deletes the zoom on the graphic, returning to the default zoom setting.





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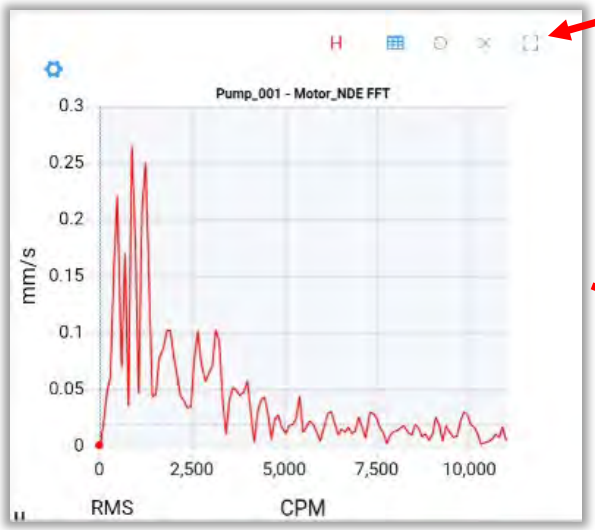
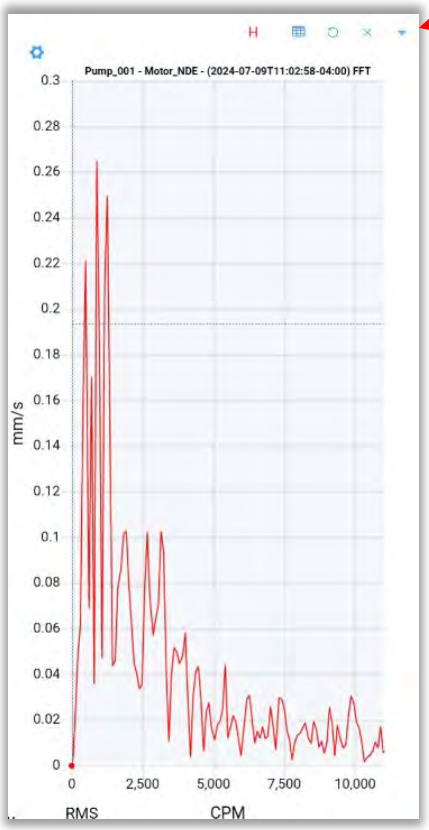
Expand TWF & FFT

Tap on ⛶ to expand the TWF or FFT to full-screen.

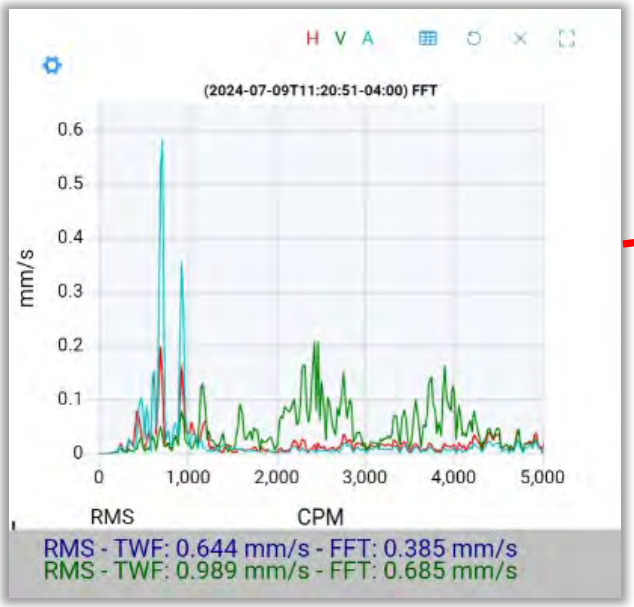


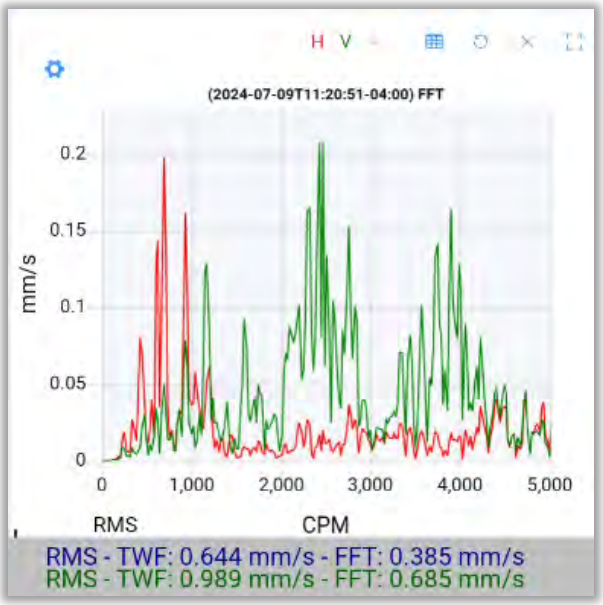


Tap on ▾ to return the graphic to original size.

Activate/Deactivate axes

With triaxial vibration files, it is possible to activate and/or deactivate the axes (H,V & A), by clicking the H V A buttons In the TWF or FFT. Example shows deactivating the A axis. Note how the screen auto-sizes to fit the peaks.





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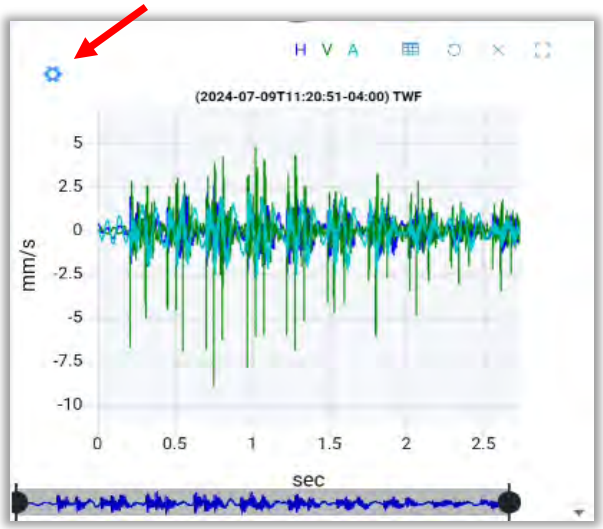
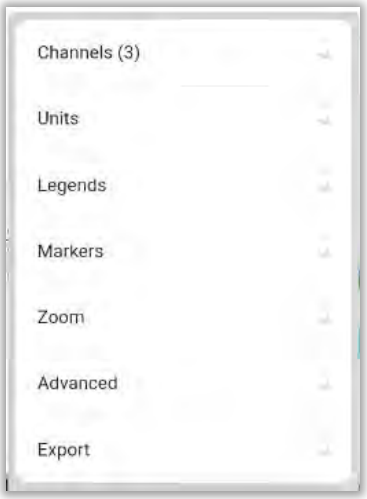
TWF Tools

Tap the settings button  at the upper left corner of the graph to access the TWF tools.





Channels

Choose between the three measured channels (triaxial mode). For each channel there are 3 options:

- **Visibility** – This option toggles the visibility of the selected channel to on or off.
- **Marker** – Allows placement of Markers on this channel. Use the **cursor** to place the marker on the graph or use the bar below to move the marker.

  Tap on  to draw the marker, or  to cancel.

Marker slider

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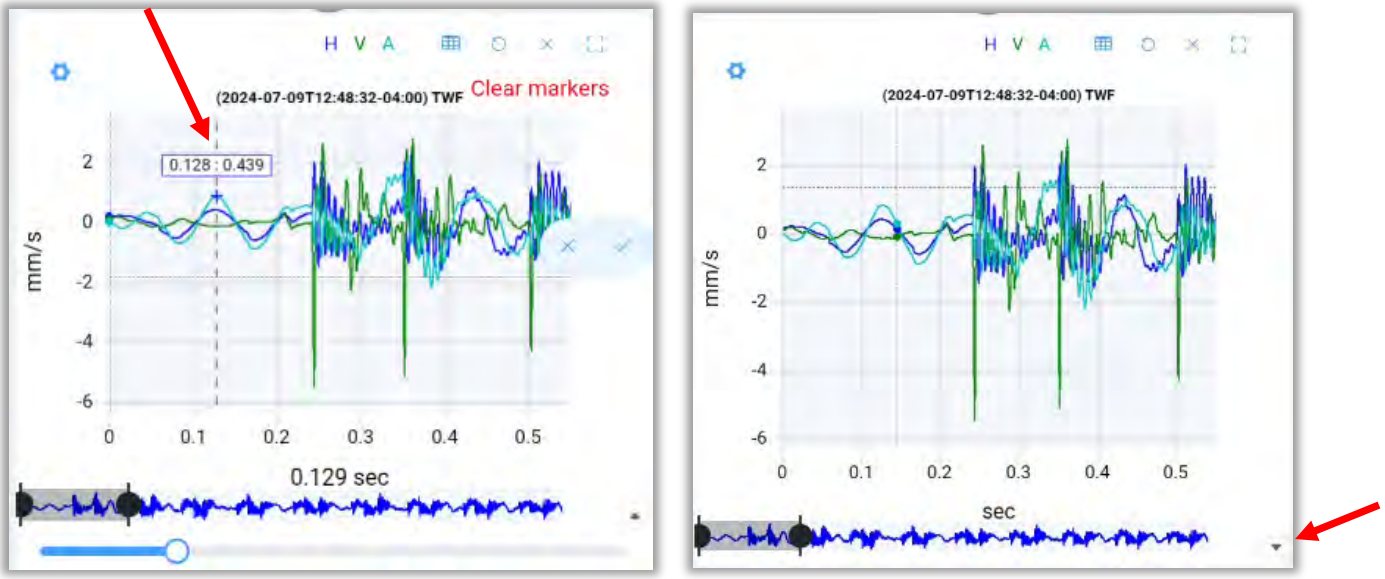
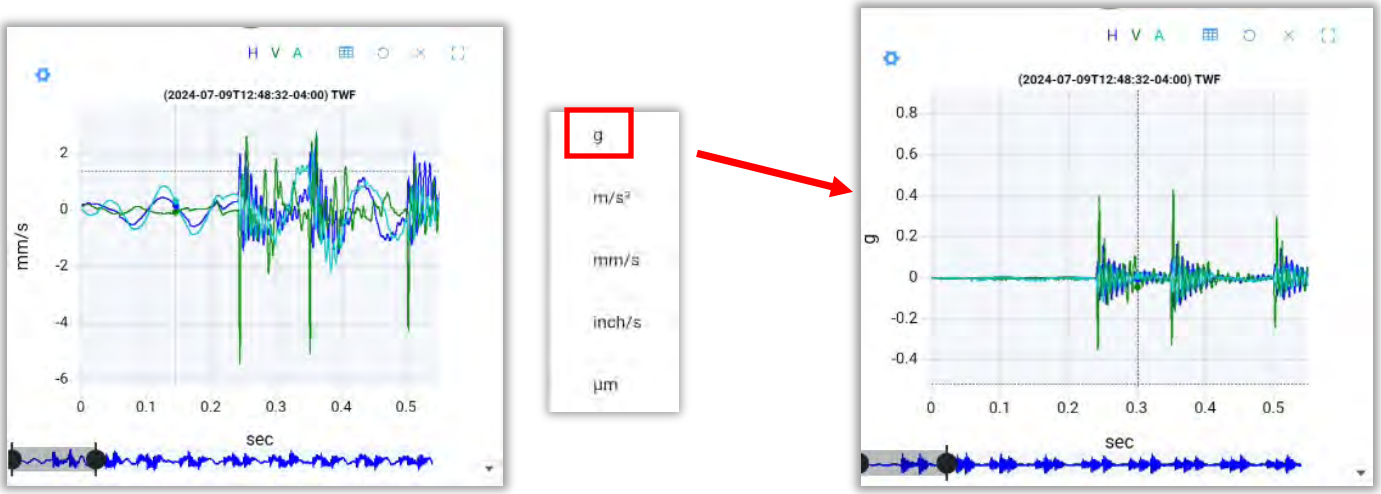
- **Locate** – This feature works the same way as a Marker, however, it only allows location on a measured point on the graph while Markers can be placed between points. When the cursor is moved, it will automatically look for the nearest measured point. A shortcut to this tool is located in the lower right corner of the TWF graph.Tap on ✓ to draw the marker, or ✕ to cancel.



Units

Select the units displayed on the **y**-axis of the TWF and FFT graphs.

Example - switch from velocity in **mm/s** to acceration in **g's**:



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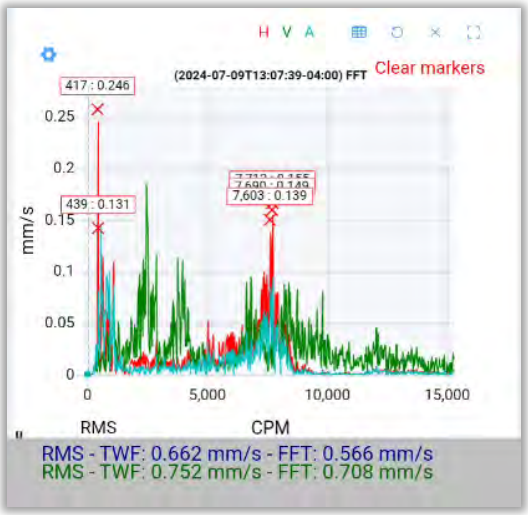
Legends

Toggles the visibility of the Legends on or off.

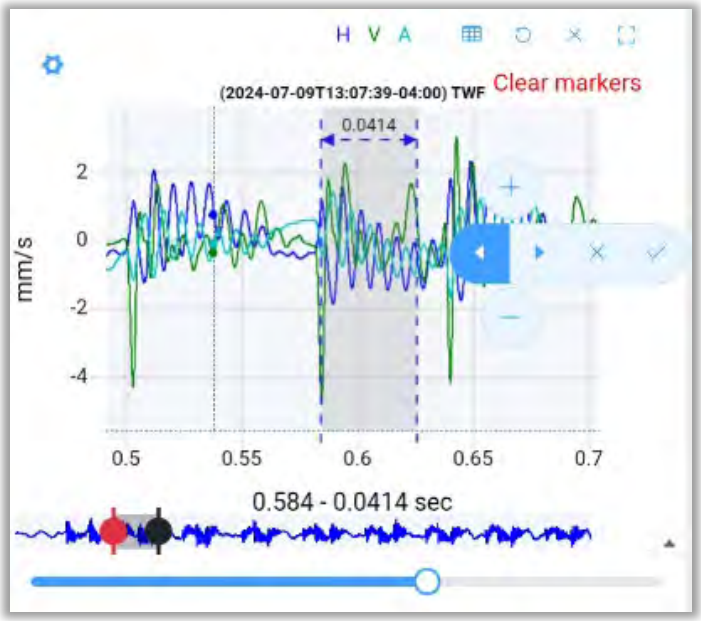
Markers

- **Max values -** Show markers for the Max peak, Max 5 or Max 10 peaks.

Example showing the Max 5 peaks Markers applied:



- **Marker –** Place a marker on the channel of your choice. See Channels section above.
- **Measure Horizontal** – Allows the distance between two points to be displayed.



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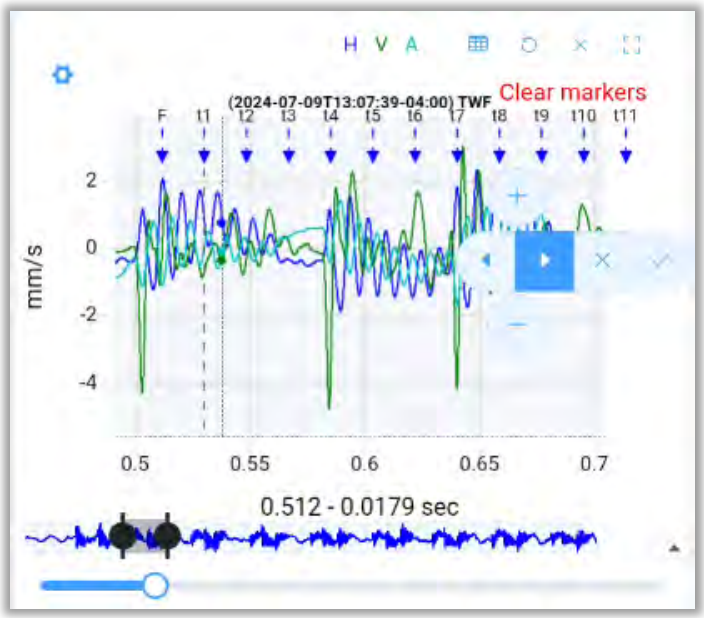
- **Transient** - Draw transient points on the TWF. First locate the fundamental frequency (**F**) on the TWF with the marker bar, and press → to confirm the position, or × to cancel. Then move the first transient (**t1**) with the bottom bar. The rest of the transients will be placed equidistant to **t1** to the right, the distance between them is the same distance from **F** to **t1**. Select + − to add/remove a transient. Select × to cancel and ✓ to confirm the process.



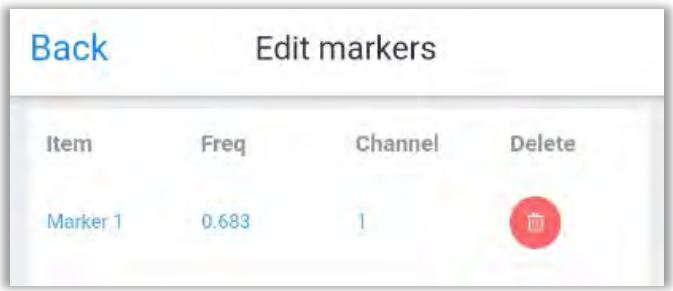
Tap ◂ ▸ to make the current position become the immediate right/left transient.

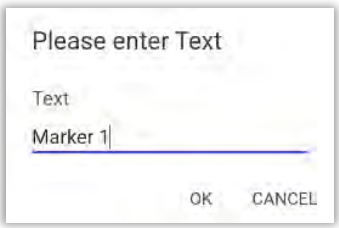
Edit markers

Used to edit previously added markers. The name of the marker is displayed In the **Item** column, depending on the marker type. The **Freq** column shows the frequency at which the marker is placed.

In the example below, the Max 5 markers was selected, so default names were applied.

Both the Item name and frequency can be edited.





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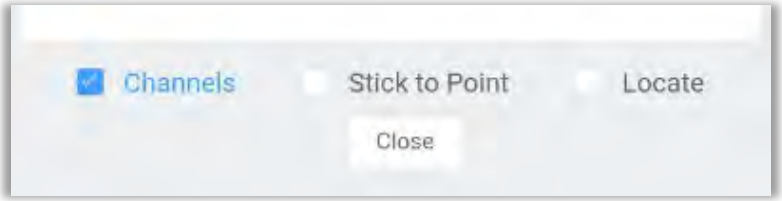
Several useful tools are located at the bottom of the page:

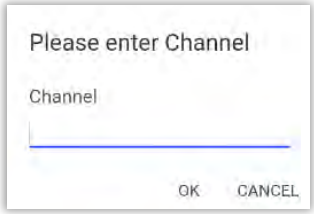


Select 

to add a new column to the edit page.

This displays which channel the marker is located on.

Tap on the number to modify.



Select 

to add a new column to the edit window.

If the value in the column is false, the marker can be moved depending on the position in the graph.

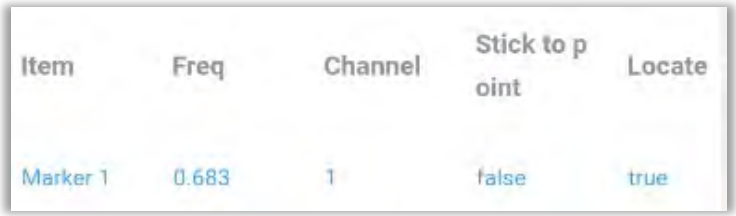
If the value is true, the marker will stay in the current position even if the other markers in its group are modified.

Item	Freq	Channel	Stick to p oint	Delete
Marker 1	0.683	1	false	

Tap on the value to modify.

The 

feature adds another column for locating the marker on the TWF or FFT.



Item	Freq	Channel	Stick to p oint	Locate
Marker 1	0.683	1	false	true

NOTE: This process works the same way for FFT markers described below.

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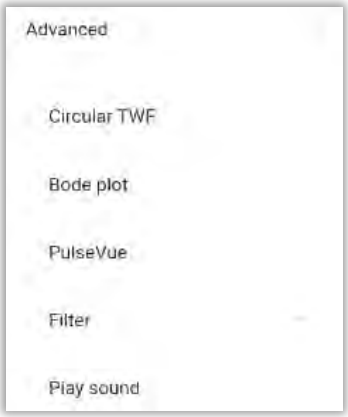
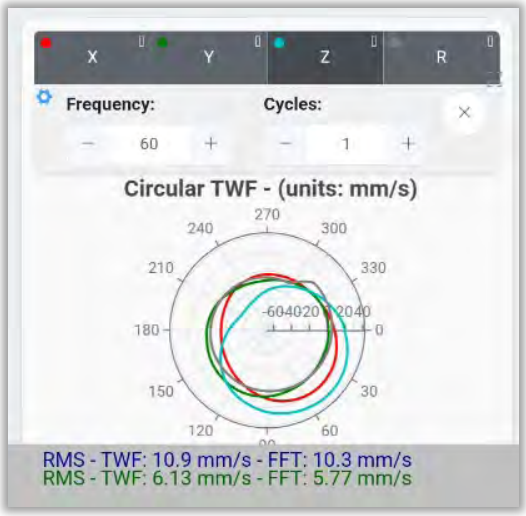
Advanced TWF Tools

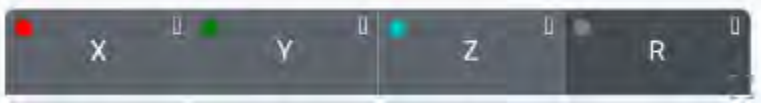
The **Advanced** section contains four options:



- **Circular TWF** - Select this tool to display a graph at the bottom of the analysis screen. **Note**: The units of the graph are the same as those of the TWF.

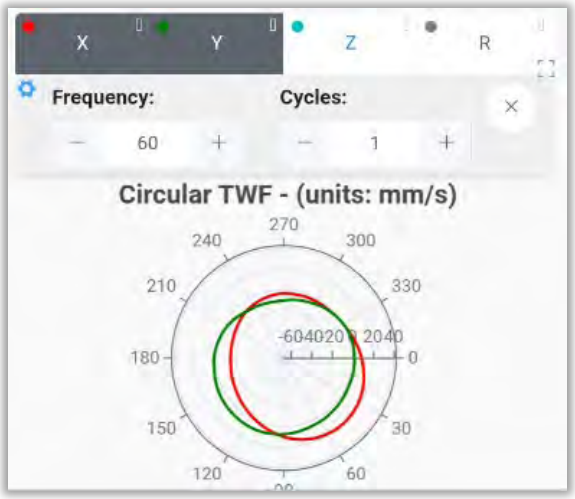


The display of each axis on the graph is controlled using the tabs:

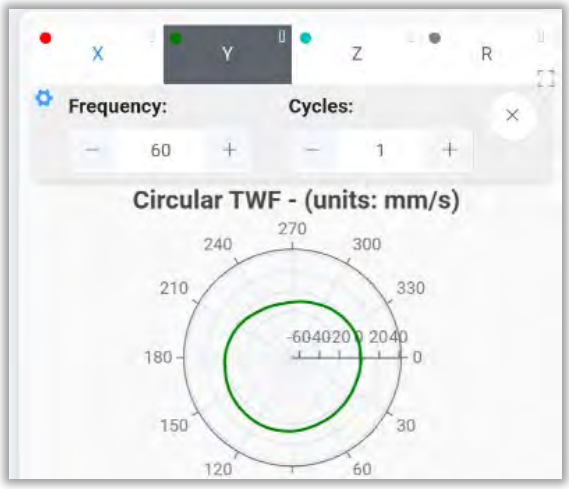


Example:

X & Y



Y



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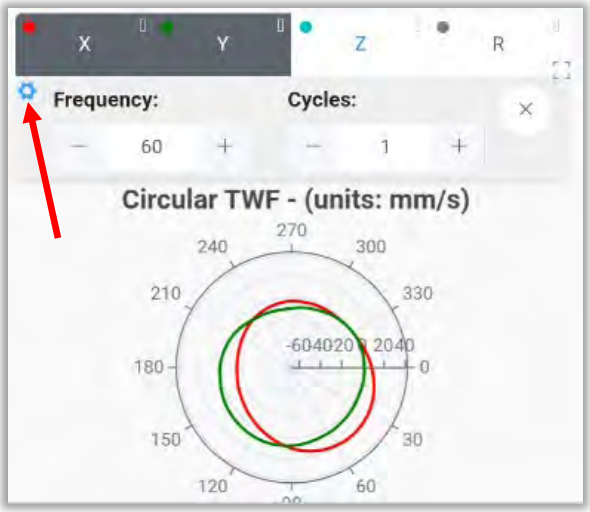
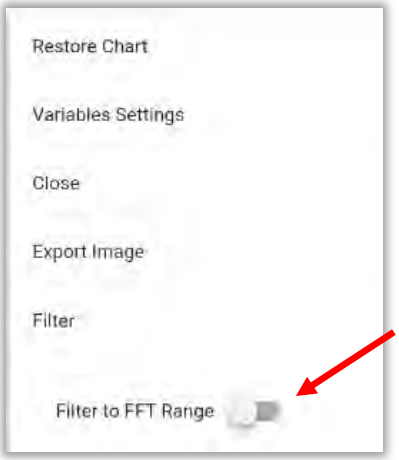
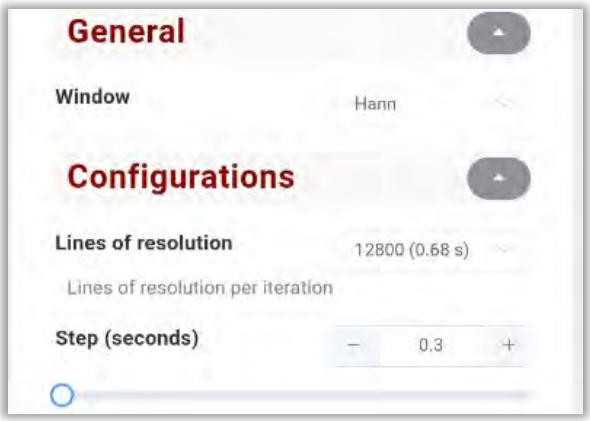
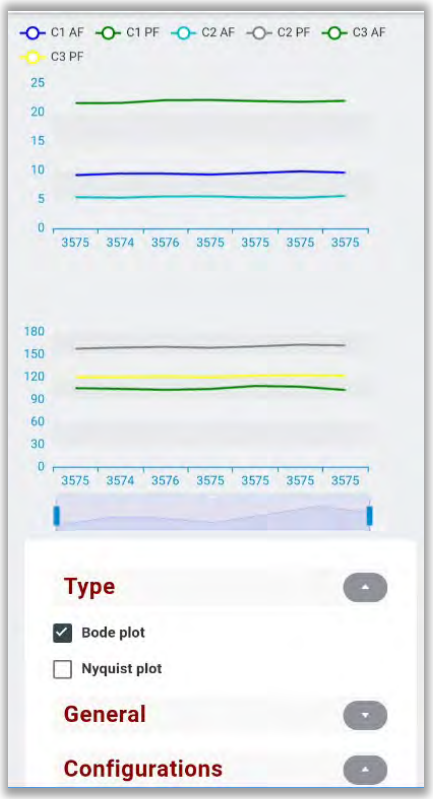
An optional filter may be applied so the graph only uses data within the range used in the FFT. Tap on ⚙ to add the filter.





- **Bode Plot** -used to determine resonant frequencies
  - Requires 2 channels minimum
  - Select Nyquist or Bode plot
  - Set lines of resolution and Step interval





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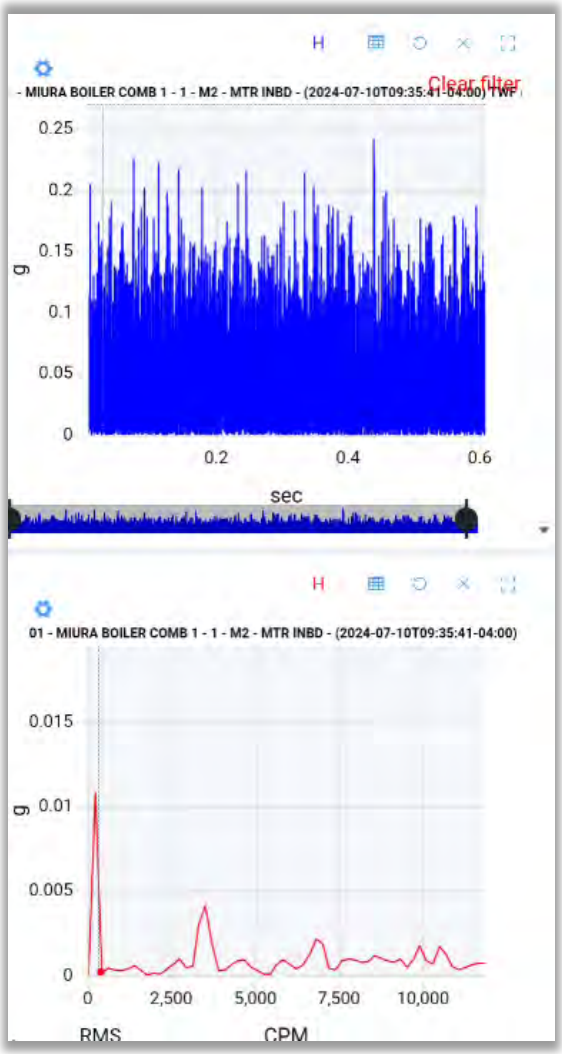
- **PulseVue -** The PulseVue filter is used to aid in analyzing high frequency pulses such as those created by damaged gear teeth in a gearbox or damaged races or rolling elements of a bearing.

To apply the PulseVue filter, open a signal file and view the Time waveform in G's.

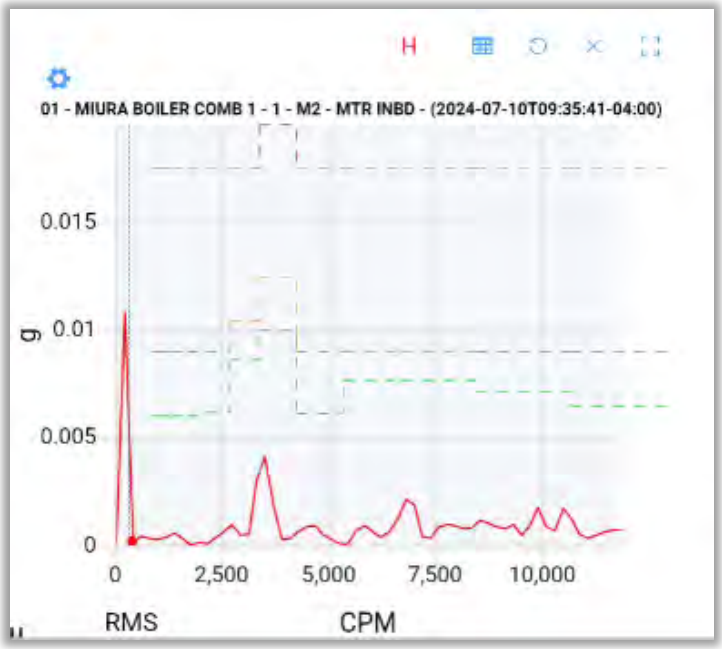
The range defaults from Min 1000Hz to Max. Set as desired in CPM or HZ and press OK.

The PulseVue filter inverts all negative signals to positive, then the acceleration RMS is calculated.

The RMS value is trendable to determine asset health.



Envelope Alarms added after applying PulseVue Filter:



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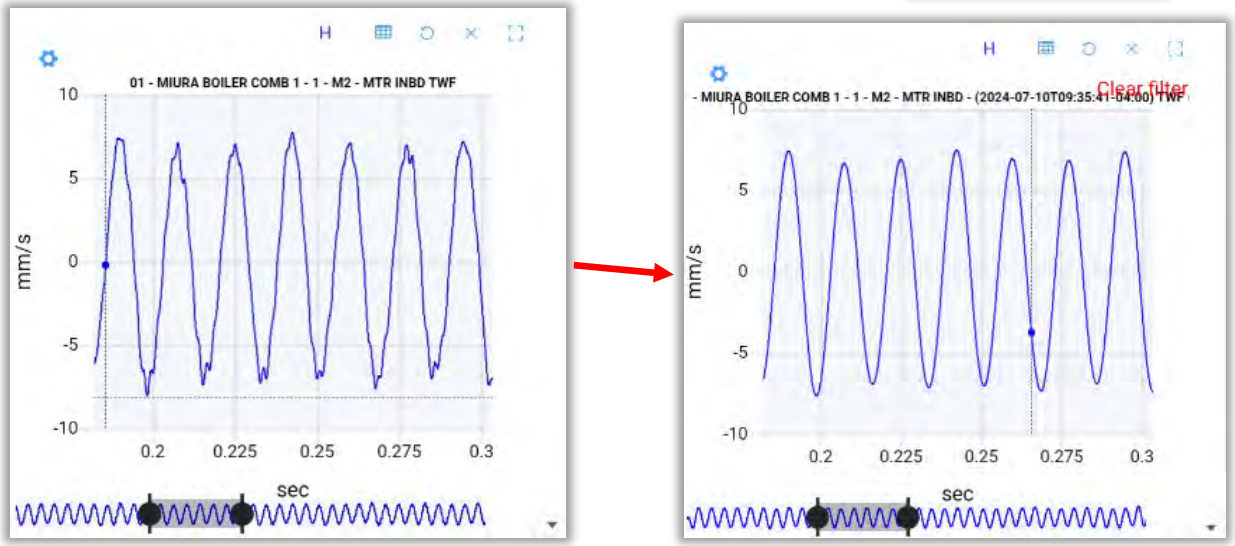
- **Filter** -
  - **Band Pass** - Applies a band-pass filter to the signal.

Example:



  - **Band Reject** - Applies a band-stop filter to the signal.
  - **PulseVue –** Applies a PulseVue filter as described above.
  - **Clear Filter** - Removes any filters previously applied to the graph.

Play Sound - Tap to play back the recorded vibration using the device's speaker.

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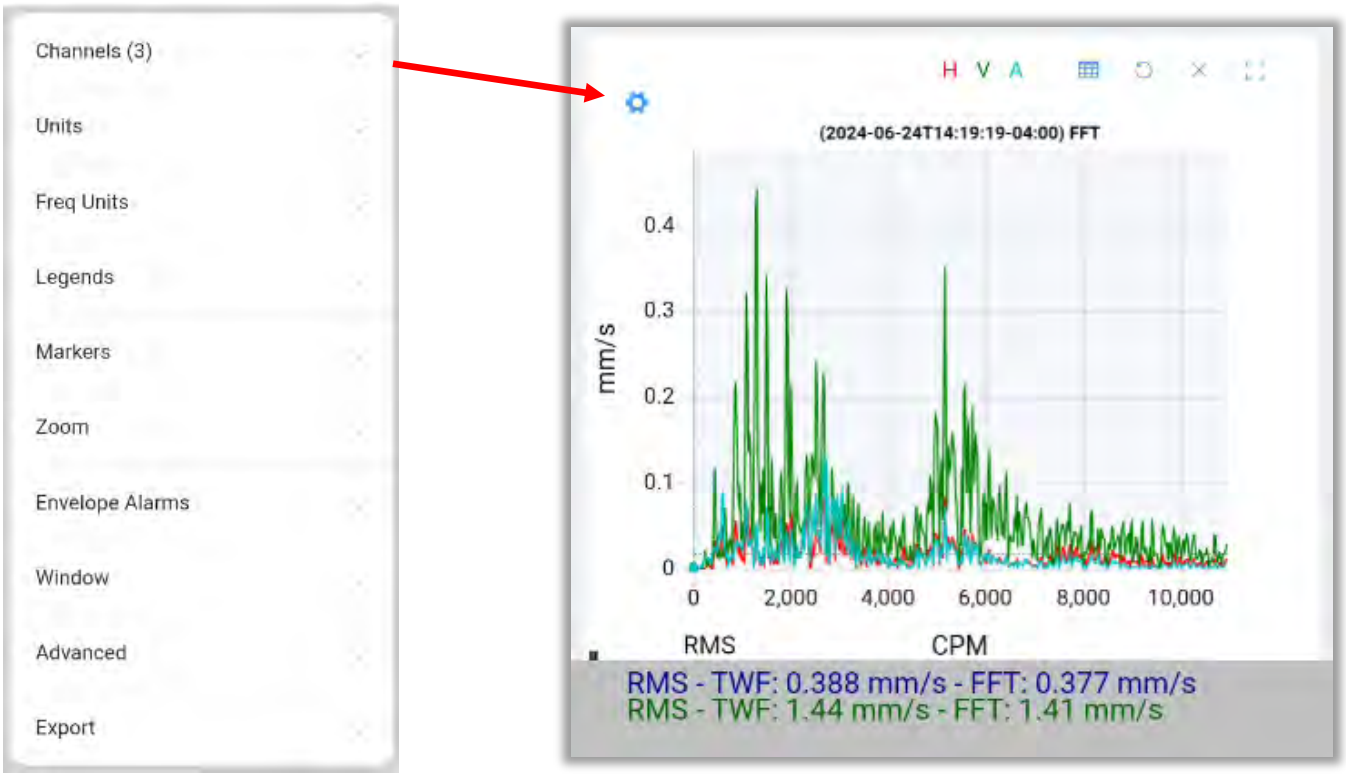
FFT Tools

To access the FFT tools menu, tap on . in the upper left corner of the FFT graph.



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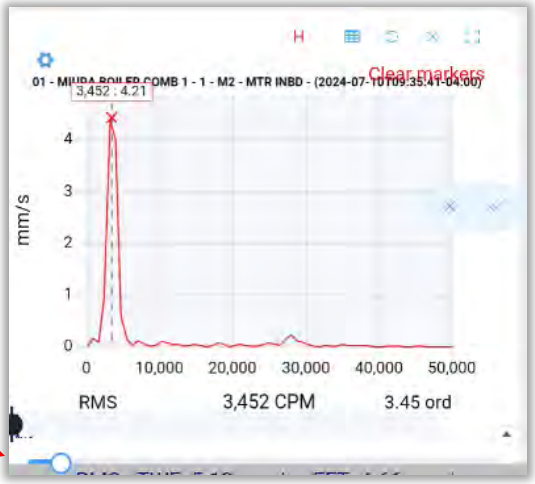
Channels

Choose between the three measured channels (triaxial mode). For each channel there are 4 options:

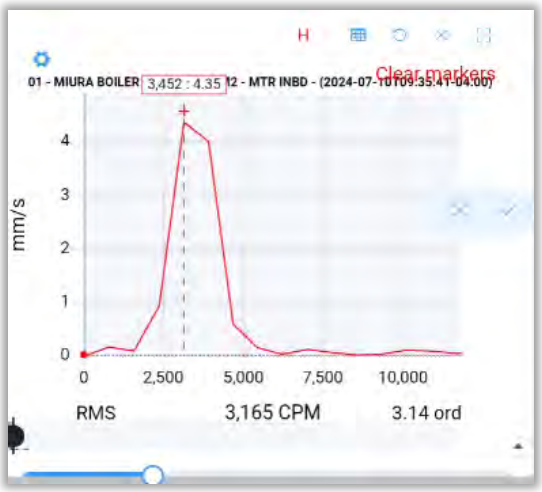
- **Visibility** – This option toggles the visibility of the selected channel to on or off.

- **Marker** – Allows placement of Markers on this channel. Use the **cursor** to place the marker on the graph or use the bar below to move the marker. Tap on ✓ to confirm and save the marker, or ✕ to cancel.



Marker slider

- **Locate** – This feature works the same way as a Marker, however, it only allows location on a measured point on the graph while Markers can be placed between points. When the cursor is moved, it will automatically look for the nearest measured point. Tap on ▾ to activate the tool and tap again on ▴ to deactivate it. Tap on ✓ to draw the marker, or ✕ to cancel.



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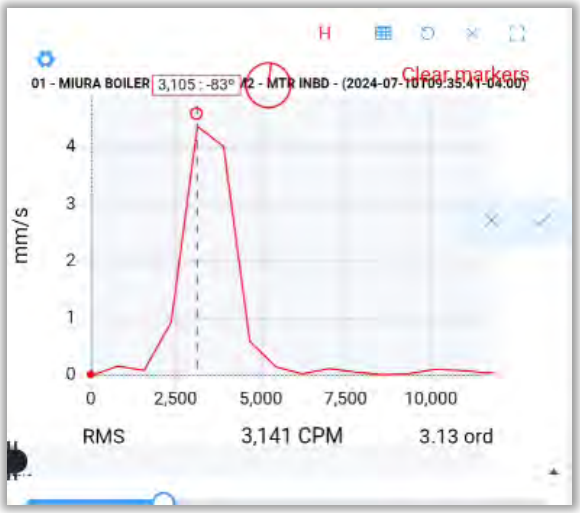
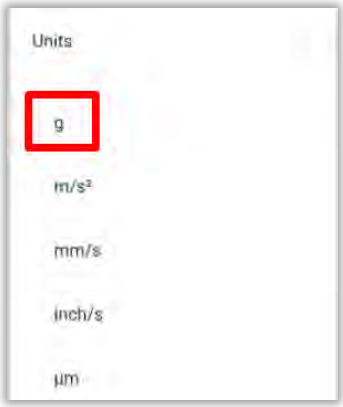
- **Phase** – Moving the cursor along a channel displays the frequency value with its phase, at the analysis points.

  Select ✕ to cancel and ✓ to confirm and place the marker.



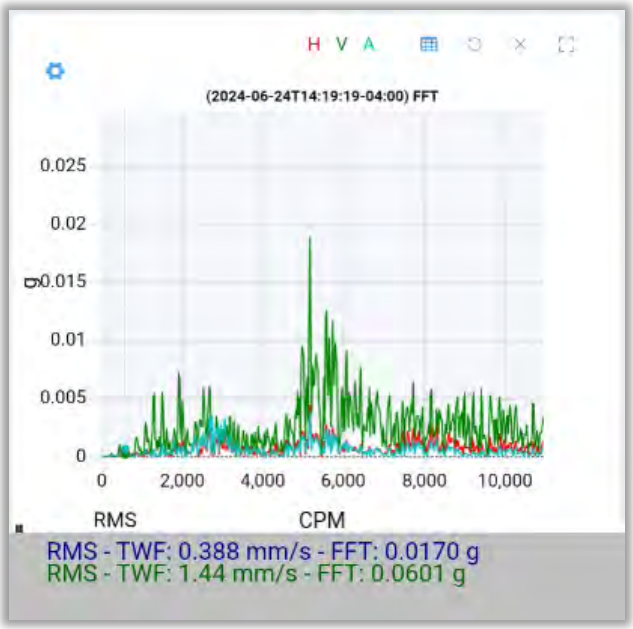
Units

Select the **units** to display on the Y axis of the FFT (in/s, mm/s, g's, etc.).



Freq Units

Sets the units shown on the X axis on the FFT, typically CPM or Hz. Example:



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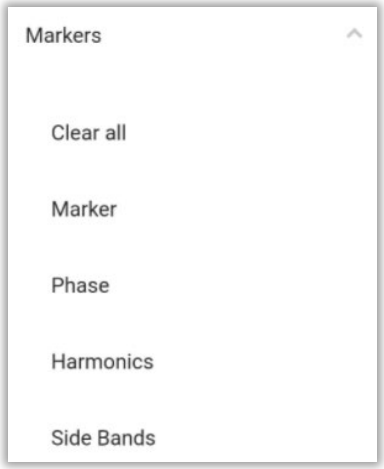
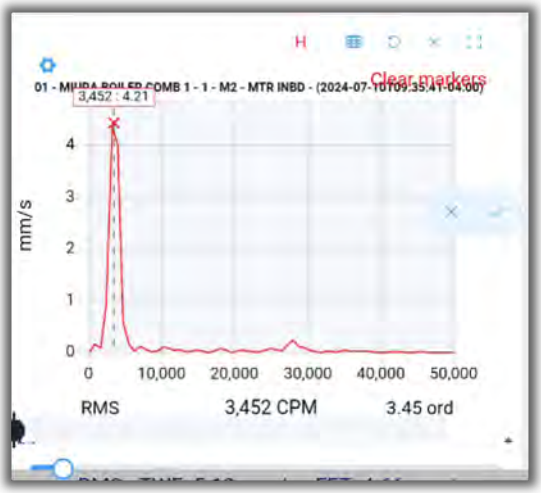
Legends

Toggles the visibility of the Legends on or off.

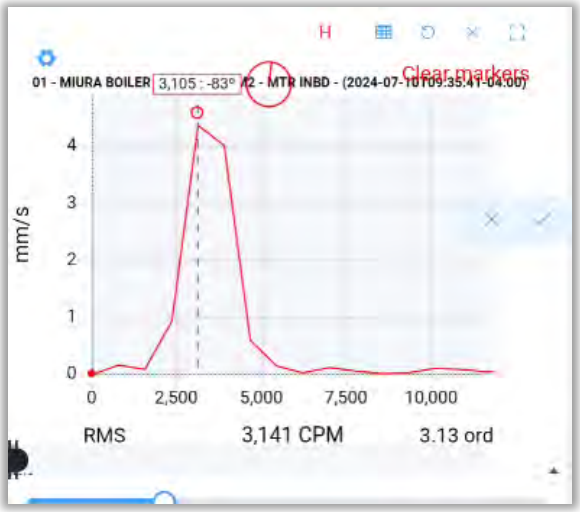
Markers



- **Clear All** – Erases all markers
- **Marker** - Use the cursor to place a marker anywhere on the graph or use the lower bar. Select ✕ to cancel and ✓ to confirm and place the marker.



- **Phase** – Moving the cursor displays the frequency and associated phase at the measured points on the graph. Select ✕ to cancel and ✓ to confirm and place the marker.



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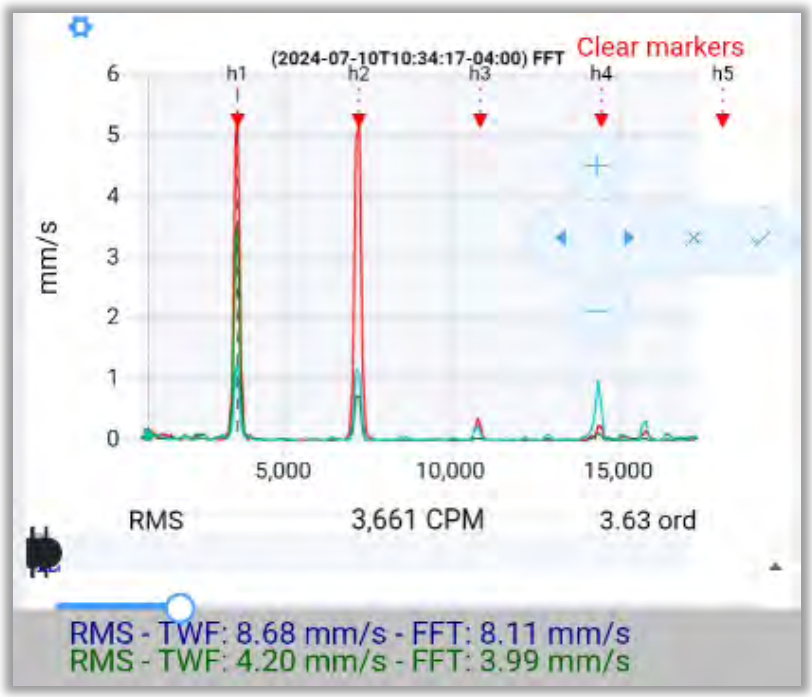
- **Harmonics** – Calculate and display harmonics on the FFT. Moving the first harmonic (**h1**) on the FFT will cause all other harmonics to be placed equidistant to **h1** on the right. The distance between them is the same as the distance between 0 and **h1.** Select + — to add/delete a harmonic point. Tap on × to cancel and ✓ to confirm and place the harmonics.

Example: Tap once on ▸; the current position will move to **h2,** the lower bar will now allow the second harmonic to be moved.



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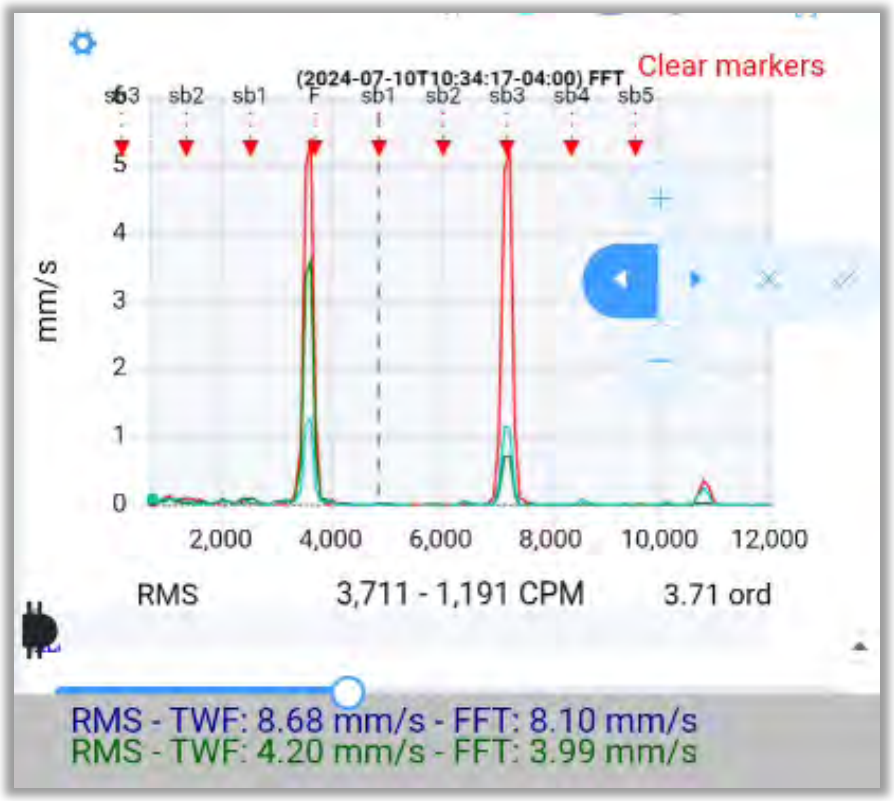
- **Side Bands** - Displays side bands on the FFT. Locate the fundamental frequency (**F**) on the FFT, then move the first side band (**sb1**) with the lower bar. The other side bands will be placed equidistant to **F,** 5 to the right and 5 to the left. The distance between them is the same as the distance between **F** and **sb1.** Select + − to add/delete a side band. Tap on × to cancel and ✓ to confirm and place the side bands.



Press ◂ ▸ so the current position becomes the immediate right/left side band.

- **Bearings**

Apply the bearing frequency markers to the graph based on bearing model number. WiSER Vibe features a bearing database containing fault frequencies of over 40,000 common bearings from major manufacturers. Bearings may be permanently assigned to a machine measurement point or specified during Analysis. The bearing database features a **Search** function, a **Manua**l function for adding new bearings and fault frequencies to the database, and a **Calculator** to calculate bearing fault frequencies using bearing component measurements.

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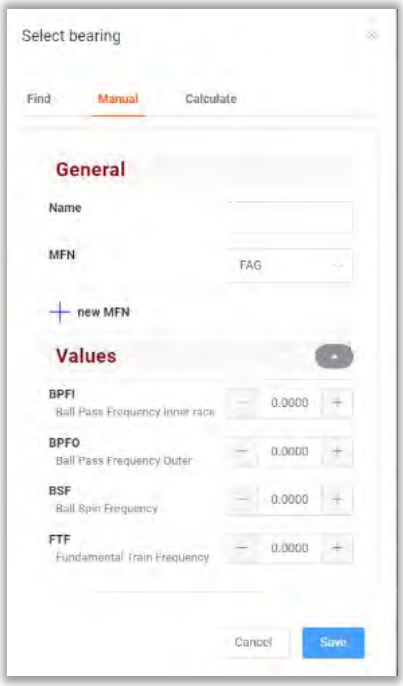
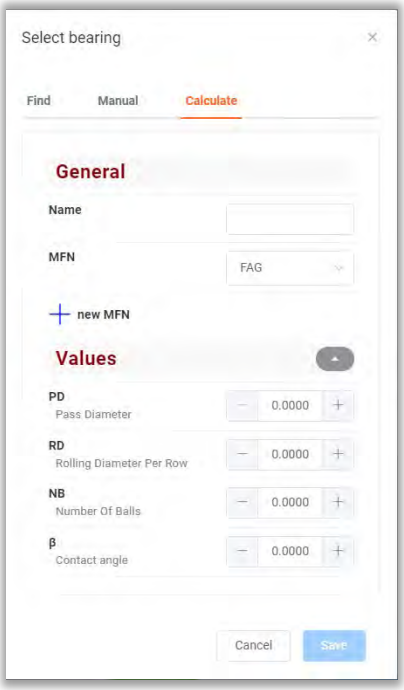
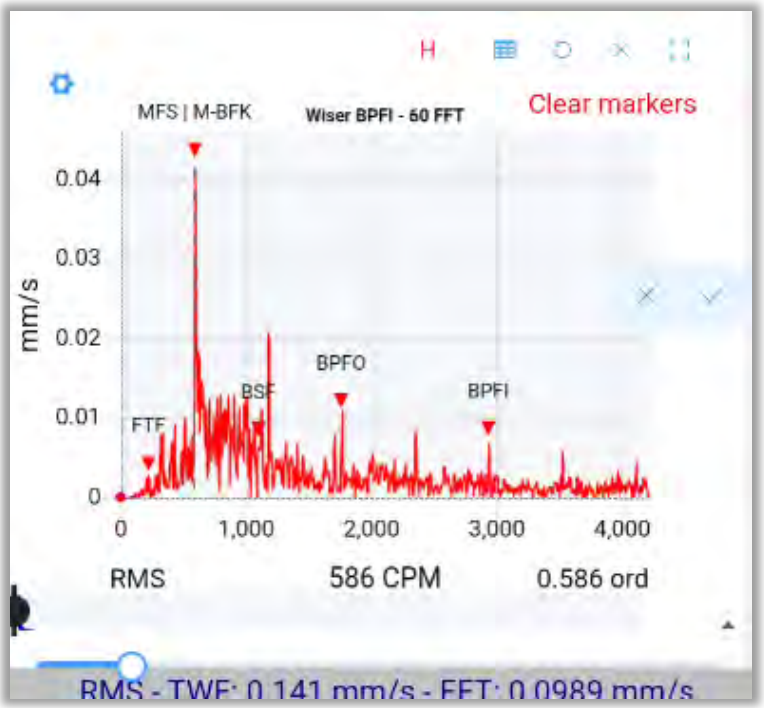




Select the bearing from the drop-down:

Previously select bearings will be shown as well:

Use the slider if necessary to adjust the marker positions.



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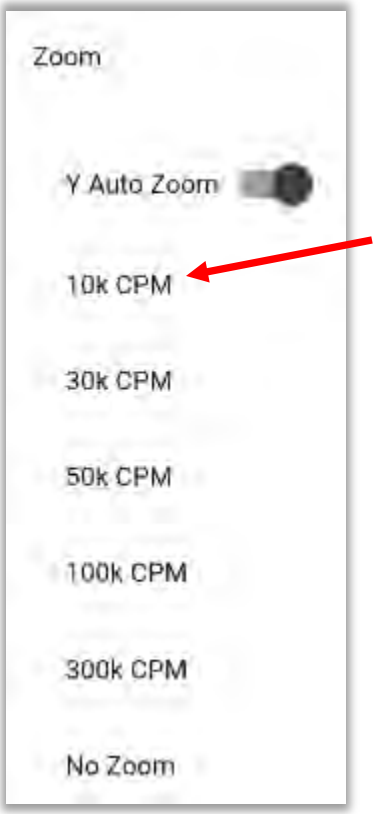
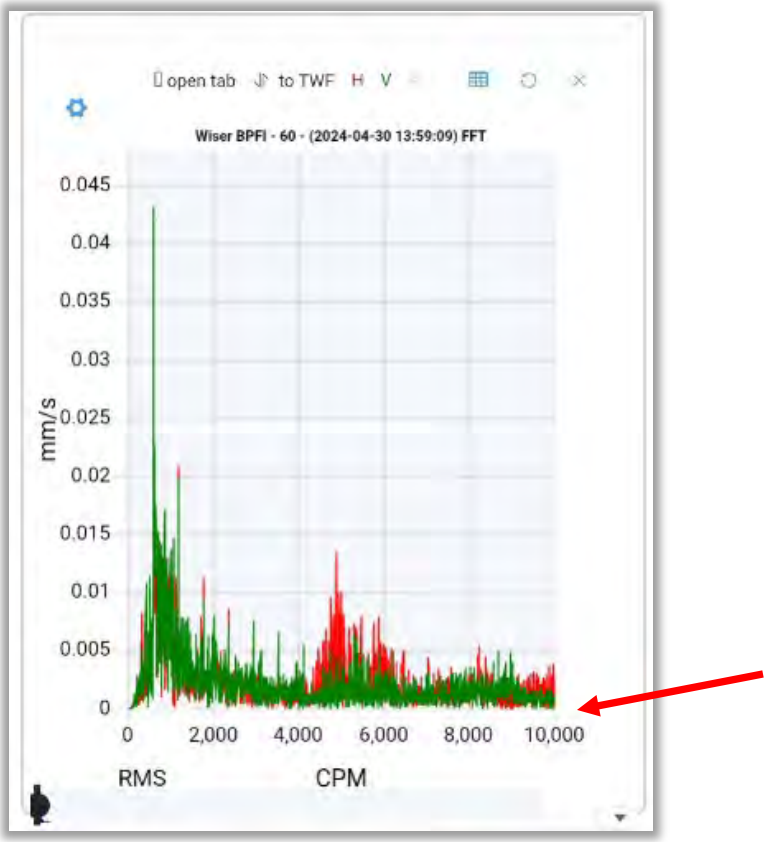
Zoom

Choose the maximum frequency displayed on the FFT. An exact horizontal zoom is made to the value of choice. Also,

allows the FFT y axis to auto-adjust to show the peak amplitude.





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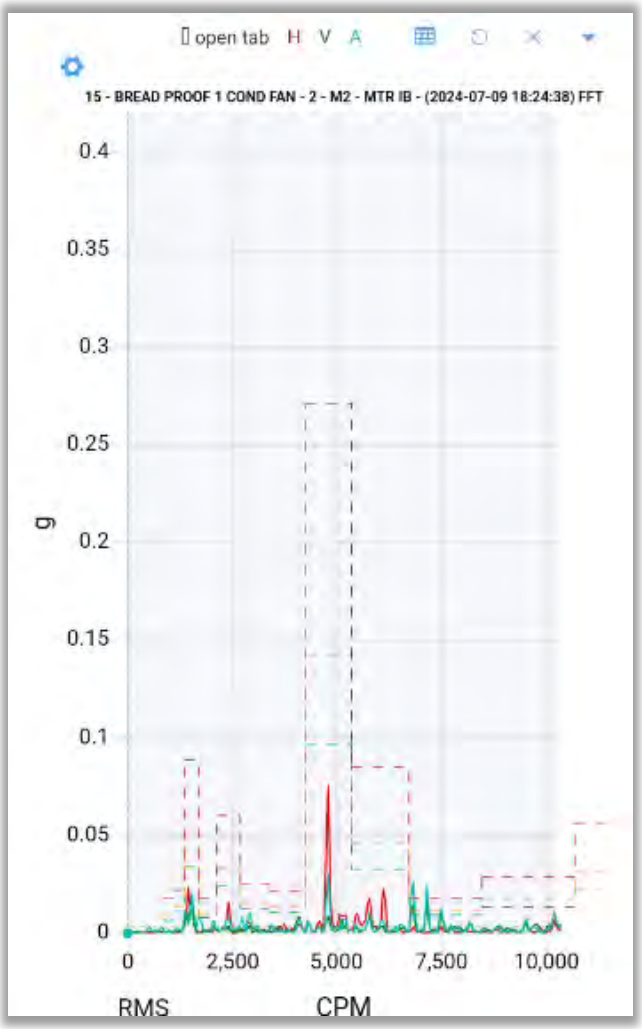
Envelope Alarms

Previously configured Envelope Alarms can be shown on the FFT using **Show all** or **Hide all** The **Auto Calculate** function will place red, yellow and green envelope alarms on the FFT, based on the measured signal.



Envelope Alarms are configured as part of the Machine database using Machine Manager in the EI-Analytic web portal or DigivbeMX software for Windows.

See the *DigivibeMX v11 User Manual* for more details on how to set Envelope Alarms.

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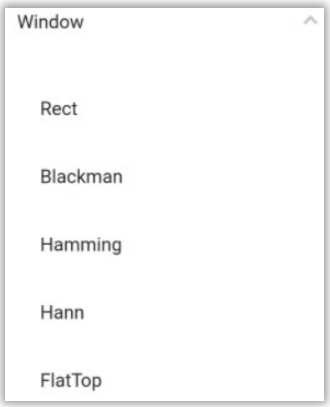
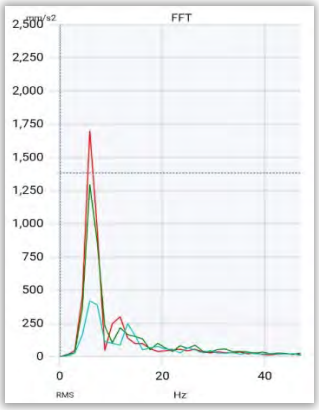
Window

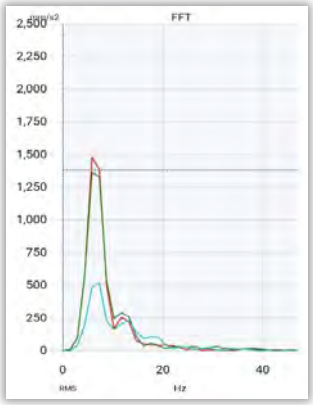
Select the windowing function to be used for the FFT. The default is Hann (Hanning) with four other choices:



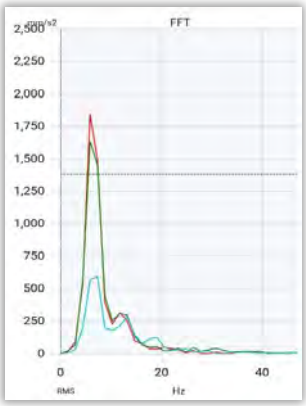
Rect



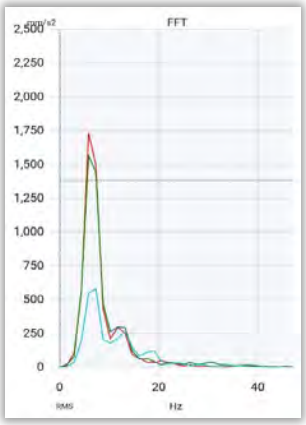
Blackman



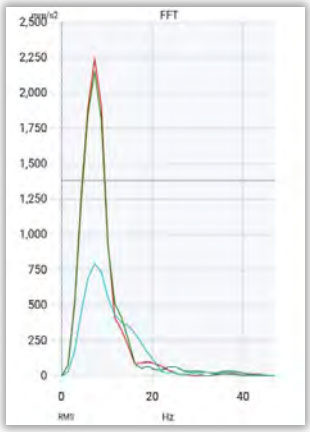
Hamming



Hann (default)



Flat Top



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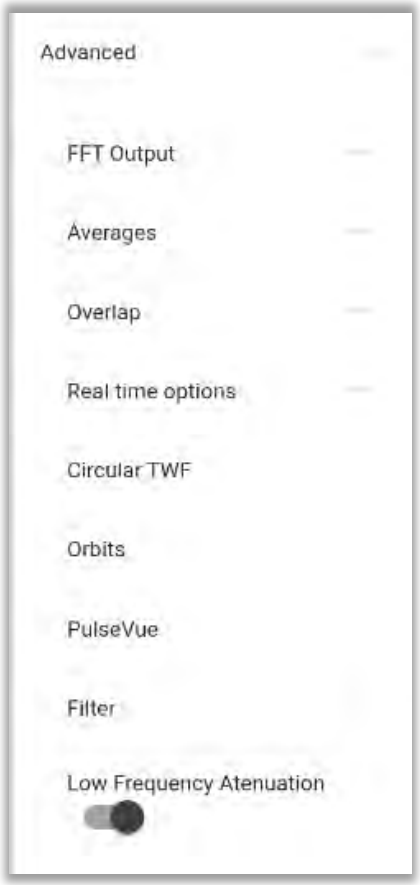
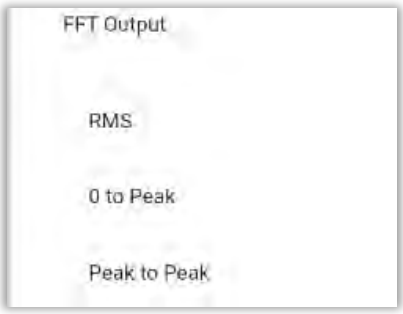
Advanced

The Advanced menu contains:



- **FFT Output** - default is RMS:



- **Averages** – From 1 to 10, default is 1:

- **Overlap** – Select percentage, default is 0%:

- **Real Time Options** – Used when live recording:

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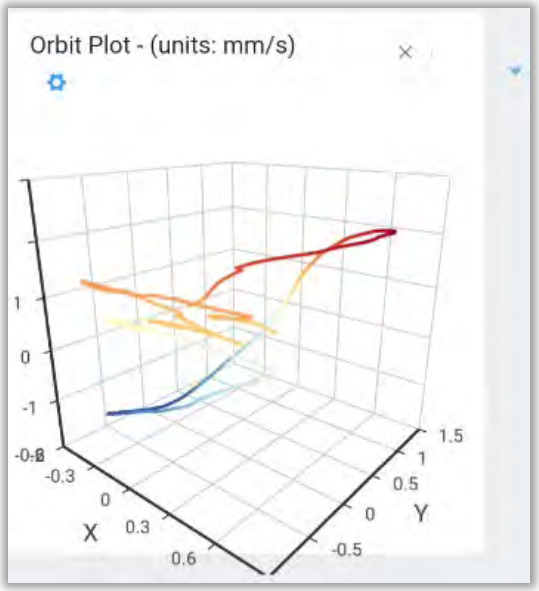
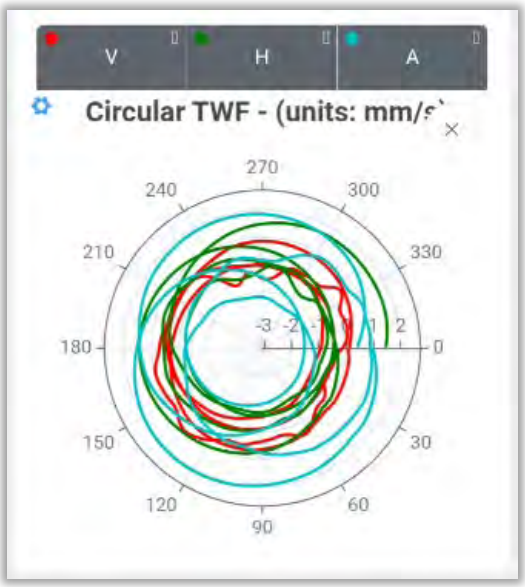
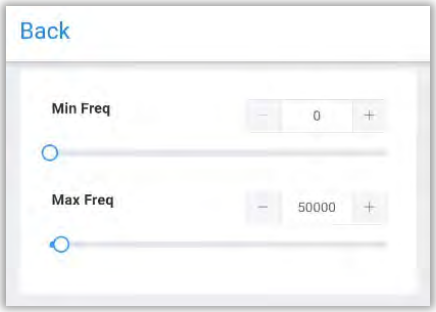
- **Circular TWF** – Renders a circle plot graph for the Time WaveForm and displays it below the FFT.
- **Orbits** – Displays the Orbit Plot below the FFT:

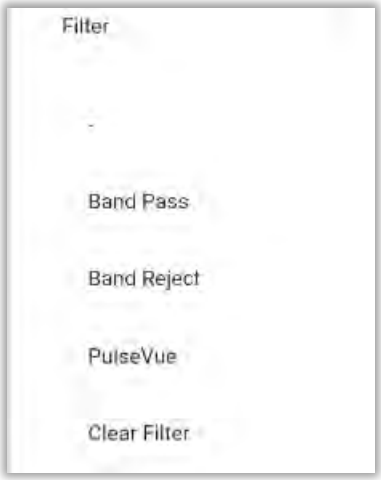




- **PulseVue** -opens a pop-up to set the Min/Max frequencies for the Pulse filter to be applied to the FFT. Use Clear filter to undo the filter. Note the PulseVue filter is usually applied to the TWF, not the FFT.

- **Filter** – offers the ability to apply a Band Pass or Band Reject filter in addition to the PulseVue, previously described.





- **Low Frequency Attenuation** - activates/deactivates the attenuation of frequencies below 11 Hz when rendering the FFT.

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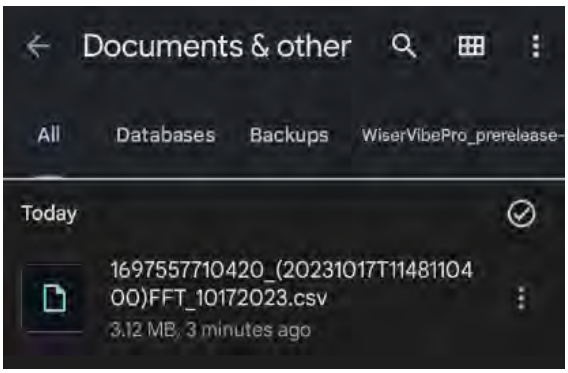
Export

Allows the export of the currently open signal file using three different formats, CSV, Image or ANL (Erbessd proprietary format used by EI-Analytic and DigivibeMX software). **Note** – the exported file will be placed into the **Files** folder on the device running the WiSER Vibe app.

Example from an Android Phone of a file exported in CSV format.



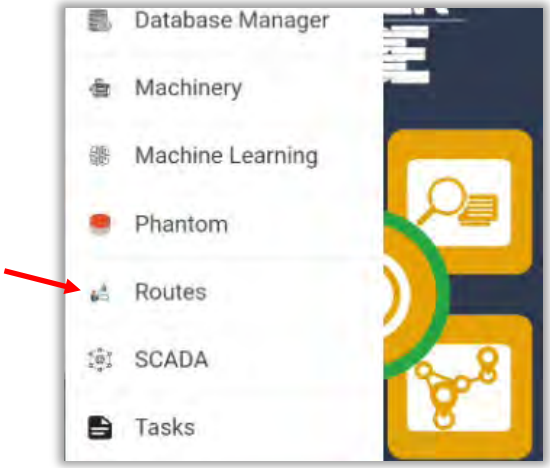
Routes

Machines and Points are grouped and organized into logical **Routes** that are used for fast, efficient data collection with a portable instrument such as a WiSER3X or a WiSER Mini.

Routes can be created and edited using this app, in addition to the EI-Analytic web portal or DigiVibeMX software for Windows OS.

Open the **Settings** menu on the Home screen and tap on **Routes** to manage the Routes database.

For details regarding Routes management, see the **Routes** section of the **The Settings Menu.**



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Once Routes are created in the database, they can be launched by using the Routes function.

The Routes function is accessed from the Home screen and contains four sections:

- Cloud
- Local
- Machinery
- QR Scan

There are two Route options in the three-dot menu:

- **Delete:** Delete the selected route or machine(s).
- **Save in device:** Save the route on your device so it can be accessed without an Internet connection.

Connection Manager

The Connection Manager is used to establish communication between the WiSER Vibe app and a:

- *WiSER™ 3x* portable triaxial wireless accelerometer. (Wi-Fi)
- *Phantom™* triaxial wireless accelerometer (Bluetooth)
- *WiSER™ 3X mini* portable triaxial accelerometer(Bluetooth)

Connection Manager has four options (if using a phone, rotate the view to see all four options):

The **Connect to Wiser** option is the default, and is used to connect the app to a WiSER 3X accelerometer. **NOTE** – the device running the app must first connect to the WiSER 3X using Wi-Fi, see below.

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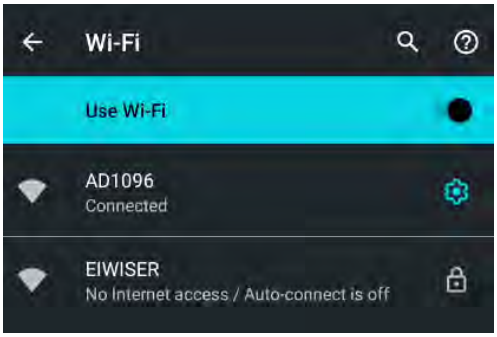
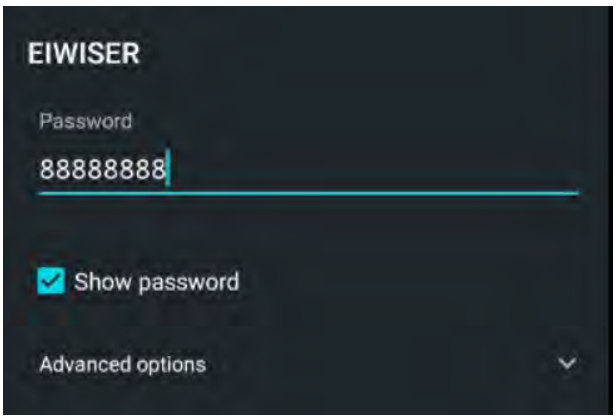
Connecting a WiSER 3X

Press the button on the WiSER 3X to activate the sensor. The blue LED should be lit.

Select the EIWISER network when it appears on the list of available Wi-Fi networks on the device.



The first time you connect to a Wiser 3X, you must enter the password – **eight 8's**, then press Connect.



IMPORTANT! Some mobile device Operating Systems will warn that the EIWISER network does not have Internet access, and you MUST **Tap for options** to keep the WiSER 3X connected to your device!

The look of this screen may vary by device manufacturer. This example was taken from a phone running Android 11.

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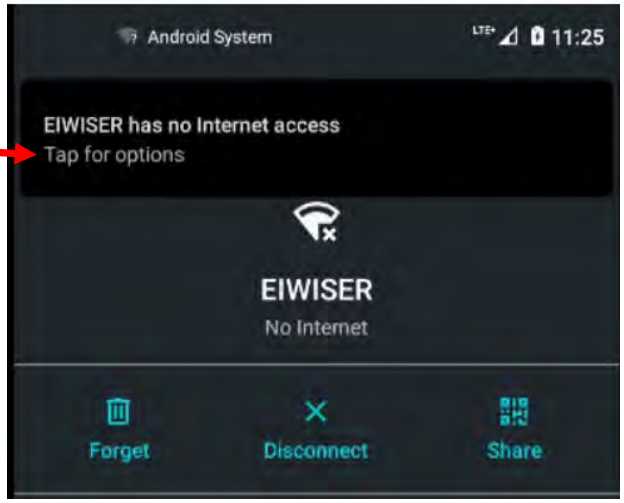

Return to Connection Manager and tap on **Connect to Wiser**

The **Connected to Wiser 3X** screen opens and provides a **Disconnect** option to end a session.

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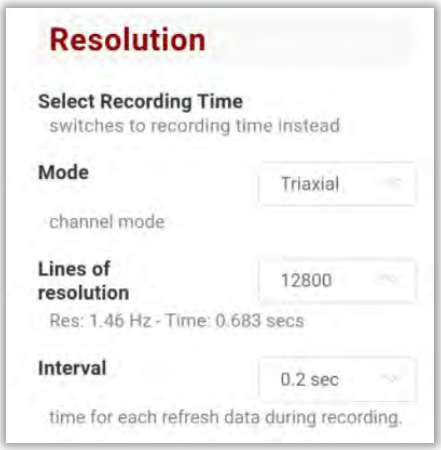
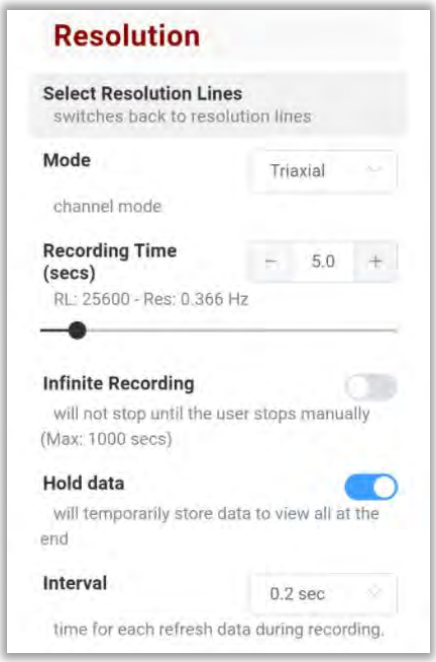
The **Resolution** section contains the option to use Lines of Resolution OR Recording Time as the basis for vibration measurements:



- **Select Recording Time**: Change the recording type to recording time. (default is Lines of Resolution mode)
- **Mode**: Choose between 3 axis (triaxial) or 1 axis (single axis) recording. (With single axis, choose which axis to record (x, y or z).
- **Lines of resolution**: Set the number of resolution lines that will be used on the recording.
- **Interval**: Time for each data refresh during recording.



- **Select Resolution Lines**: Change the recording mode from recording time to Lines of resolution.
- **Mode**: Choose between 3 axis (triaxial) or 1 axis (single axis) recording.
- **Recording time**: Set the recording time (this will show the resolution lines and the max frequency for the selected time).
- **Infinite recording**: Will not stop until the user stops recording manually (max 1000 secs).
- **Hold data**: Will temporarily store data to view all at the end.
- **Interval**: Time for each refresh data during recording.

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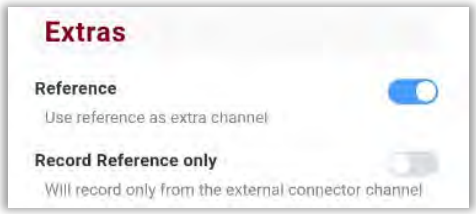
- **Reference**: Toggles the use of the reference channel.(Lemo connector on WiSER 3X)
- **Record Reference only:** Will only record from the external Lemo connector (channel 4).



- **Synchronous averages**: Number of averages to be made.
- **Sync to frequency (Hz)**: By default, the 1X detected in its last recording is selected

Once you have finished configuring your WiSER™ 3X, tap on the **Back** button to return to the Route screen.

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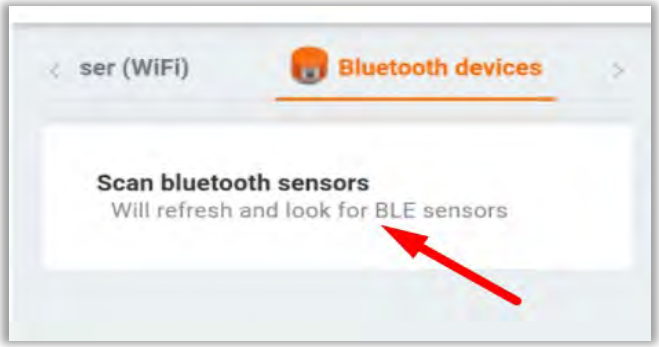
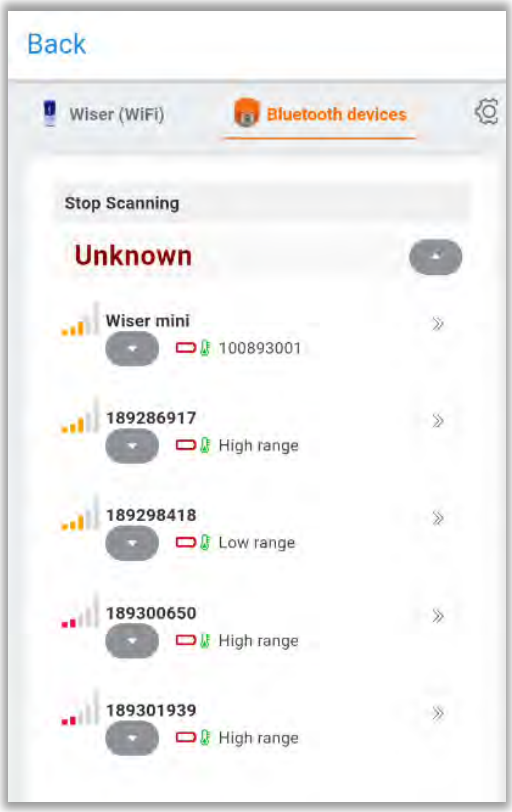
Connecting a Bluetooth Device

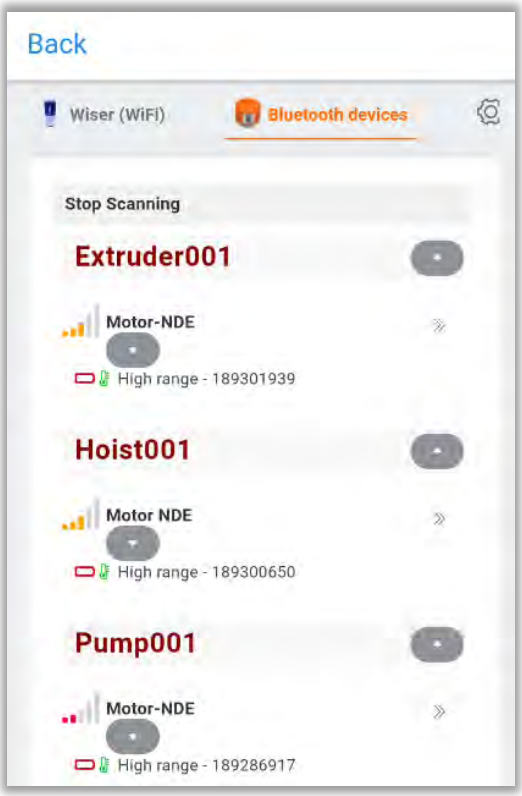
Tap on Scan Bluetooth sensors.



Detected bluetooth sensors, such as a Phantom™ or WiSER™ 3x Mini, will be displayed.

Initially, Phantom sensors will all be listed as **Unknown**, only showing the serial number. Once the Bluetooth Option to **Download phantom info** is selected, all names and machine assignment info is displayed.





Hide the sections with and expand them with .

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For each device the signal strength is displayed along with the battery level .

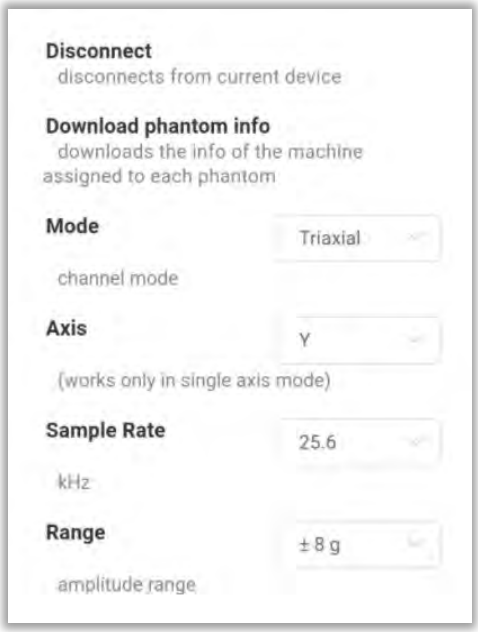
For the **Phantom™** sensors you will see the name or serial number, for the WiSER™ 3x mini, you will see **"Wiser mini"**.

Select to observe the battery level , internal temperature and rms values of the x, y & z axis.

Bluetooth Devices Setup

Choose the sensor you want to connect to and tap on . Once connected, the **Bluetooth devices setup** tab becomes available.

- **Disconnect:** Disconnects from device.
- **Download phantom info**: Download the machine information assigned to each Phantom™.
- **Mode**: Choose to record 3 axis (triaxial) or 1 axis (single axis).
- **Axis**: If you select the single axis mode, you can choose which axis to measure (x, y or z).
- **Sample rate**: Select the sample rate in kHz.
- **Range:** Choose the amplitude range (may change depending on the sensor type).



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Changing the Sample Rate has an impact on Recording time and Fmax, as shown in the following tables:

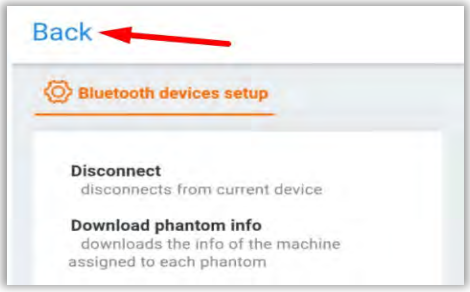
V10, V17, V10E and V15 High Sensitivity sensors

Recording time (s) 3 axes	1	2	4	8	16
Recording time (s) 1 axes	3	6	12	24	48
Sample rate (Hz)	25,600	12,800	6400	3200	1600
Max frequency (Hz) [x,y]	4000	4000	2500	1250	625
Max frequency (Hz) [z]	1800	1800	1800	1250	625
Lines of Resolution	6400				
Spectral noise (@10 Hz)	130 µg√Hz				

V11, V18, V11E and V16 High Range sensors

Recording time (s) 3 axes	1	2	4	8	16
Recording time (s) 1 axes	3	6	12	24	48
Sample rate (Hz)	25,600	12,800	6400	3200	1600
Max frequency (Hz) [x,y]	10,000	5000	2500	1250	625
Max frequency (Hz) [z]	5100	5000	2500	1250	625
Lines of Resolution	6400				
Spectral noise (@10 Hz)	630 µg√Hz				

Select Back to return to the Routes screen.



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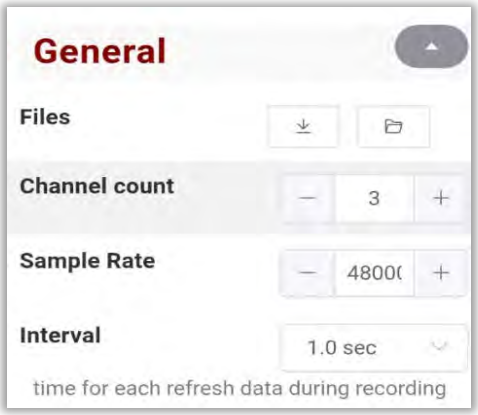
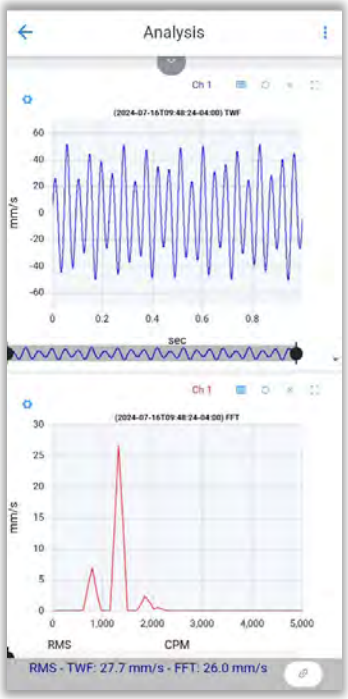
Signal Generator

This feature provides the generation of a signal for testing purposes. You can customize the signal according to your needs. Use the button to drop down the options of each section, and to hide them.



- **Files: U**se to save the signal on the device. Tap to select and open one of the previously saved signals.
- **Channel Count:** Choose the number of channels you want in the signal (maximum 4).
- **Sample rate:** Select the sampling rate.
- **Interval:** Selects the data refresh time for each recording.

- **Hold data:** Stores the data to display the complete signal.
- **Recording time:** Selects the recording time in seconds.
- **Infinite recording:** Generates a signal without a time limit, you must stop the recording manually.
- **Connect for real time:** Simulates a real time recording in the analysis window with
- **Generate now:** Press to open the analysis tab with the generated signal.



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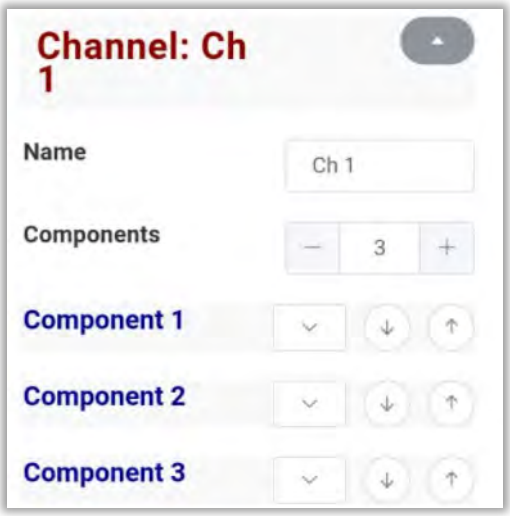
Previously added channels are shown at the bottom. There are three channels in this example. For each channel you will see the following options:

- **Name:** You can customize the name of the channel by taping in the box and typing the name of your choice.
- **Components:** Each channel can have several components, each with different options. Choose the number of components to be contained in the signal.



The order of the components can be changed by taping  to move the component up one position or  to move it down one position. For example, moving **component 3** up two positions:

Tap to display the options for each component. The options are as follows:

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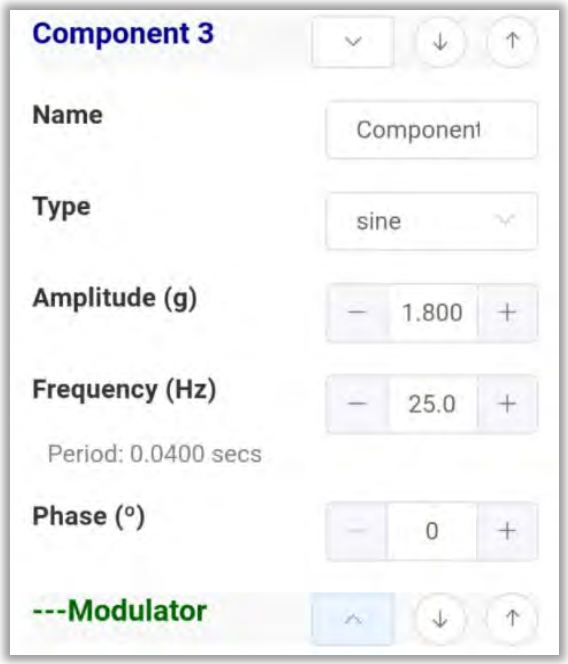


- **Name:** Choose a name for the component: tap in the box to type the new name.
- **Type:** Selects the type of component signal from the drop-down:

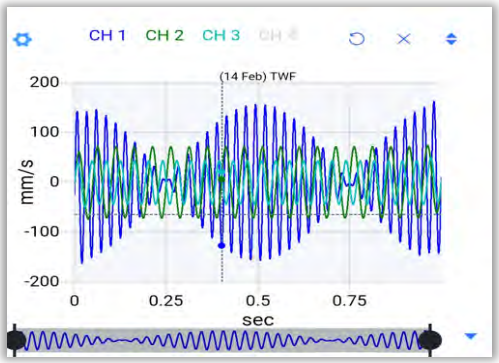
- **Amplitude (g):** Select the amplitude value in g's.
- **Frequency (Hz):** Choose the frequency of the component signal in Hz. The period in seconds is displayed below, depending on the frequency chosen.
- **Phase (°):** Selects the phase angle of the signal.

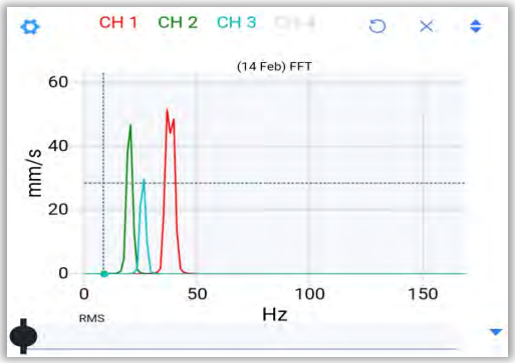
A modulating signal may be added to the component of your choice.

Tap on to display the modulator options:

- **Type**: Select the type of signal: sinusoidal or sawtooth, for example
- **Amplitude** (g): Select the amplitude value in g's.
- **Frequency** (Hz): Choose the frequency of the component signal in Hz.

Once you open a signal, either a previously saved signal or one that you generate on the spot, you will see it in the analysis screen.
Example:





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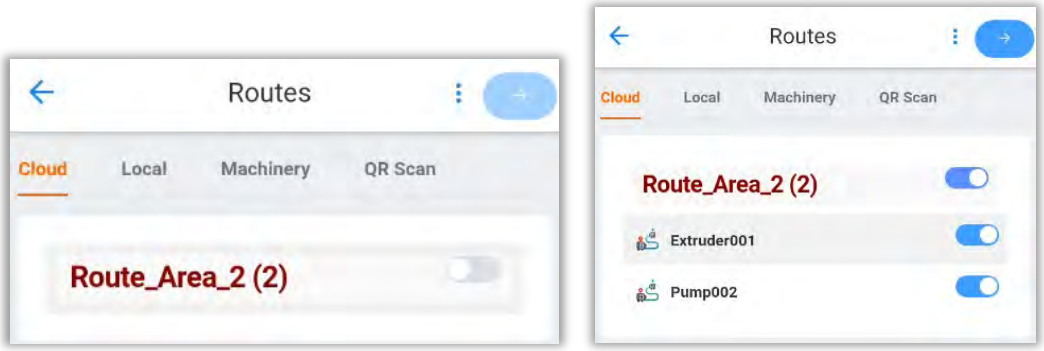
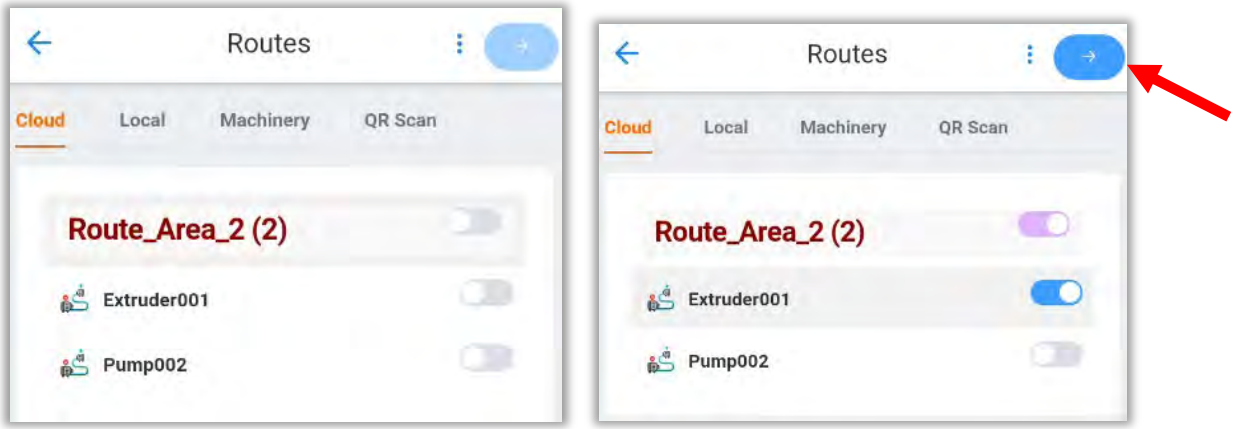
Cloud Routes

The Routes window opens the Cloud option by default. **Note** - Connection to an EI-Analytic account is required to use this option. All routes in the cloud database are displayed, whether they were created from the WiSER Vibe app, from DigivibeMX® or the EI-Analytic® web portal.

Tap on the desired Route from the list. The Machines and Points to be included in the Route can be edited using the sliders. To add the whole Route as is, just select the route level slider:



Individual Machines can be included/excluded from the Route using the sliders:



When finished, tap the Blue right-arrow at top.

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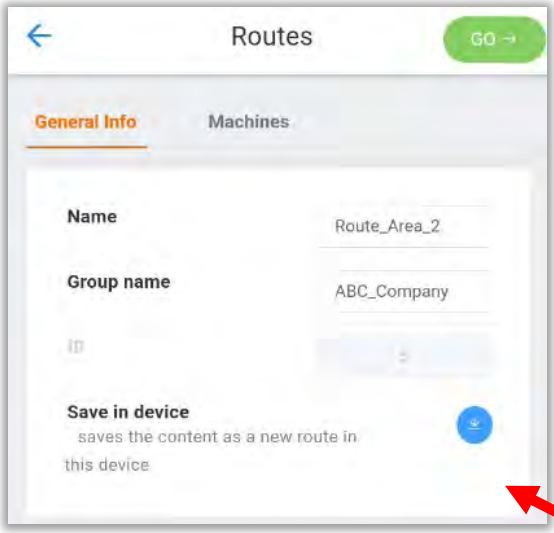
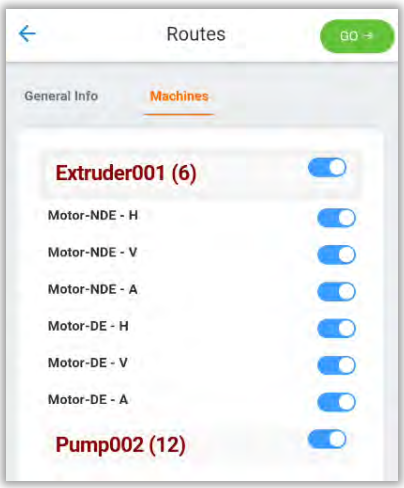
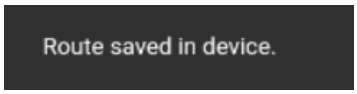
The next Routes screen has two tabs, General Info and Machines.

In **General Info**, the Route Name and Group Name may be edited and then saved as a new Route, if desired. The **Machines** tab can be used to edit the list of Machines in this Route down to the axis level.





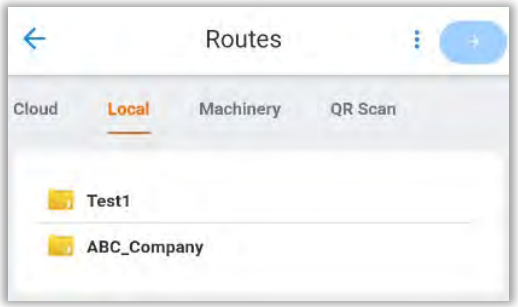
To save this Route locally on the device, tap **Save in device**. A message will be flashed at the bottom of the screen to indicate the Route was successfully downloaded.

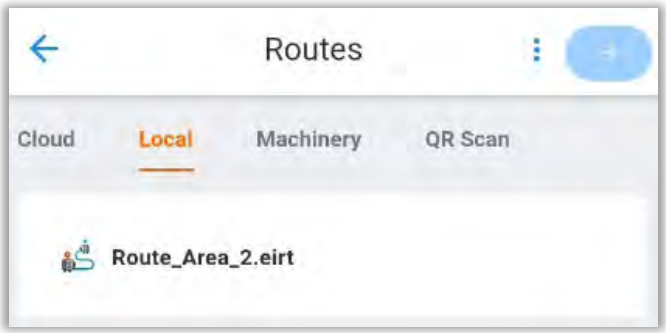


Tap the Go  button to begin the Route.

Local Routes

Routes can be conducted locally, without the need for connection to an EI-Analytic database(Internet access). Tap on a Group folder in the **Local** tab to see all Routes.





Tap the Route and then press  the .button to begin the Route.

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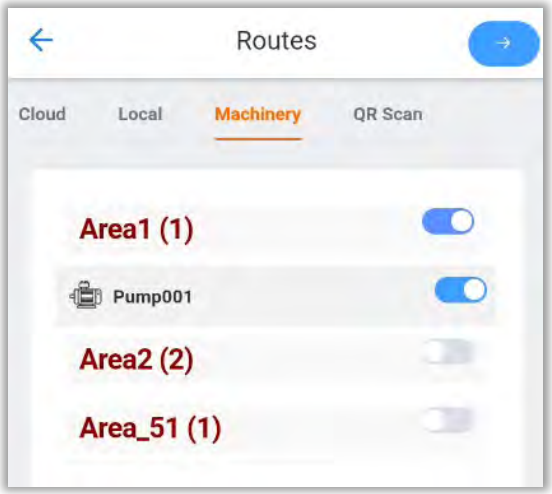
Note – Local Routes should be deleted from the device whenever a database version changes as part of an update to EI-Analytic. Reloading Routes from the Cloud removes the possibility of a Database mismatch between the mobile device and EI-Analytic. Attempting to upload data saved with an older DB version may result in erors or lost data.

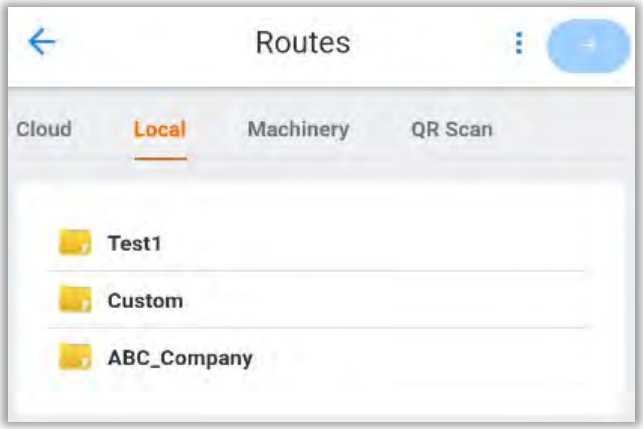
Machinery

The Machinery tab can be used to create a custom Route. Tap on it to open the database:



Drill down and select the desired Machines using the sliders, then press the blue right-arrow to continue.

A new Route Name and Group can be assigned. The Group name defaults to “Custom” when adding a Route in this manner. Tap on **Save in device** when finished. The Custom Route may now be conducted by pressing the GO → button. A new folder is added to the Local Routes using the Group name chosen.



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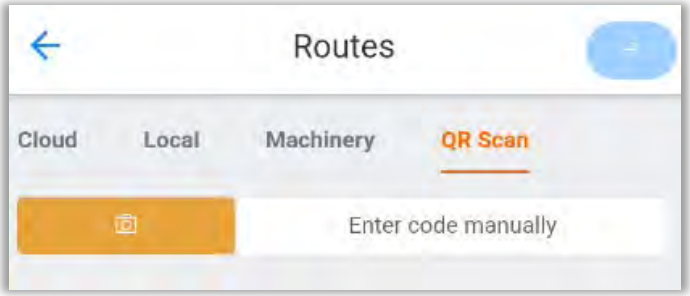
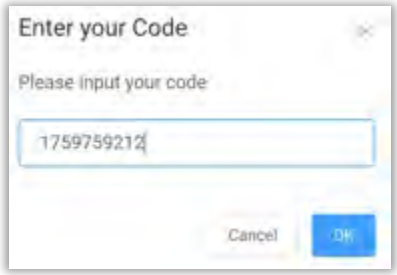
QR Scan

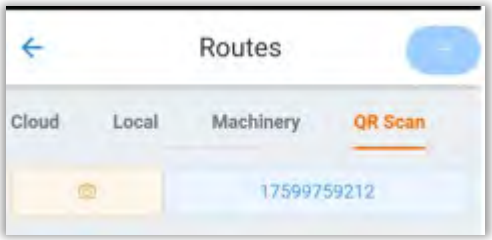
A machine may be added to a Route via scanning its QR code in the **QR scan** section, or enter the number manually.



Select  to open the device's camera and scan the QR code displayed in DigivibeMX, or tap on 

to enter the machine code manually.



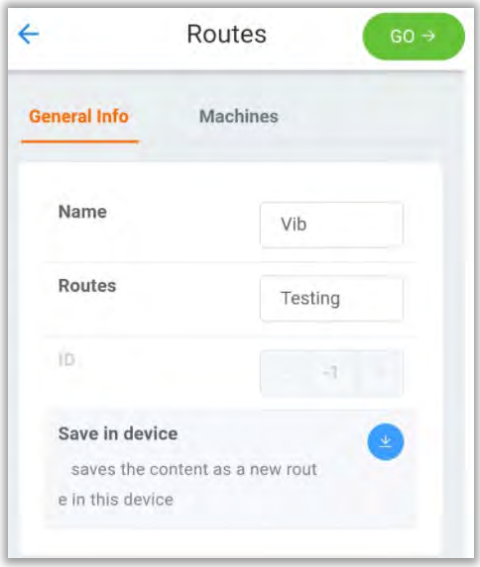


Once you confirm and the machine loads, select  to continue. The machine must be added to a new route. Choose a **name** and the **route group**.

Select  to save the route to the device and have it available locally.

Press 

to continue.



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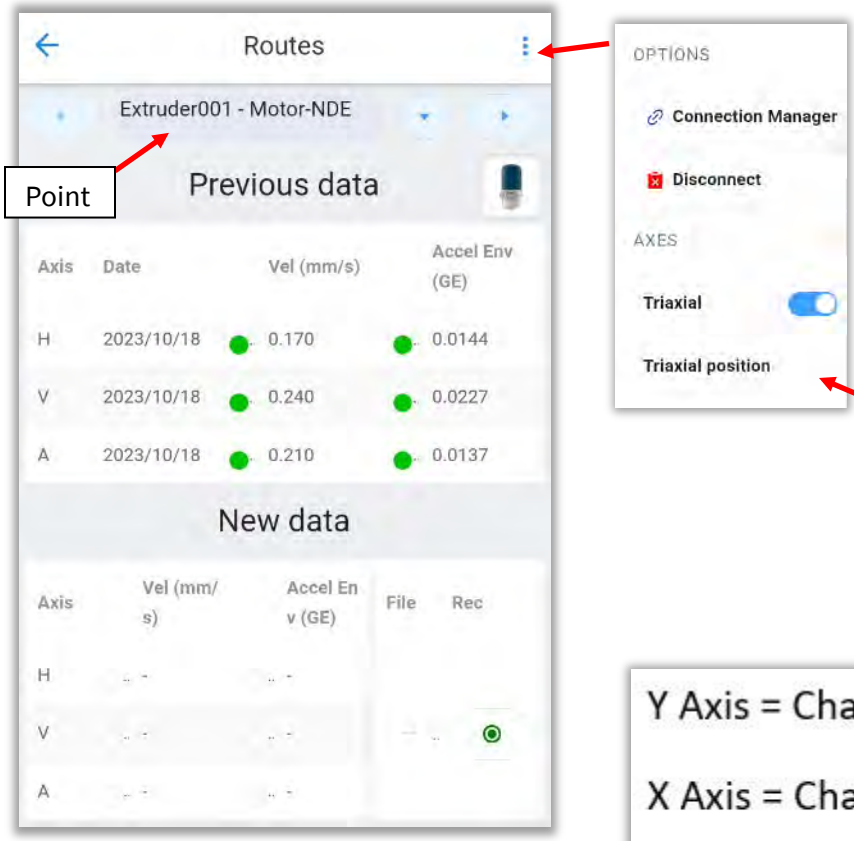
Collecting Data

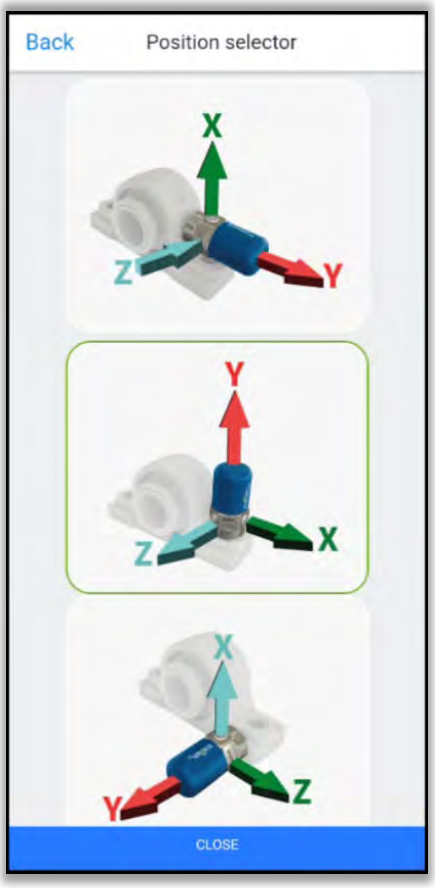
Whether a Route is launched using the Cloud, Local, or Custom option, once GO → is pressed, the Connection Manager opens.

1. Connect the WiSER 3X, WiSER Mini, or Phantom sensor and review the settings as per the instructions in the *Connection Manager* section of this guide.



Once connected, the Route Record screen will open with the first Machine Point in the Route displayed

Use the left and right arrows to navigate through the list of machines in the Route. Expand the machine and point name with



Y Axis = Channel 1

X Axis = Channel 2

Z Axis = Channel 3

If available, the **Previous data** for this Point is displayed.

2. Place the sensor on the machine point to be measured, and check the **Triaxial position** setting in the Options menu at top right. You can also access this by tapping on the WiSER 3X icon. Set the posiition as desired. The default is -Y axis (channel 1) is Vertical, as shown.

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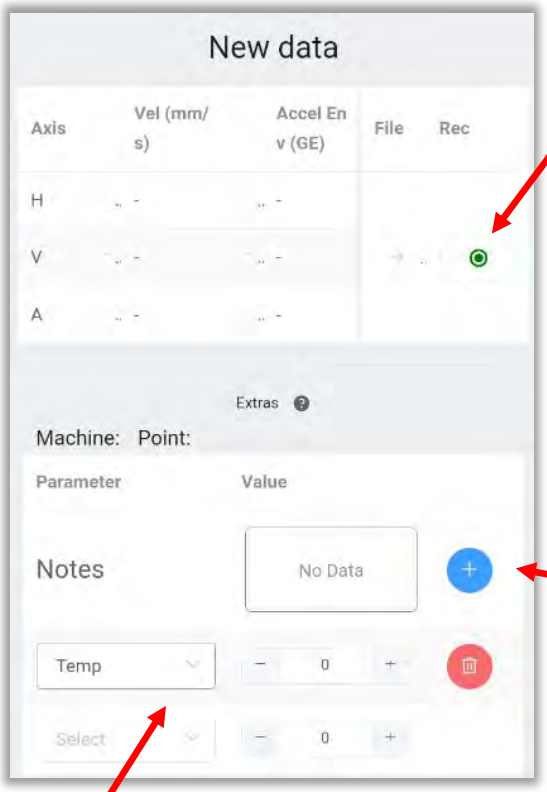
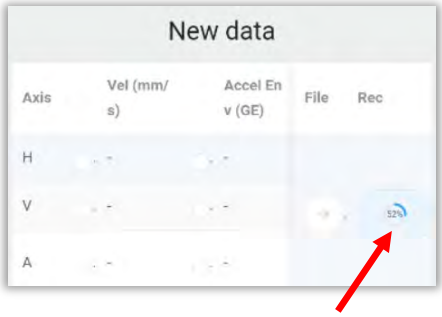
If **Extra Parameters** have been configured to be collected, enter them in the area below the New Data section of the screen prior to recording vibration data. If they are configured as mandatory, they must be input before a vibration recording can be taken.

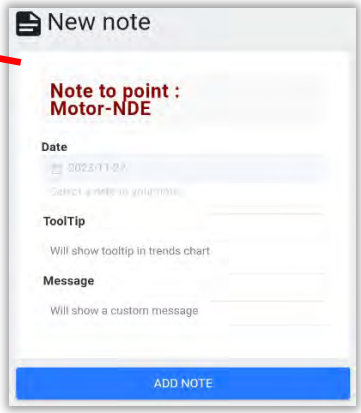
Notes should also be added before vibration recording.



The Green Record button in the **New data** section can now be pressed to start a vibration recording. **Note** - the blue button on a WiSER 3X accelerometer may be pressed to initiate a recording as an option.

Recording progress is shown by a circle graphic. The length of recording depends on the Lines of resolution setting. This is often 1 second or less, so the circle graphic can disappear quickly!





Extra Parameters

A success message is flashed at the bottom of the screen, which includes the filename assigned to the recorded signal.

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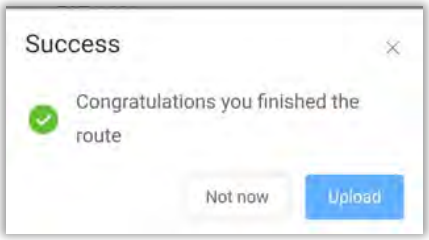
The next machine point in the Route will appear automatically.

Repeat the process of checking the Triaxial Position and recording for each Machine Point in the Route.

When the Route is completed, a pop-up screen allows the upload of files to the Cloud (if Internet is available), or select **Not now** to upload later.

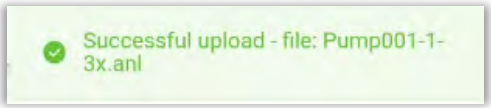


Uploading Data

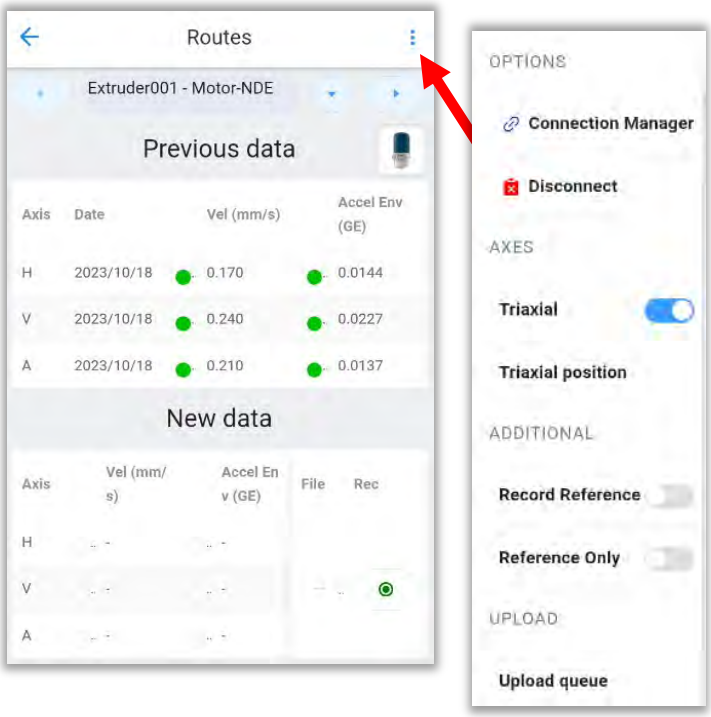
If files are not uploaded to the cloud upon finishing a Route, they will remain in the data queue, so they may be uploaded later.

To manually upload the files in queue before exiting the Routes screen, open the Options menu at top right.

Tap **Upload queue** to send all files to the Cloud database. As the files upload successfully, messages are displayed on the screen.



If you do not see a successful upload message, or receive an error message, check to ensure you are logged into EI-Analytic, and are connected to the correct database. If you are logged in, but are receiving error messages, contact Erbessd Technical Support for assistance.



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Other Options:

Disconnect disconnects the WiSER 3X Wi-Fi session.

Triaxial slider toggles between single axis and triaxial.

Trixial position – explained above.

Record Reference slider is used when the 4th channel (Lemo connector) of the WiSER 3X is used as a reference channel.(E.g. used for a laser tachometer when balancing)

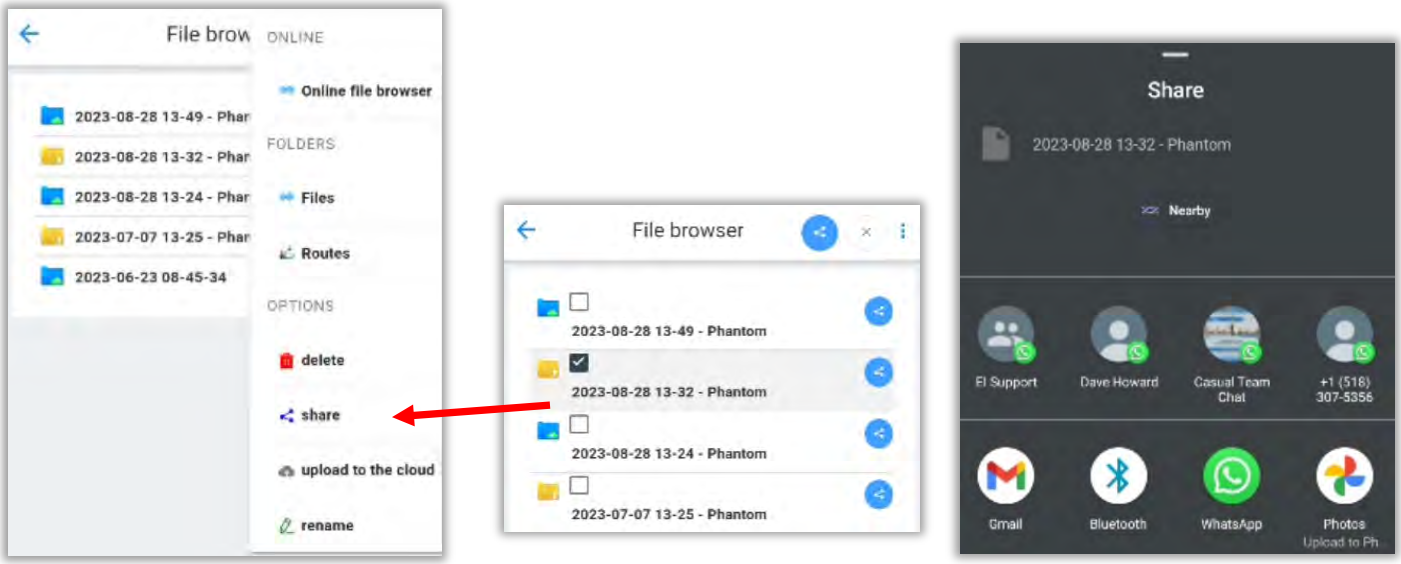
Reference Only records only channel 4 (Lemo connector) of the WiSER 3X.

Sharing Files

To share data files stored on your device via E-mail, text or other app:

1. Open the File browser menu and select share
2. Select the folder(s) to be shared (shown by checkboxes).
3. Tap the share icon at the top of the screen.

1. The Share screen will open; choose text, email, WhatsApp etc., to send the .anl file(s) as attachments. **Note** - Phantom vibration sensors create data files of approximately 160kb in size, the Wiser 3X creates .anl files up to 3.5 Mb in size. These signal files can only be opened with DigivibeMX , EI Analytic, or the WiSER Vibe mobile app.



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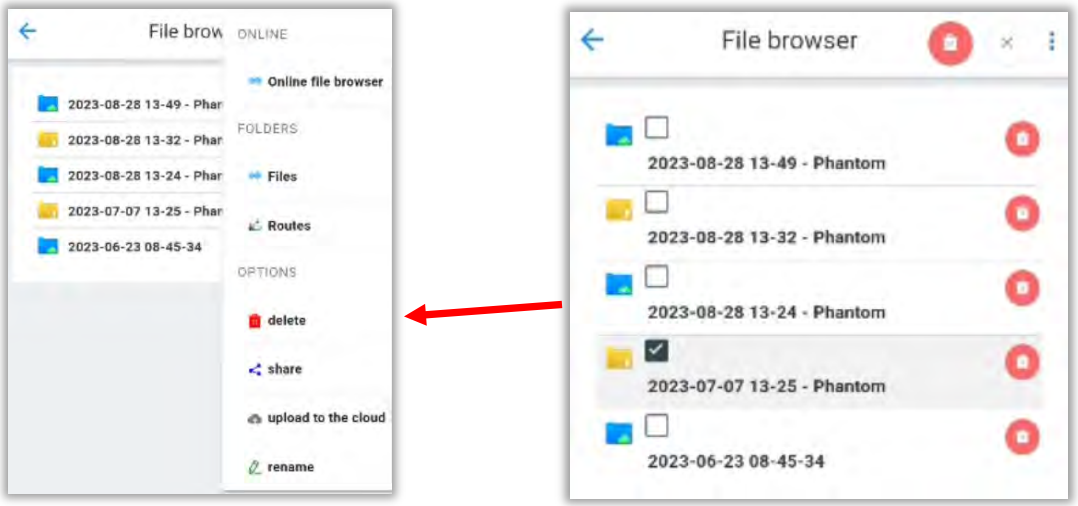
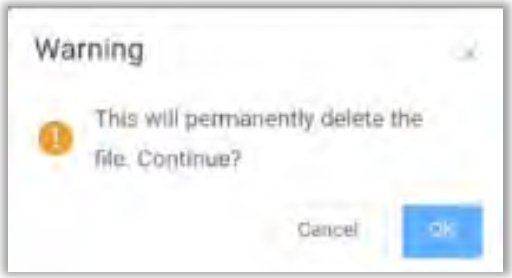
Deleting Files

To delete files stored on your device:

1. Open the menu in the File Browser and delete select



2. Select the folders to be deleted (shown by checkboxes) and press the delete icon at the top of the screen.
3. Confirm by pressing OK on the warning pop-up.



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The Advanced Menu

The Advanced Menu contains several tools, including:

Off Route – Opens the Analysis window to take on-demand vibration measurements and analyze the results.

Orbits – Opens a window to show an orbits graph for a measured Time Waveform(TWF). This is a dual channel function.

Circular – Opens a window to show a circular graph for a measured TWF.

Bode – Opens a Bode plot or optional Nyquist plot (dual channel function) for a measured TWF.

Balancing – Opens the Balancing module. Single plane balancing is supported natively, Dual channel balancing requires an additional license. See Balancing section of this guide for details.

ODS – Opens the Operational Deflection Shape (ODS) feature.

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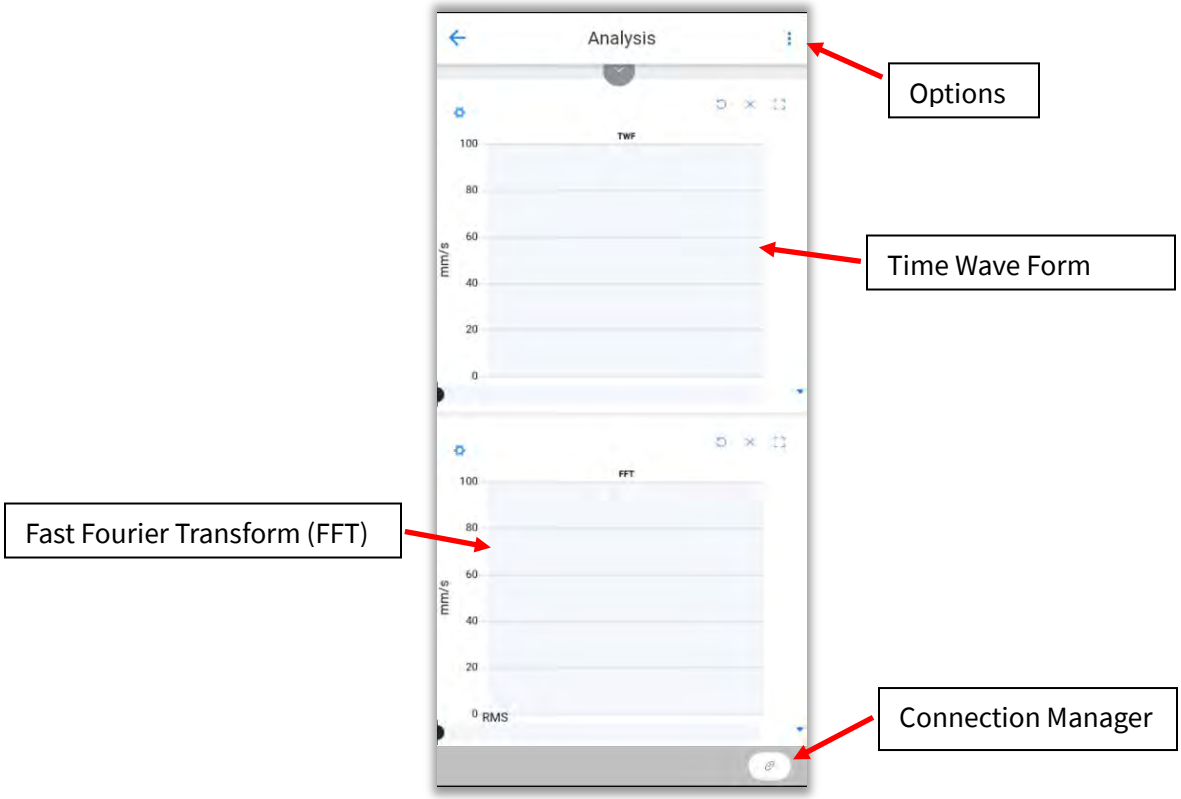
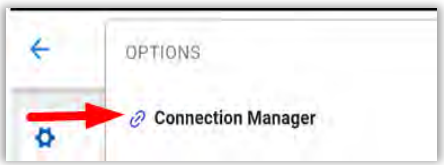
Off Route

This option supports on-demand vibration signal collection.



To start an off-route data collection, select the Connection Manager shortcut at bottom right of the Analysis screen.



1. Connect the WiSER 3X, WiSER Mini, or Phantom sensor and review the settings as per the instructions in the *Connection Manager* section of this guide.
2. Once connected, the Analysis screen opens with the green Record button at bottom.
3. Press the Record button to take a measurement.
4. The resulting TWF and FFT can now be analyzed using the tools described in the *TWF and FFT tools* sections of this guide.
5. To save the signal file , open the Options menu and select Save file
6. To disconnect the portable sensor, choose Disconnect

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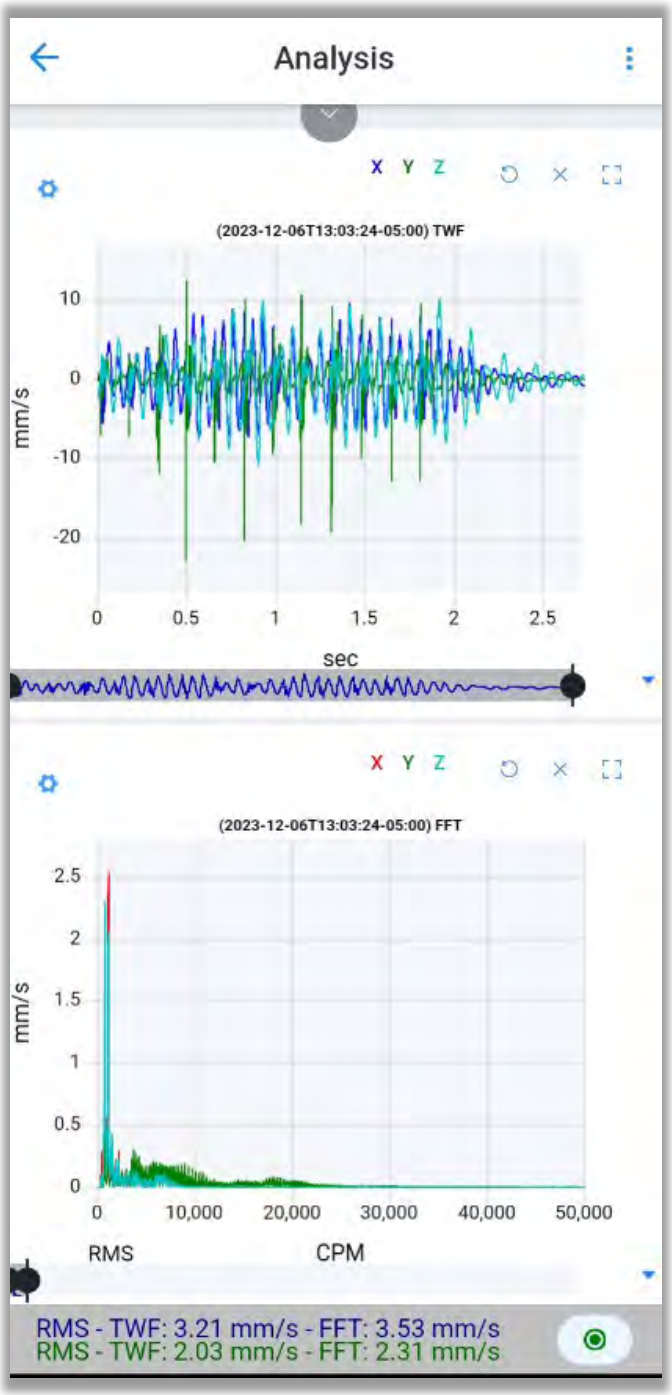

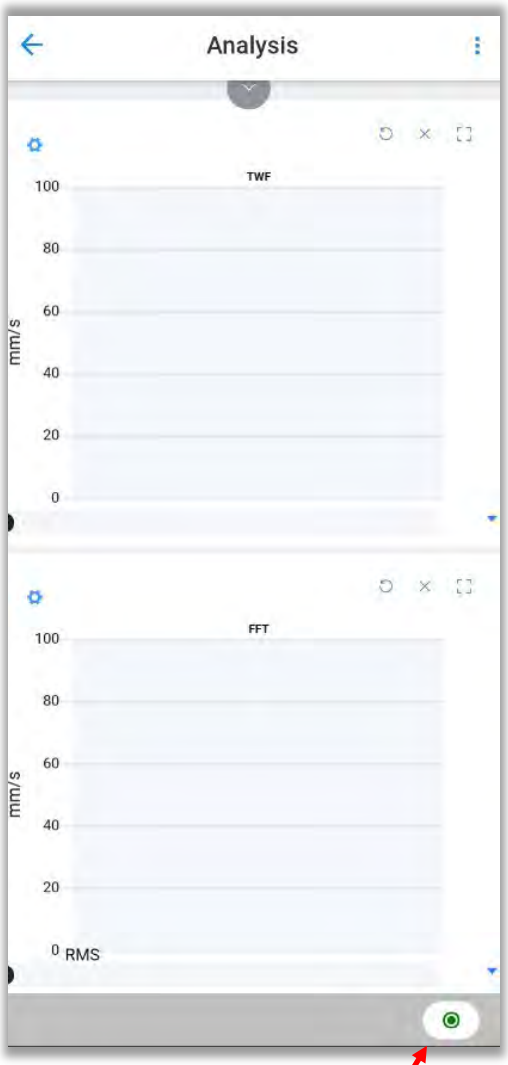

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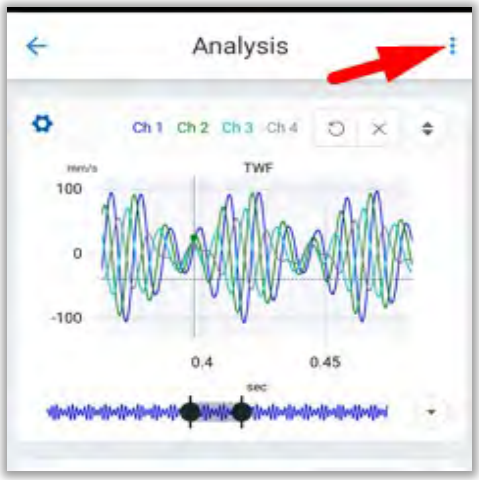
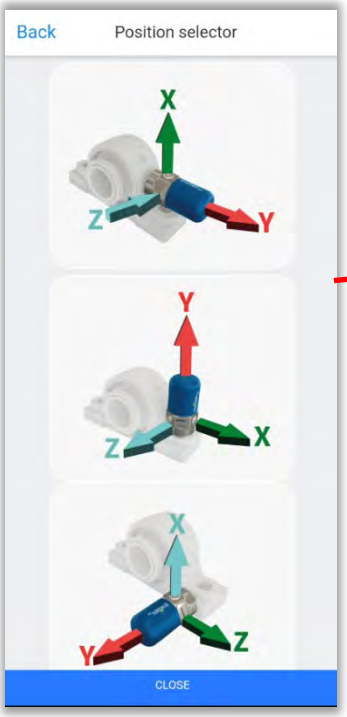
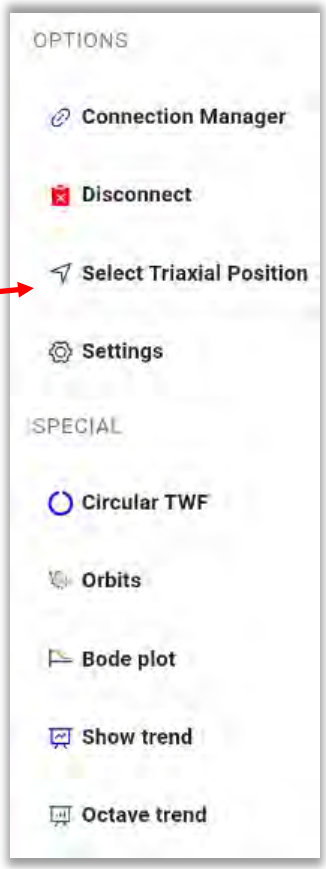
Analysis Options

Tap on the Options menu on the Analysis screen to view all options, sorted into three categories; **Options**, **Special** and **Filesystem**.

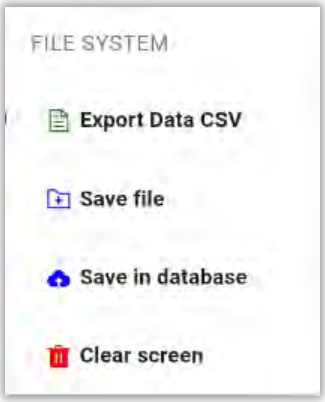






Options section:

- **Connection Manager** - Opens Connection Manager with all the tools described above.
- **Disconnect** – Disconnects the app from any active Wi-Fi or Bluetooth session.
- **Select Triaxial Position** – Sets the orientation of a portable sensor, such as WiSER 3X.
- **Settings** Contains several FFT settings:
    - Default units for TWF and FFT
    - Initial zoom setting
    - Legends visible or not (slider)



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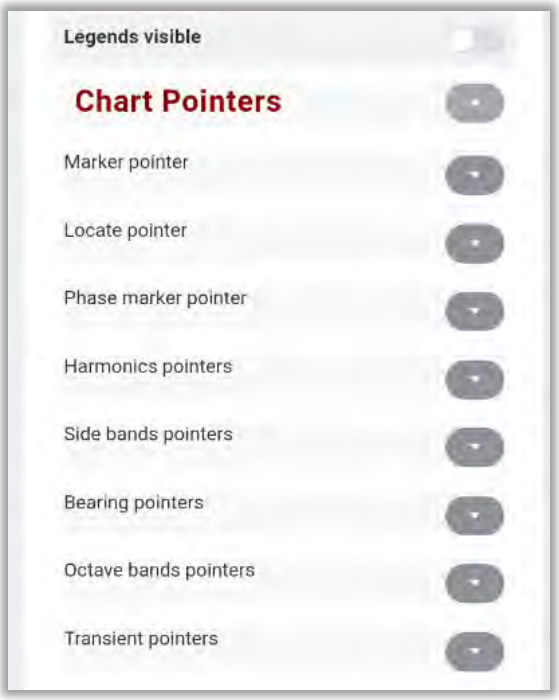
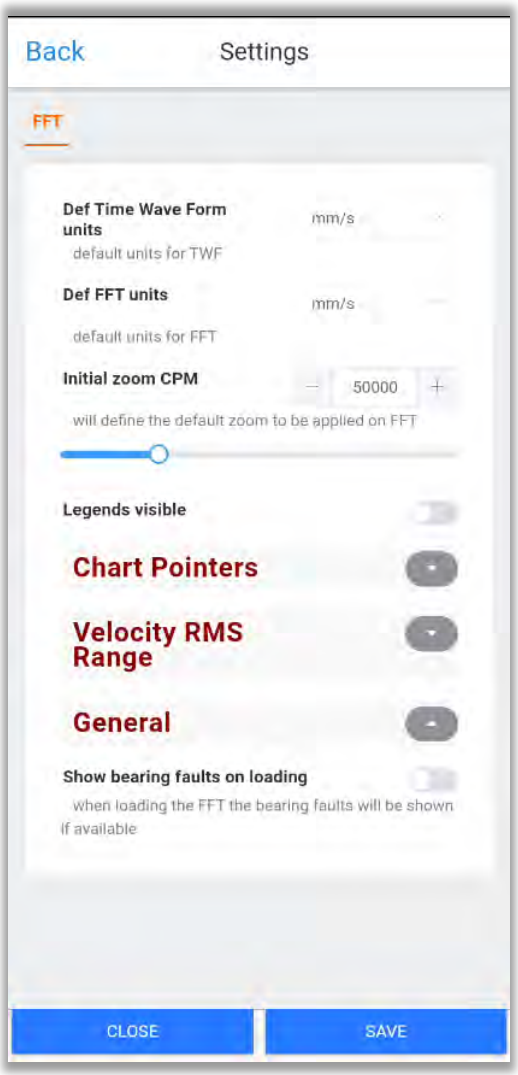
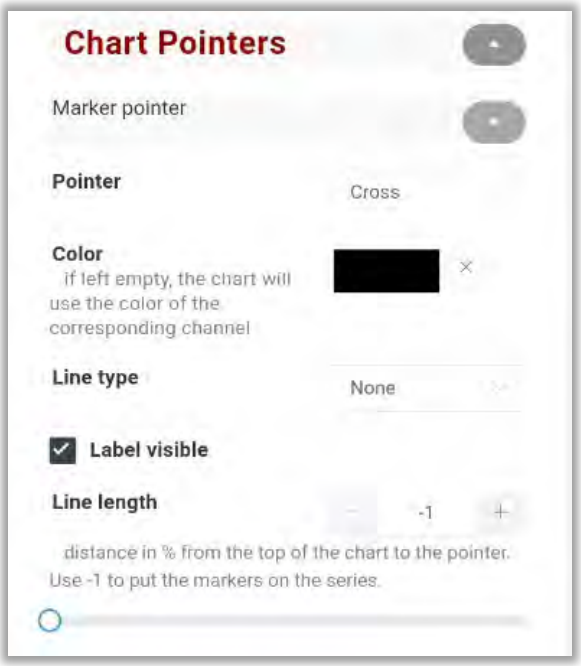
To manage **Chart Pointers**, tap on the down arrow.

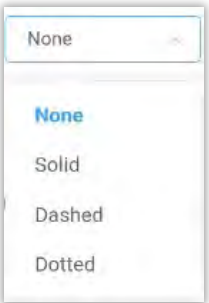
Each type of pointer can be custom configured by tapping its down arrow:





The Pointer style can be selected from the drop-down menu, along with the color, line type and line length:





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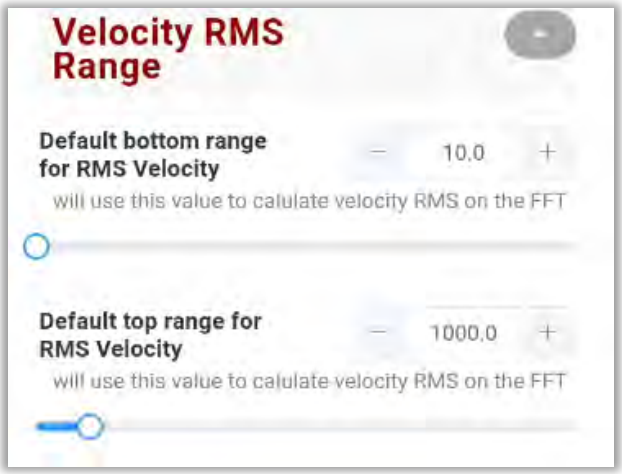
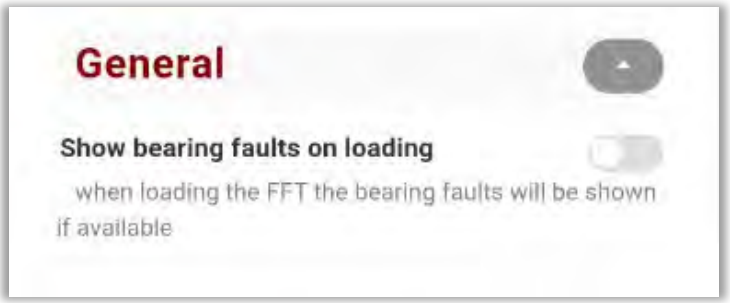
- **Velocity RMS Range**

Select the frequency range used to calculate the RMS value on the FFT.



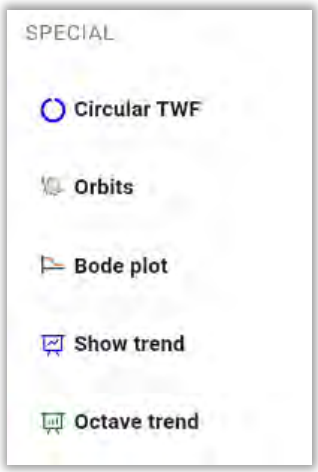
- **General** –Has one parameter as shown:

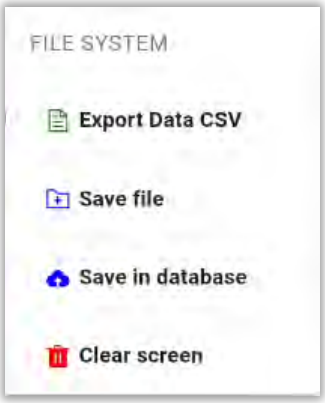


The **Special** section of the Settings Menu contains shortcuts to the Circular TWF function for previously loaded single-channel signal files and to the Orbits and Bode plot functions for dual-channel files.

The **Show trend** feature is reserved for future use.

The **Octave trend** feature is reserved for future use.





The **Filesystem** section contains:

- **Export Data CSV** – Exports the signal file data in comma-separated-value (CSV) format to a folder on the device.
- **Save file** - Saves the open file to a folder on the device as an .ANL file.
- **Save in database** Allows the signal file to be placed into an EI-Analytic database at the machine point/axis of choosing. **Note** - the device must be logged into the correct database to use this feature.
- **Clear screen:** Removes any signals that are currently open in the analysis area, clearing the window.

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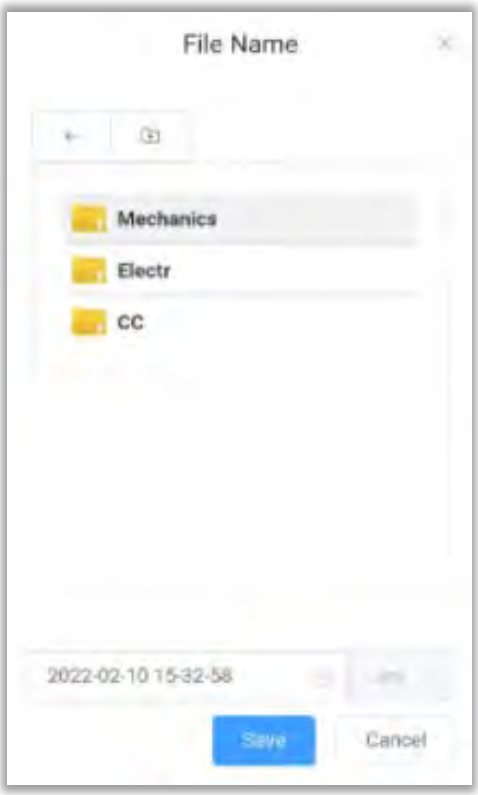
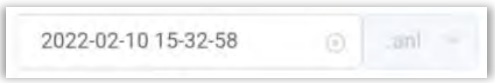
To save the signal in a folder, create a new one with , or choose a previously-created folder:



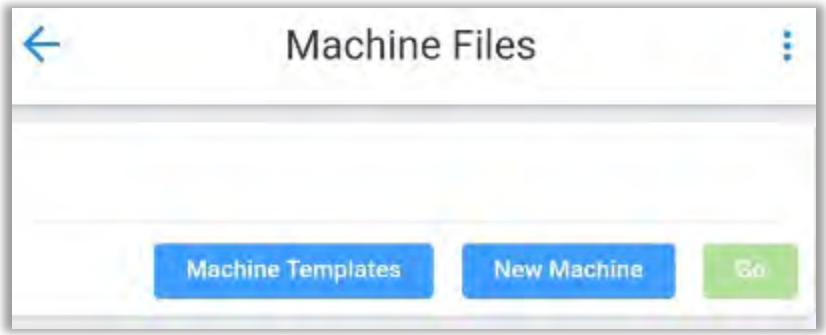
Choose a file name or keep the default which is comprised of the date and time:



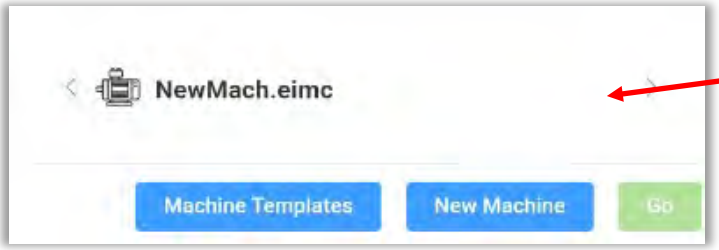
Tap on Save to save the signal, or Cancel to cancel.

New Local Route

Allows creating a new Local Route by either loading from an existing Template or creating a new Machine.



Create a new Machine, it will be saved locally:



Click to start Local Route

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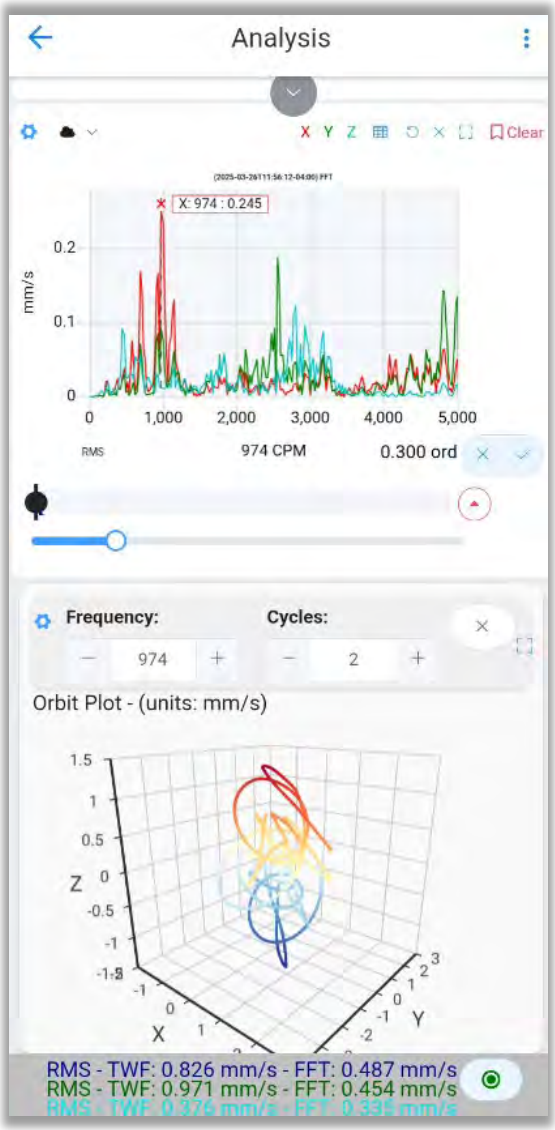
Orbits

Orbit Analysis requires simultaneous data collection in the vertical and horizontal planes. In order to accomplish this, one would need triaxial, biaxial or two single-axis accelerometers. A single triaxial or biaxial accelerometer could be positioned vertically. With two single axis accelerometers, one must be positioned horizontally and the other vertically – each collected on its own channel. Start a new analysis and collect both channels simultaneously.

Tap **Orbits** to read values from the device and create TWF, FFT and Otbits charts. Scroll down to see the Orbits chart.



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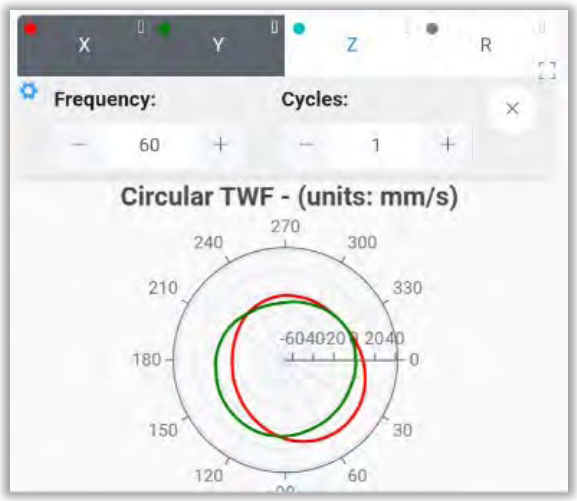
Circular

Like Orbits, the Circular Time Waveform function requires 2 channels of simultaneous data.

Click **Circular** and connect to your device such as a Wiser 3X and create TWF, FFT and Circular charts. Scroll down to see the Circular chart:



Bode

Displays machine start-up or run-down data collections in Bode Plot format.

Balancing

See *Balancing* section of this guide.

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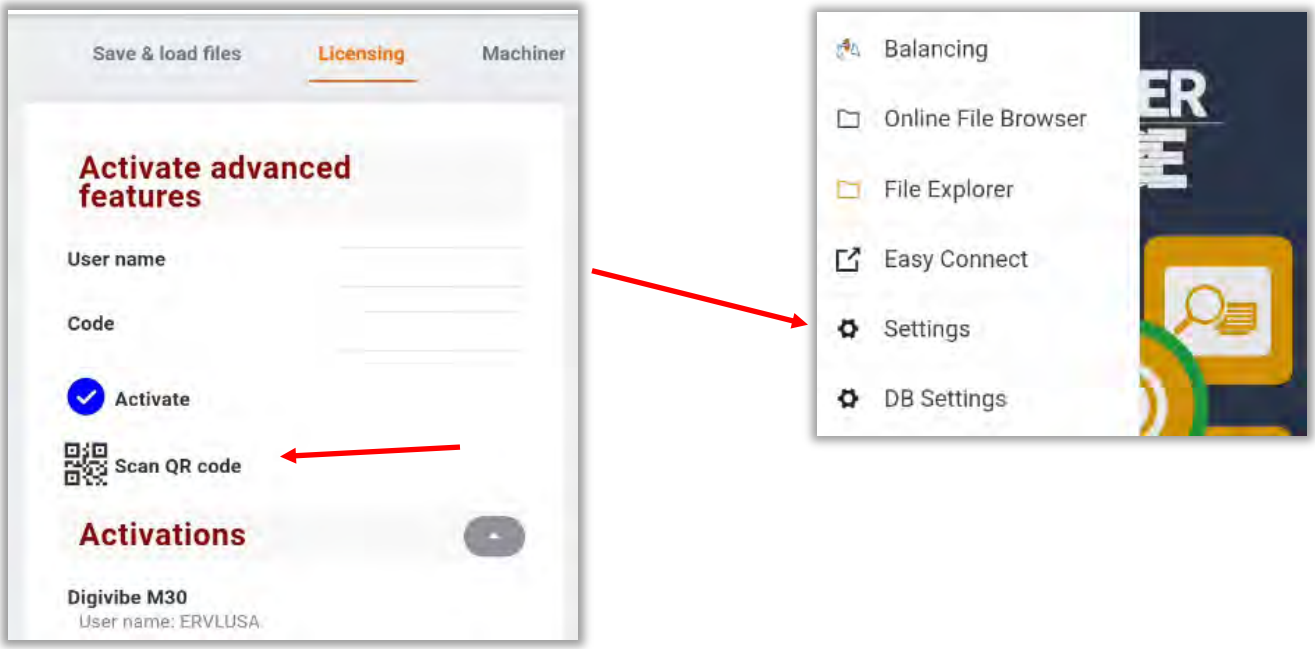
ODS

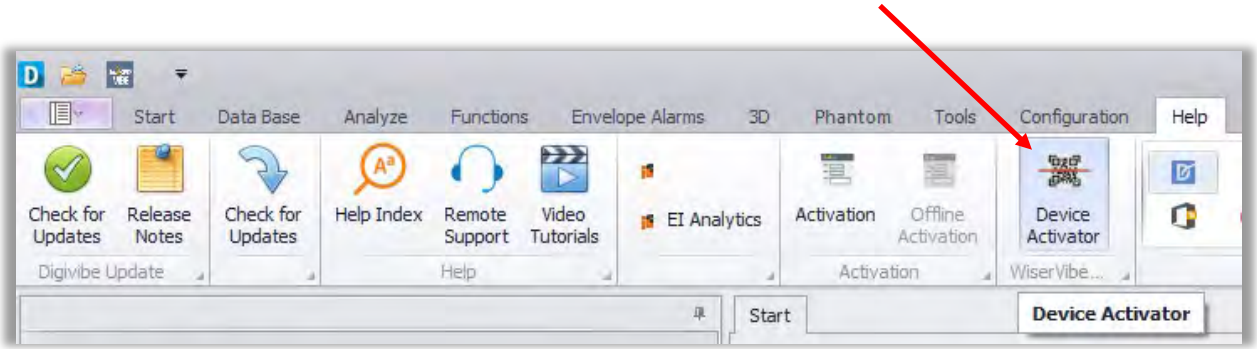
Operating Deflection Shape (ODS) analysis can animate the deformation of a mechanical system at a selected frequency. ODS operates in Demo mode only unless you extend a Digivibe M20 or M30 license to Wiser Vibe,

To access all functionality of ODS, extend a DigivibeMX license to a mobile device:

1. Open the Wiser Vibe **Settings** screen and scroll over to the **Licensing** Tab.



2. Open Digivibe and select Help> Device Activator.



A QR code will be displayed on the screen.

3. Press **Scan QR code** in the Wiser Vibe Settings screen and scan the QR code using the device's camera.
4. The license will automatically activate.

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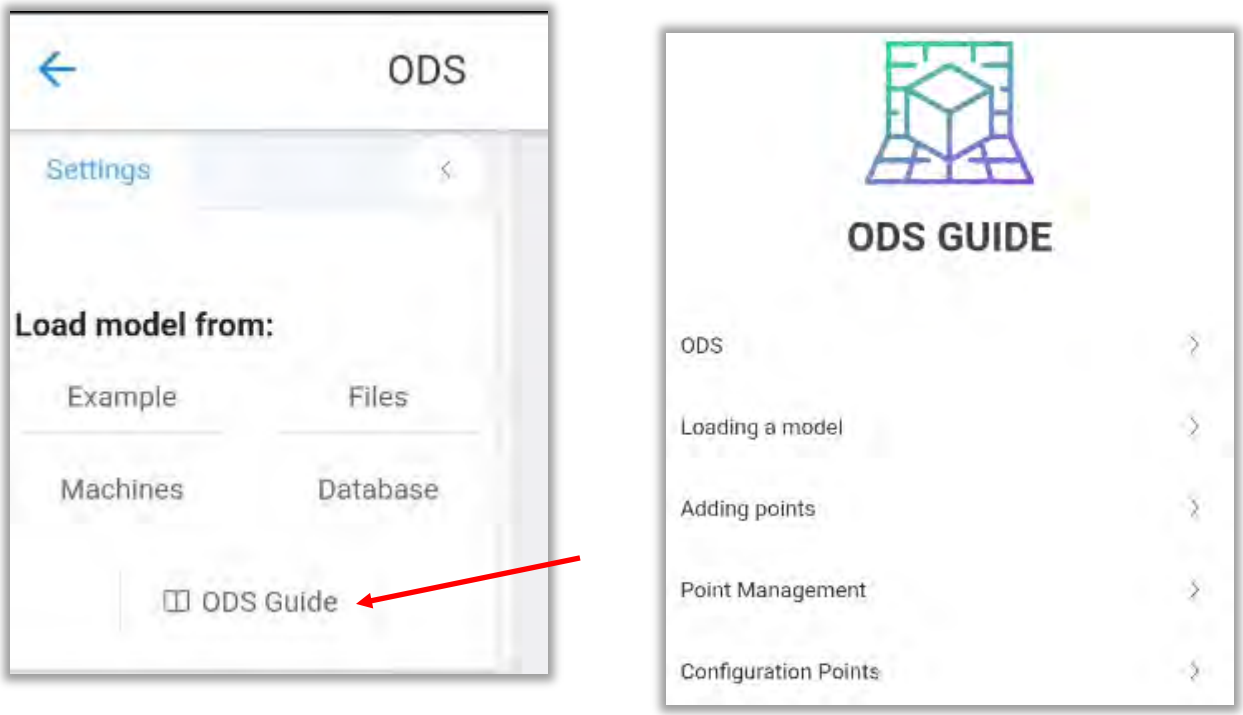
Use the embedded ODS Guide to learn how to load a model, add, manage and configure points in order to run a simulation.



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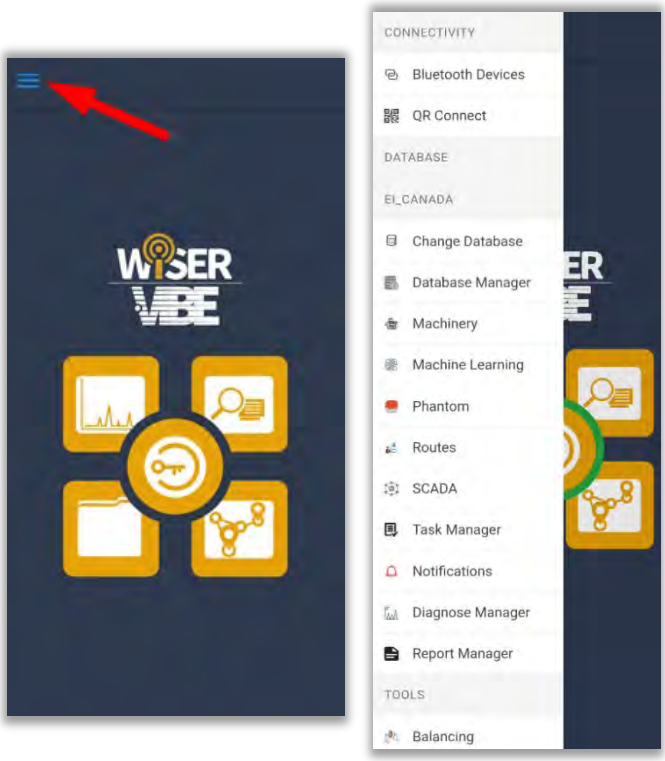
The Sidebar Menu

The WiSER Vibe **Sidebar Menu** is accessed from the Home screen, and contains many options.



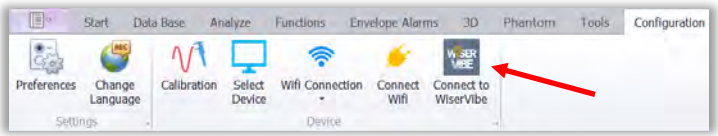
Bluetooth Devices

Scan for, and connect to Bluetooth sensors (Phantom or WiSER Mini). See the *Connection Manager* section of this guide for more details.

QR Connect

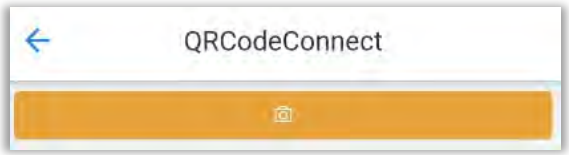
Use this tool to scan a QR code generated in DigivibeMX® to connect WiSER Vibe. and transfer files. . **Note** – both devices need to be on the same data network.

In DigivibeMX, go to the Configuration Menu and click on the **Connect to Wiser Vibe** button:



A QR code will be displayed:

Tap **QR Connect** in the Settings Menu, then the Camera button to activate the device's camera. Point it at the QR code . A *connection successful* message will be displayed.



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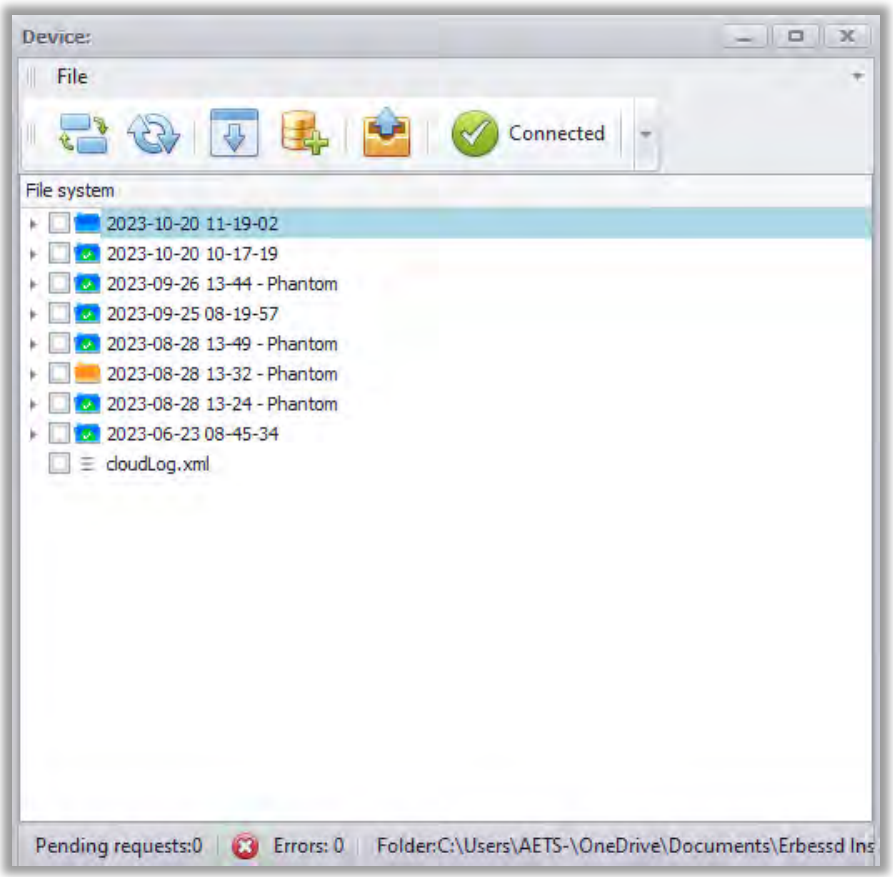
A new window will open in Digivibe, showing the files stored on the mobile device.

Use the check boxes to select which files to transfer, then click either:

 - to download files to a folder on the PC/tablet running DigivibeMX.

Or  to download files directly into the currently open DigivibeMX database.

Optionally, Routes can be copied from DigivibeMX using the  button.



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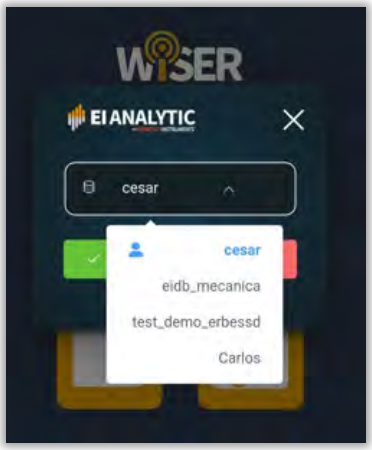
Change Database

If the EI-Analytic account contains multiple databases, use this to change which database is open.

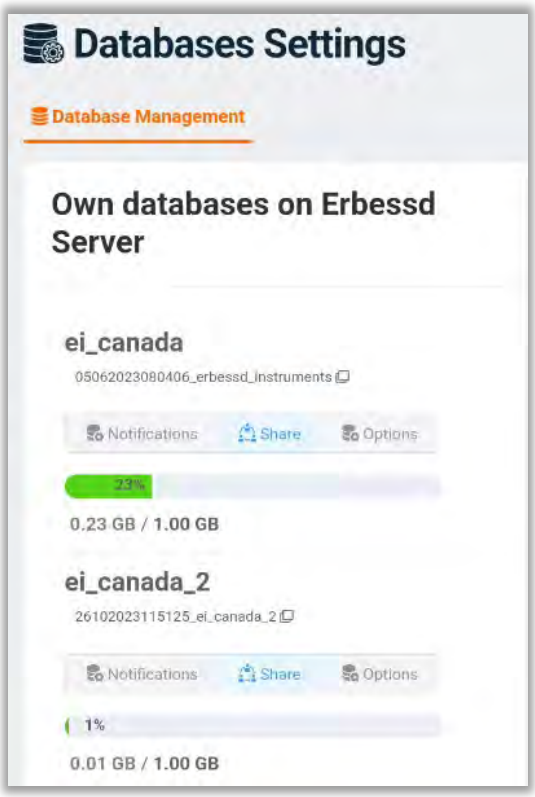


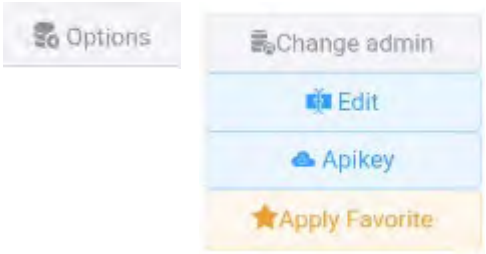
This option opens the EI-Analytic™ screen, with a drop-down box for database selection. Tap ✓ Save to connect to the selected database, or ⏻ Disconnect to log out and log in with another account.

Database Settings

Use to:

- Show all Owned and Shared databases
- Check the database size, expand an existing db
- Share with other EI-Analytic Accounts, or add a new database in this window.

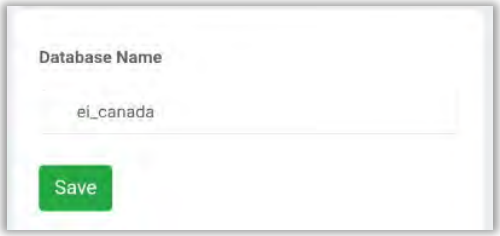




Change Admin allows reassigning an Owned DB to another EI-Analytic Account as an Owned DB.

The Edit menu allows changing the database Name:

CAUTION! Database names must be **unique**, and consist of all lower case characters, and/or numbers. The only special character allowed is the underscore.



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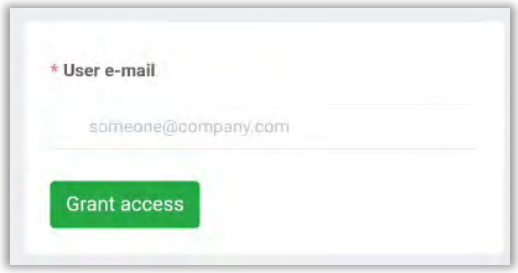
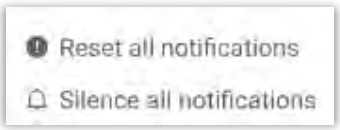
Share allows the database to be shared with the email address of another EI-Analytic account:

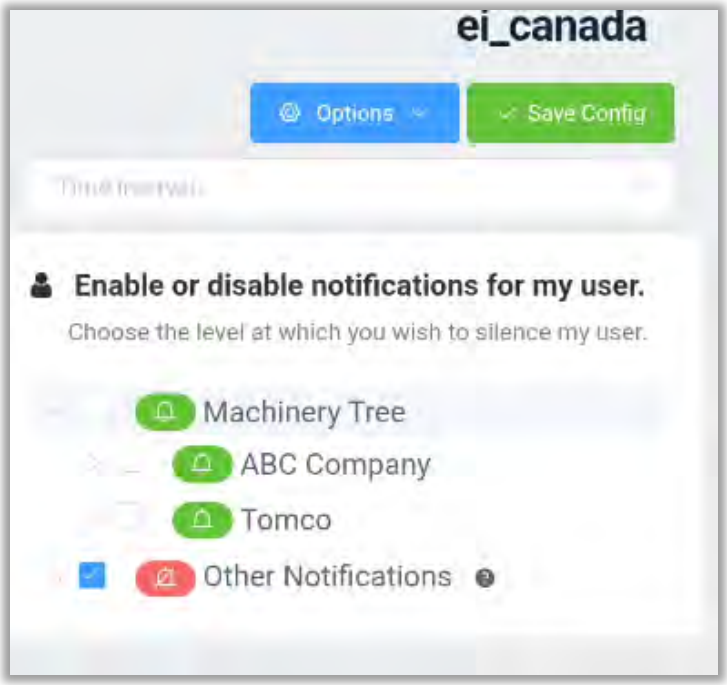


Notifications defines for which Machines Notifications can be sent (if configured).

The Options Options are:



Tap the Time Interval drop-down box to select the length of time to silence notifications:



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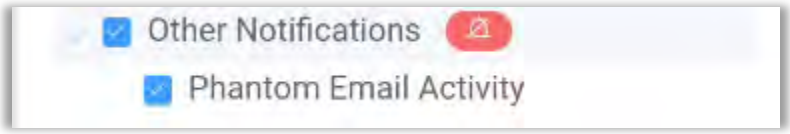
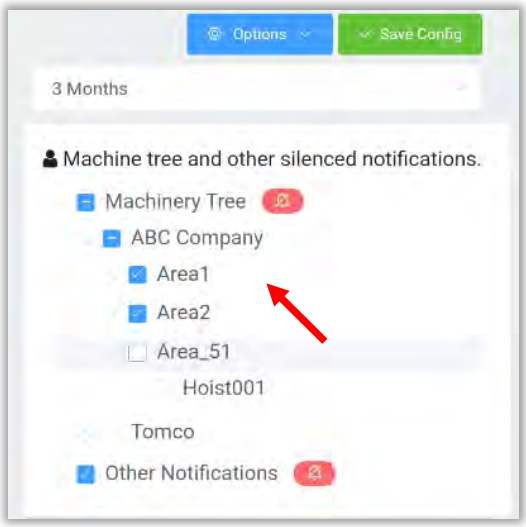
This user's email address will not receive notifications for the selected machines (silenced).

Other Notifications include Phantom Email Activity. Check this to silence notifications regarding Phantom sensor activity(if a sensor is out of communication with a gateway for example).



Press 



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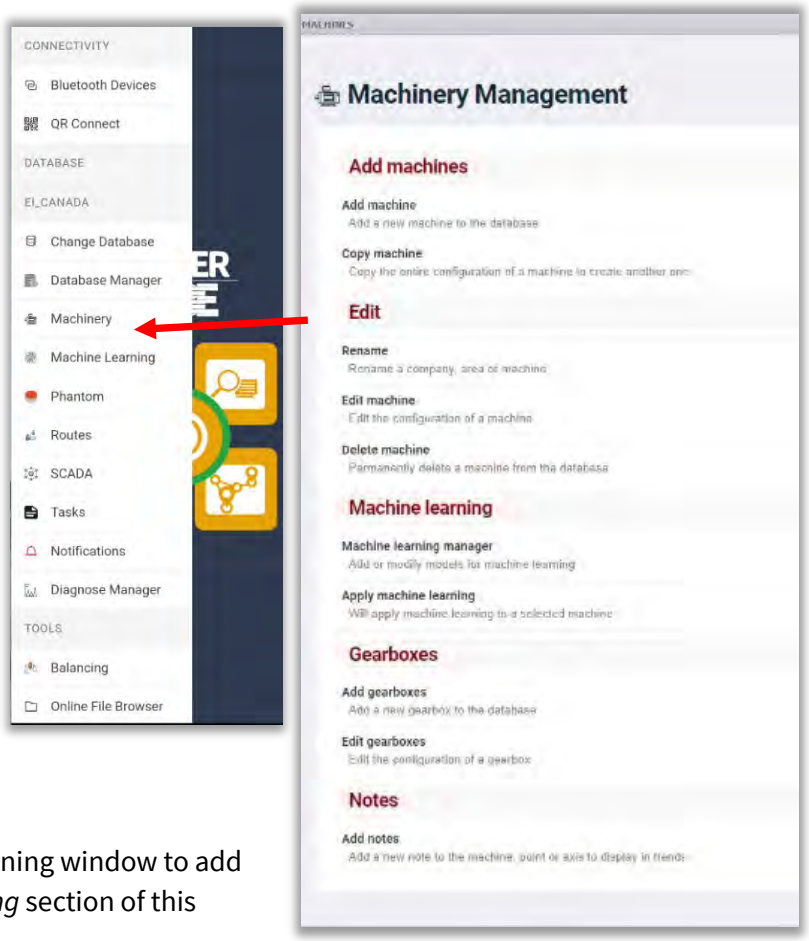
Machinery

opens Machine Manager, used to manage the **Machine** database.



Add Machine: Opens the Add Machine window for adding new machines to the database.

Copy Machine: Copies an existing machine for quick additions. This works well for creating multiple machines with the same parameters, e.g., RPM, bearings, etc.

The **Rename** feature allows renaming a Company, Area, Machine, or Point.

Edit Machine: To select a machine for editing, tap on the arrow beside the machine name. The Edit function can be used to change a machine's Company or Area assignment in addition to all other fields in the machine configuration.

Delete Machine: Select from the list to delete a machine.

Machine Learning Manager: Opens the Machine Learning window to add or edit machine learning models**.** See *Machine Learning* section of this guide for more details.

Apply Machine Learning: Applies a machine learning model to a selected machine.

Gearbox Add/Edit: Opens the Gearbox window to allow adding and editing of gearboxes in the database.

Notes: Opens the Notes manager screen to allow adding, editing or viewing notes attached to a machine.

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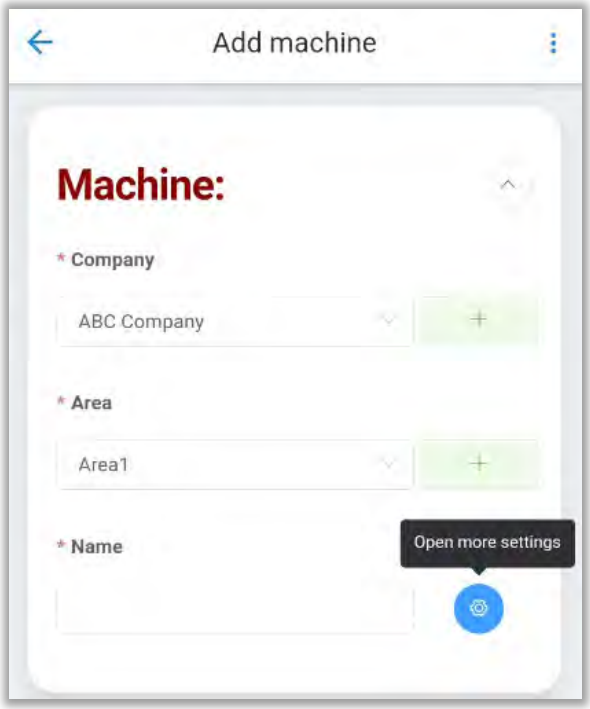
Adding a Machine



The **Add Machine** screen has two sections, the Machine panel and the Points panel.

The **Machine** panel contains fields for:

- **Company**: The company who owns the machine. Select from the drop-down or add a new Company with the + button.
- **Area**: The production area, building or location within a Company in which the machine is located. A new Area can be added by using the add button.
- **Name**: The machine name or ID number. **NOTE**: the only special character permitted in the name field is an underscore.
- **Image**: Optional 2D image of the machine may be uploaded to the database for reports. Tap the photo button to capture an image using the device's camera.
- **3D Model**: 3D ODS models can be selected from the database. External 3D models in .3ds, .xaml, or .obj formats can also be imported to WiSER Vibe.
- **Notes**: Text field for documenting additional machine information.

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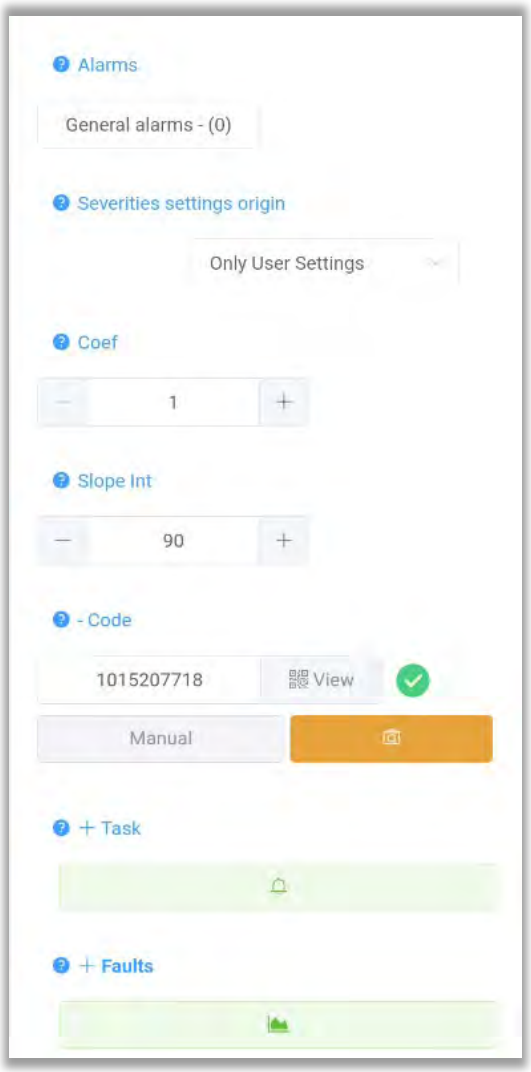

- **Alarms**: General alarms may be configured here for non-vibration sensors such as Temperature, Speed, Current, etc. These types of sensors may be administered at the Machine level **or** the Point level in the database. If created at the Machine level, the corresponding alarms should be configured here, if created at the Point level, configure alarms in the Points panel **Extras** field as described in the next section.
- **Severities settings origin**: The choice is used to determine the severity color (red, yellow, orange, green) of the icons shown in the Data Tree of DigivibeMX , EI-Analytic and the WiSER Vibe App. The drop-down menu includes:
    - Only User Settings(default) – displays colors based only on User alarm severity settings.
    - Only Machine Learning Settings – displays colors based only on Machine Learning settings.
    - Default Settings - Shows User settings as source for colors, if configured. If not, shows Machine Learning settings.
    - Default Machine settings - Severity colors are shown based on Machine Learning, if configured. If not, colors reflect User settings.
- **Coefficient**: The machine maintenance priority or criticality for severity trending on a 1-10 scale (1 for critical machines, 10 for non-essential machines).
- **Slope Interval**: The time period of data to be considered for machine severity calculations.
- **Code:** WiSER Vibe automatically generates a unique code(number) that can be used to identify a machine. Tap the View button to see a unique QR code for scanning purposes. A Manual code may also be entered, or an image created via a device's camera.
- **Task:** Opens the Task Manager . This feature provides alerts via email and/or push notifications to the WiSER Vibe App, based on configurable thresholds for velocity, acceleration, etc., for a given machine. See Task Manager section of this guide for more details.
- **Faults**: apply a previously-created custom Fault , or build a new one in Diagnose Manager. See Diagnose Manager section of this guide for more details.

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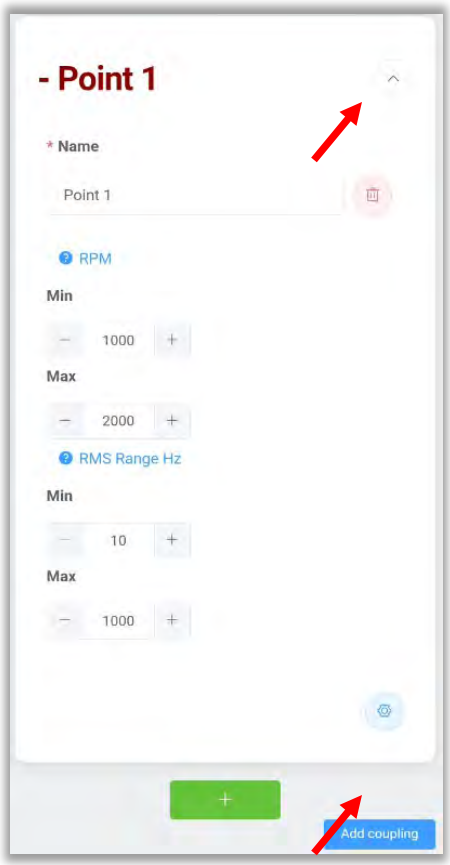
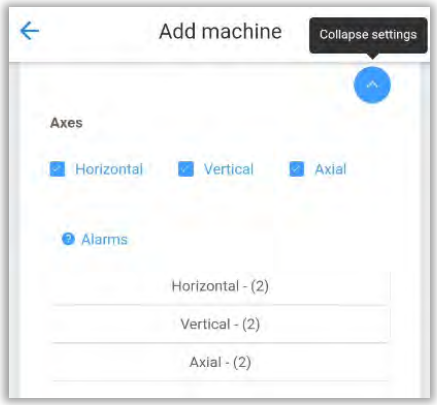
Configuring Points on a Machine



Point 1 is created by default in a separate panel. Every machine has a minimum of 1 point, although it is not used when non-vibration Phantom sensors are assigned at the machine level. Tap the up/down arrow to expand or hide the bottom portion of the Points panel.

- **Name**: Use a naming convention for points that works for you. Names like MOB (motor outboard) or NDE (non-driven end) are commonly used. Only underscores are permitted as a special character in the name field.
- **RPM**: Enter the Min and Max RPM values for the machine point. An accurate RPM range is required for Acceleration Envelope calculation and identifying the machine's running speed.
- **RPM Range Hz**: For high-sensitivity Phantom sensors (V10, V10E) use the default range of frequencies from 10 to 1000 Hz. It is recommended to change this for high-range Phantom trixial sensors (V11, V11E) to 20 Hz Min and 1000 Hz Max to get higher precision.
- **Axes**: Defaults to triaxial, adjust as necessary.
- **Alarms** - These fields are used to set Axis-level severity alarms that can be used to determine the colors displayed in the data tree. Tap **Horizontal**, **Vertical or Axial** to set the alarms for each axis. This opens the Alarm config window:



Two parameters are assigned by default for RMS alarms - Velocity and Acceleration Envelope.

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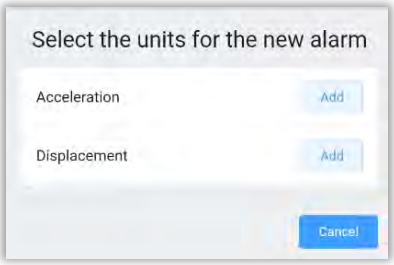
Tap on the large green Add bar to add another RMS alarm parameter (Acceleration and/or Displacement).

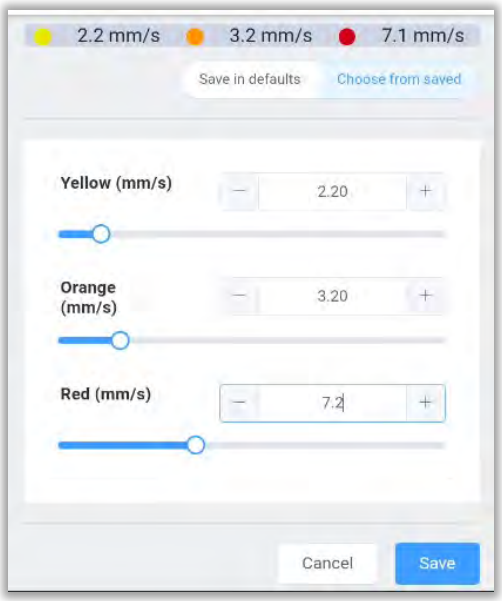


Tap on the **Edit**  button to change the default settings, which are based on ISO 10816 Class 2 standards.

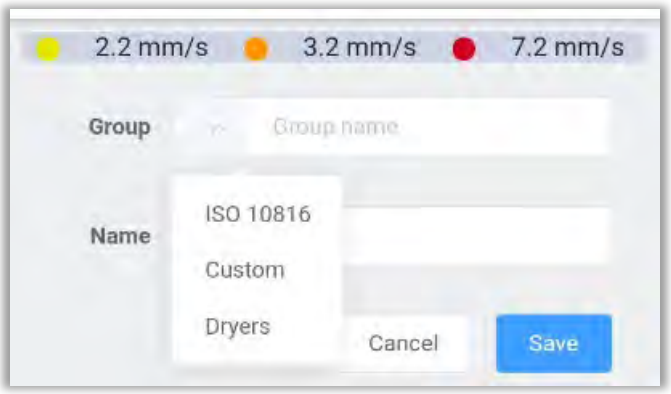
To create custom alarms, change the default values by tapping the number fields or by using the **+** and **–** buttons.

When complete, 

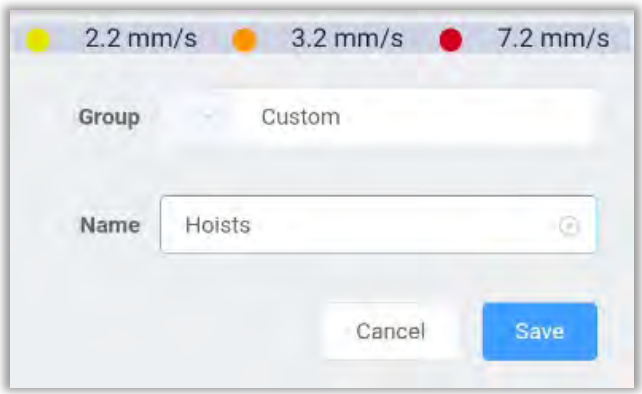
press



Enter a new Group name or use an existing one:



Assign a name:



Press **Save**

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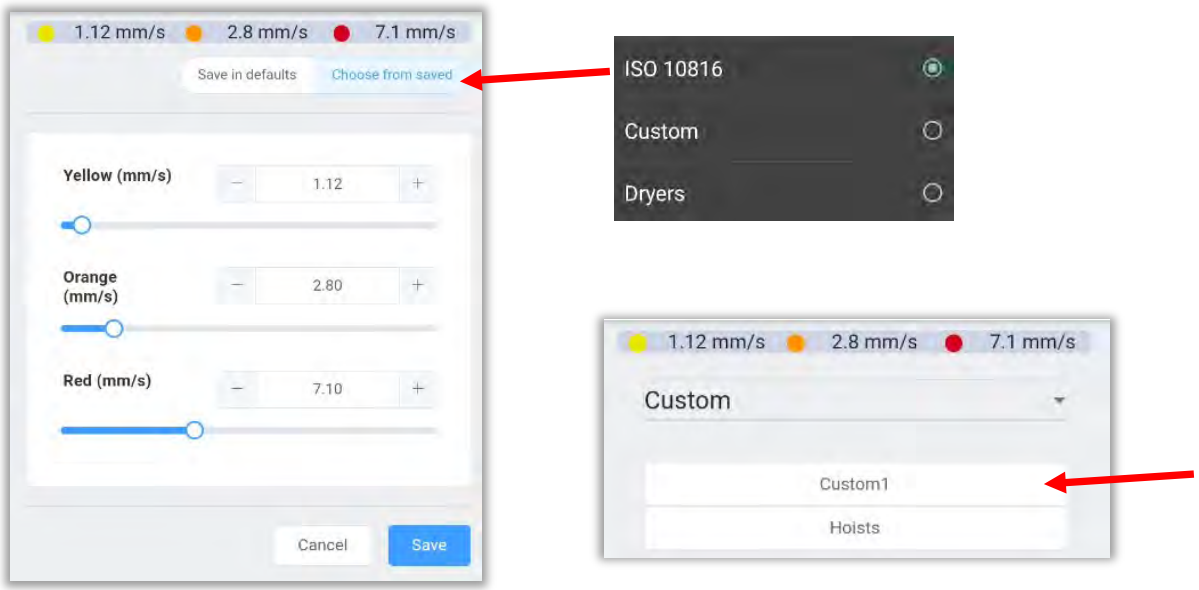
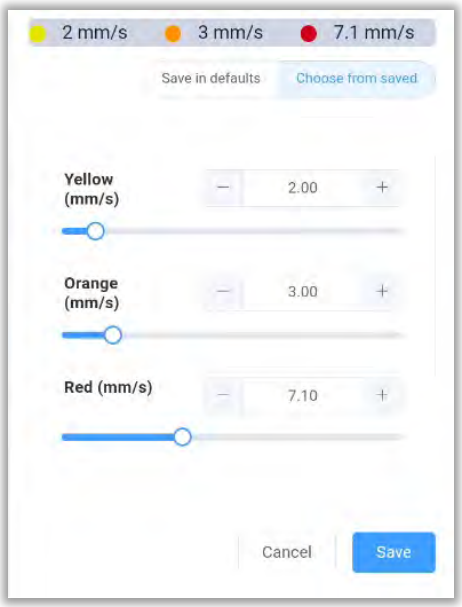
Previously created alarms can be applied by Choose from saved using :



Select the Group, and the alarm set name (example "Custom1"):

The alarm values for "Custom1" are now shown on the screen.

Once changes are made, press Save



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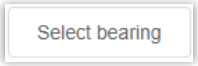
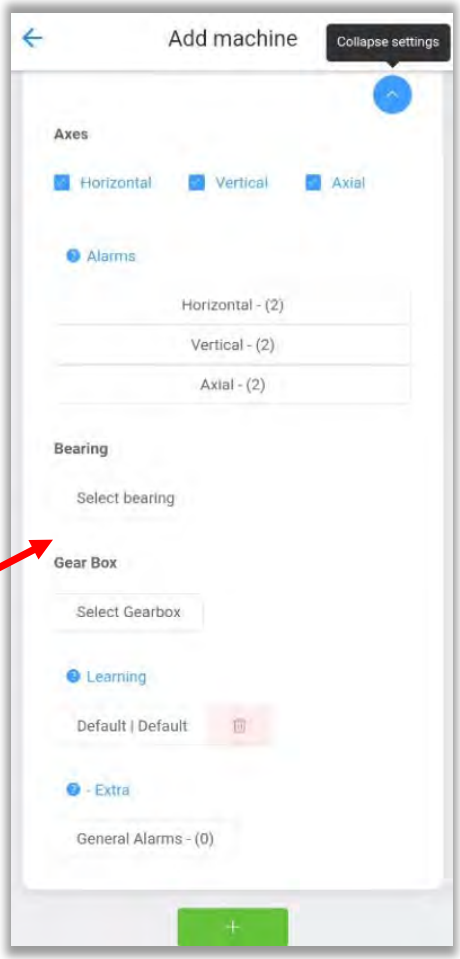
Add Bearing

Press the **Select Bearing** 

button.

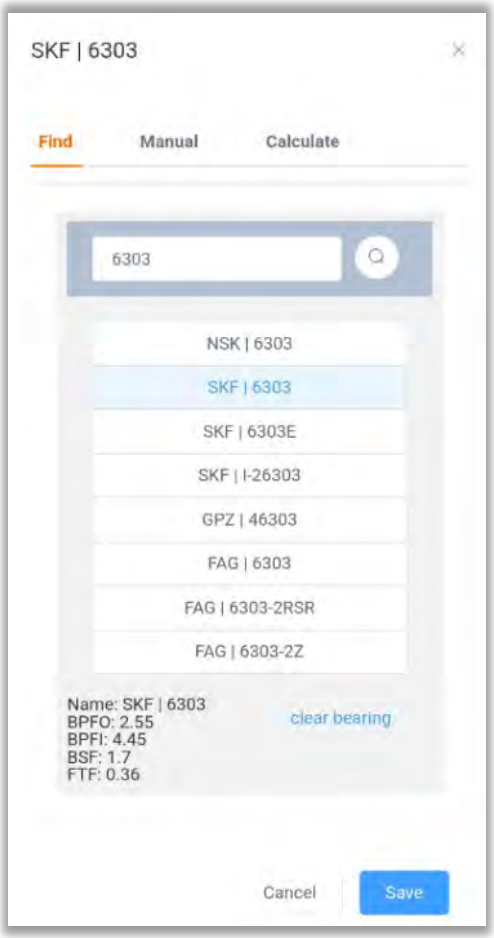


There are three options:

1. **Find** -select a bearing from the database
2. **Manual** – enter the bearing specs manually
3. **Calculate** - used to calculate fault frequencies using measurements or from data provided by the bearing manufacturer.

Enter complete or partial bearing part numbers to Search the database.

Select from the list and tap Save.



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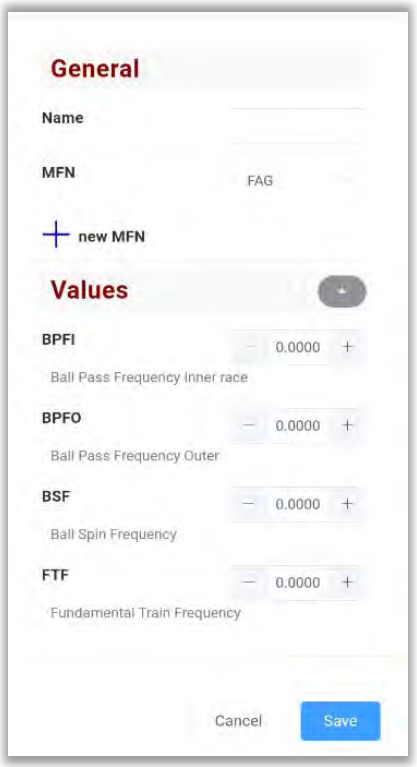
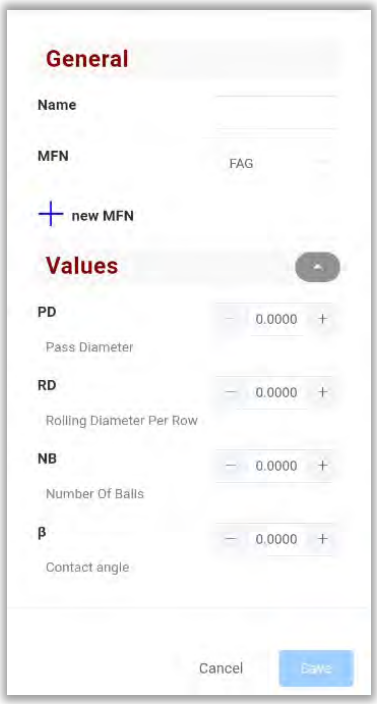
Bearings can be manually created using calculated fault frequencies or those provided by the bearing manufacturer.



The Calculator can be used to calculate fault frequencies using measurements or from data provided by the bearing manufacturer.



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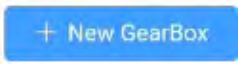
Add Gearbox

Press the Select Gearbox button 

to select an existing gearbox from the database or create a new 

one.

The Add Gearbox screen conatins the following fields:

- **Name**: Enter the name of the new gearbox.
- **Notes**: Add any desired notes.
- **Manufacturer**: Select from previously configured list or Click 

on the button to configure a new Manufacturer.
- **Step Name:** Add the step name to the Step-1 panel.
- **Input**: Enter the number of teeth.
- **Input Bearings**: A bearing configuration may be added by 

selecting the button.
- **Output**: Enter the number of teeth.
- **Output Bearings**: Add an output bearing, if desired.

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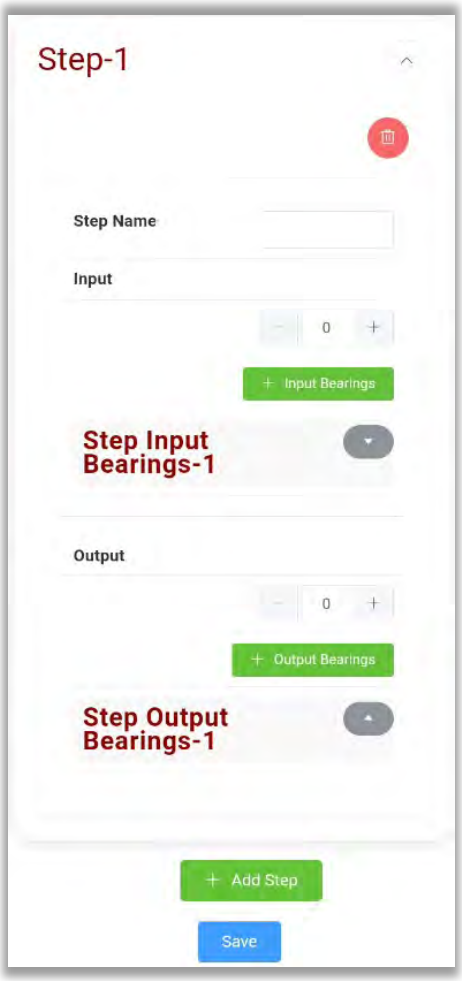
Select the button to configure another step in the Gearbox configuration.

Save

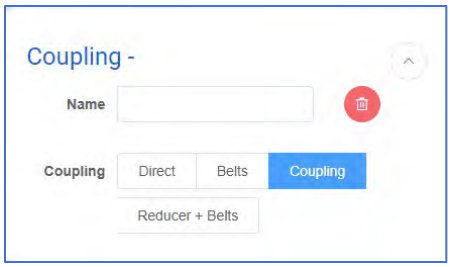
Click when finished. The new gearbox will be assigned to the current machine point.



Add Coupling

To add a Coupling, click the Add coupling button. Add coupling

Enter a name and select which type of coupling is used for this machine



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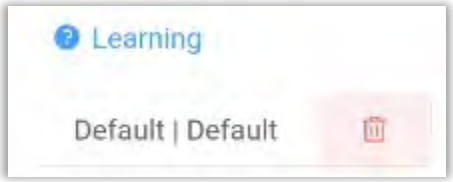
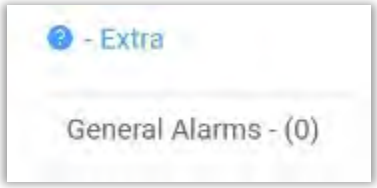
Learning

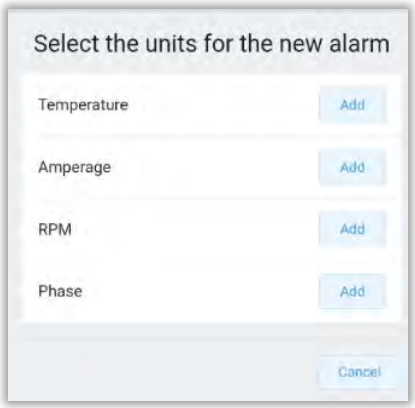
Shows the Machine Learning Model applied to this Point, if configured.



Extras

In addition to vibration data, Extra Values such as Temperature, RPM and Amperage may be documented. Extra Values may be assigned at the Machine level, or at a Point. Tap the General Alarms button to set alarms for sensors that are assigned at the point level. These point level alarms have no relation to the Axis alarms previously described.

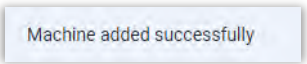


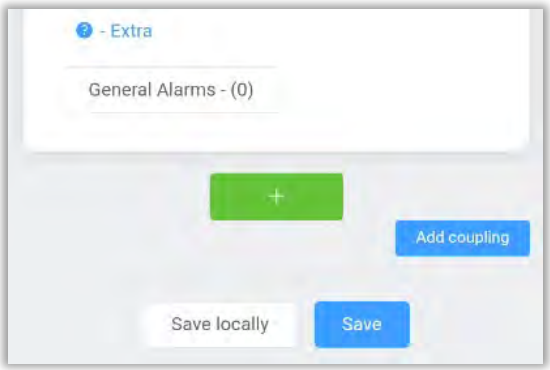


To add another machine point, click the green add button. 

After adding all machine points, click on Save. 

You will see a confirmation message appear:





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Machine Learning

One of the features available to EI-Analytic subscribers is Machine Learning.

Erbessd uses semi-supervised machine learning algorithms, as described in the article authored by Erbessd CEO, Dr. M. David Howard: https://www.erbessd-instruments.com/articles/machine-learning-vibration-analysis/

The Erbessd Phantom wireless machine surveillance system provides the historical data set used by the algorithms - machine learning requires large amounts of data. The Phantom system typically sends data every few hours, which provides a large enough database for machine learning to work accurately.

The Machine Learning feature can be used to control the color of the Severity indicators(red, orange, yellow, green) shown in the Data Tree (the left-hand panel in DigiVibeMX and EI-Analytic) for each Company, Area, Machine, Point, and Axis.

It also provides a notification feature via email and/or Push notifications to devices running the WiSER Vibe mobile app.

The Machine Learning feature is administered via the WiSER Vibe Settings Menu.

Machine Learning works through **models** that act as templates to be applied at different machine points. Models are organized into groups with a unique names for each.

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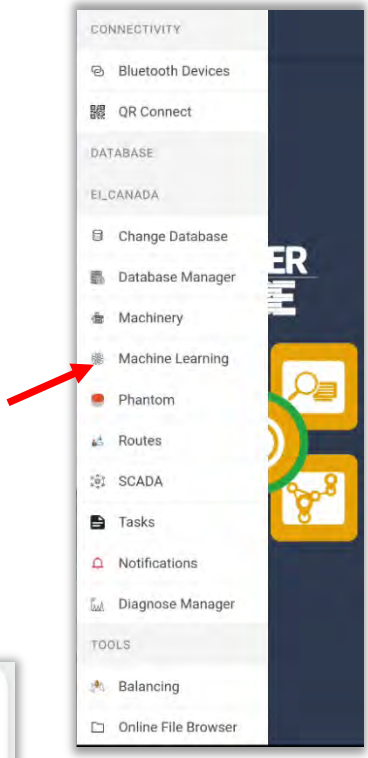
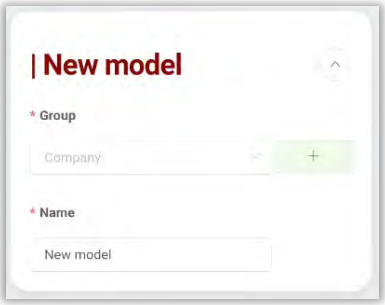
Select **New model** to begin.



Assign a Group and a Model name:



In the **Configurations** panel, options for Velocity and Acceleration Envelope are displayed by default. To add another unit, tap the green add button. Selecting the desired Units for this model will populate them into the General **Name** field.

- **Interval (days):** Defaults to 30 days. The larger the interval, the better the accuracy of the Machine Learning algorithm. Enter the number of days or use the slider to set the value.

Machine Learning may be configured to alert for **RMS**, **Crest Factor** and **Octave Bands** values. For each of them it is possible to set the notification alert based on the yellow, orange or red color values.

- **RMS values:** Applies to Vibration Amplitude units only.
  - **Notification for value:** Select the condition upon which notifications via email and the WiSER Vibe mobile App are sent:

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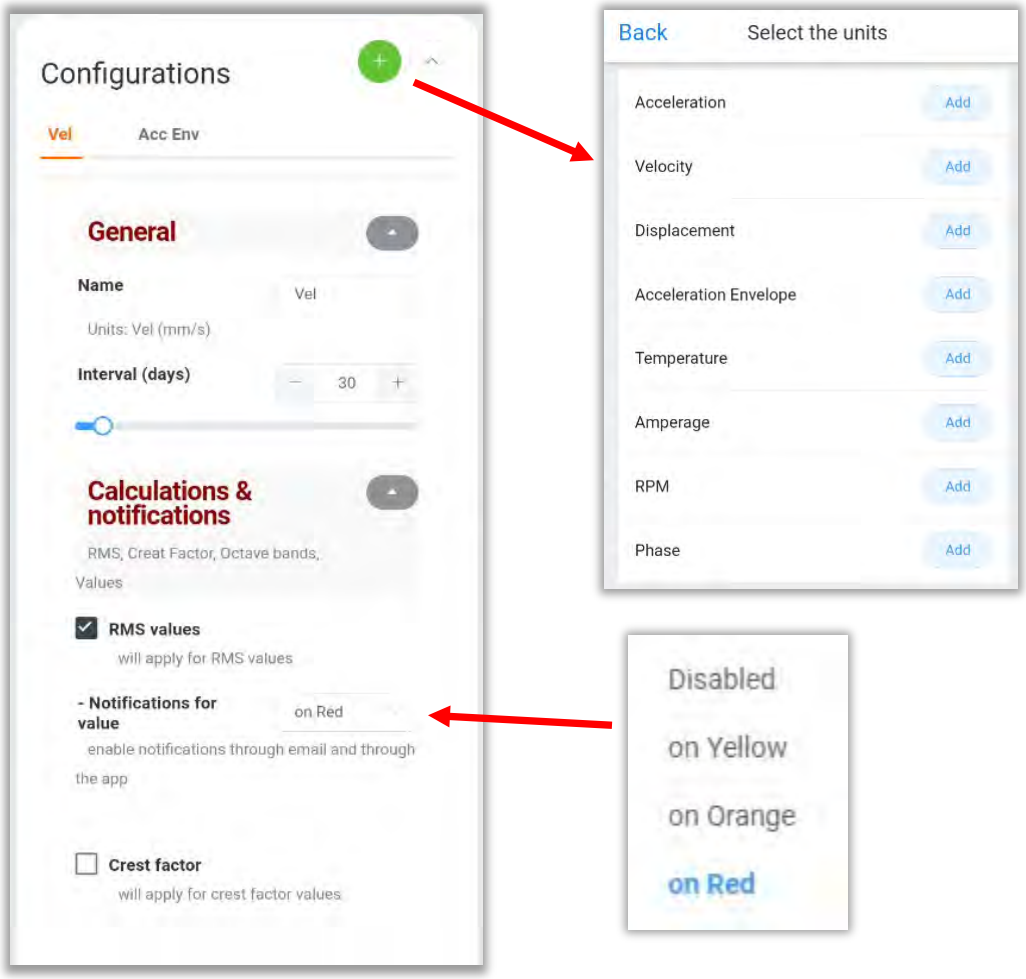
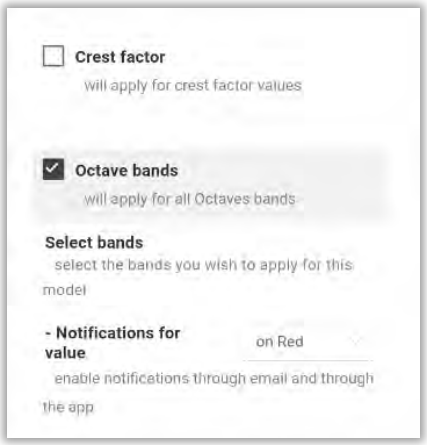


- **Crest Factor**: Check to include crest factor in calculations, and if notifications are desired.
- **Octave Bands**: Select to include Octave Band information in calculations, and notifications.



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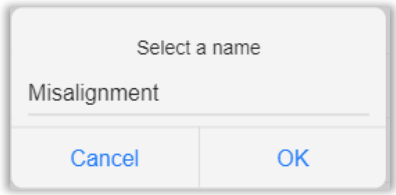
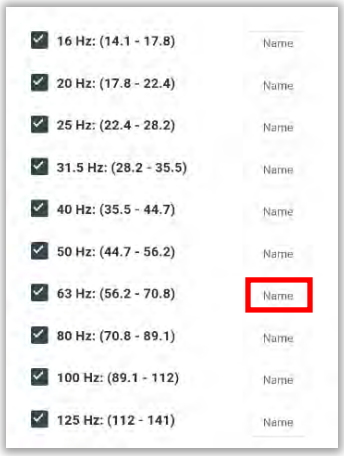
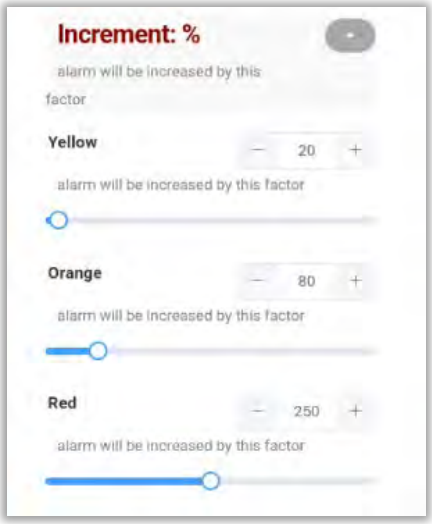
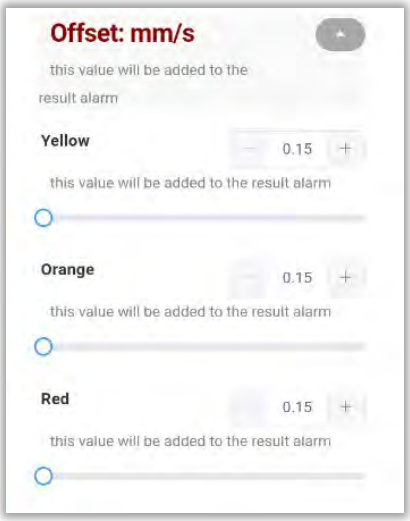
Tap **Select Bands** to assign a name to any of the 32 octave bands. As an example, the octave band that contains the frequency of 2x the running speed of a motor may be named “Misalignment”. This name will appear in the email /push notifications.





- **Axes**: Select the axis that will be used by the model.(defaults to all 3 axes.)
- **Increment %:** Choose percentage values that will be applied to the highest measurement found within the selected range of days. These values are critical in calculating the Machine Learning Alarms that are to be used to color the Data Tree. Example: if the machine learning algorithm reviews the data and finds the highest RMS velocity was 2 mm/s, it will increment that value by 250% (default), resulting in a Red alarm of 5 mm/s.
- **Offset:** Add a fixed value(Imperial or Metric units) to be added to the percentage increased in the **Increment** field. These two values are added together to generate the new severity alarm.
- **Minimum:** Setting the minimum thresholds for an alarm condition to be these thresholds, no alarm condition will be reported.
- **Maximum:** Setting the maximum thresholds for an alarm condition to be reported. If the Machine Learning algorithms predict a value greater than these thresholds, no alarm condition will be reported.





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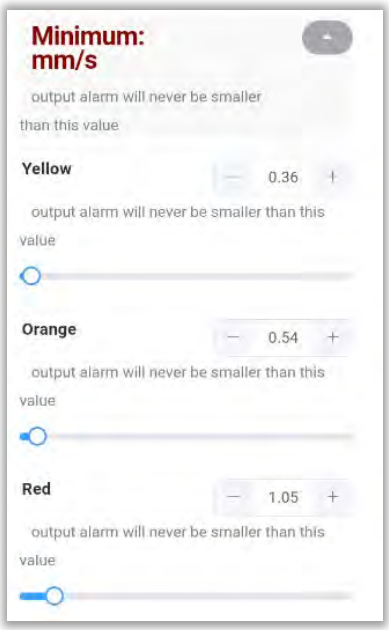
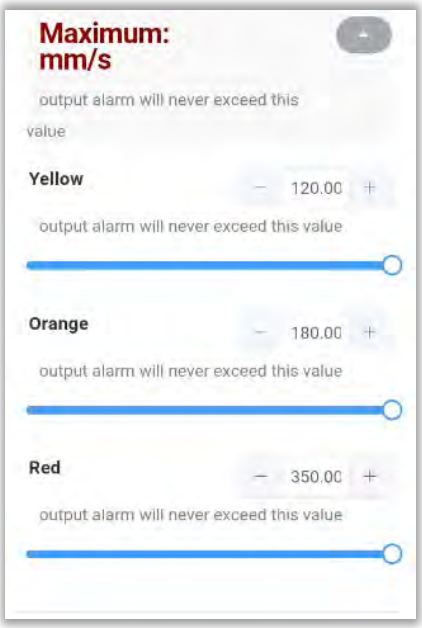
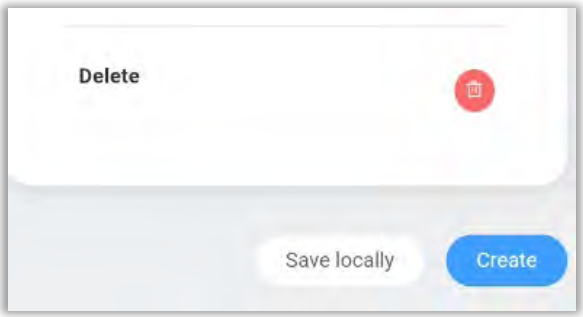
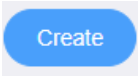




To **delete** all the settings press the delete button 



Tap  to finish adding the model.

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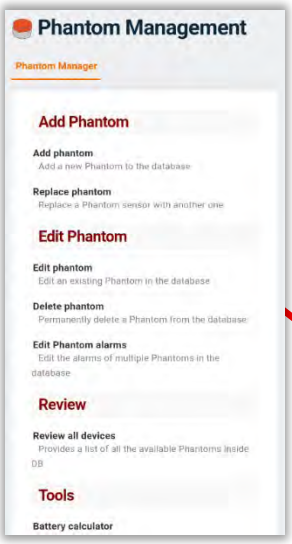
Phantom

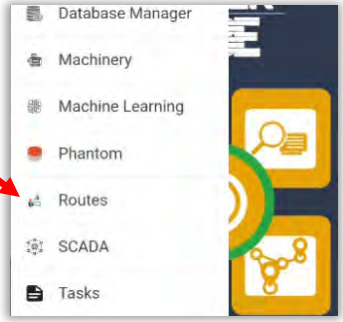
Opens the **Phantom Management** window. For complete details regarding Phantom sensors, see the *Phantom Setup Guide*.



Routes

Opens the **Routes Management** window:

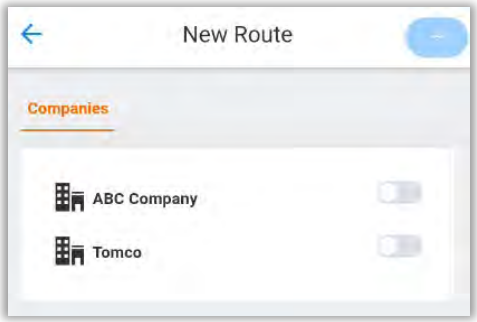
- Load a Route from the Cloud, or from the Local device, or create a custom Route from a list of machinery.
- QR Scan a machine code (displayed in DigiVibeMX)
- Create a **New** Route, **Edit** or **Delete** an existing one.



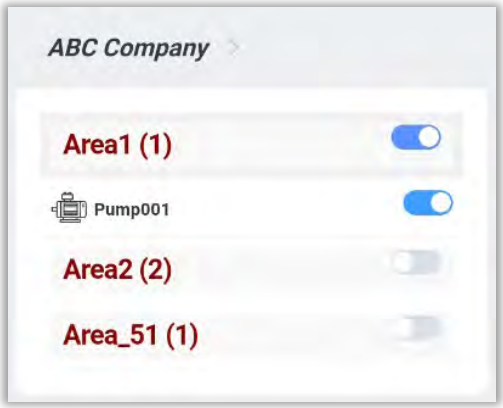
New Route

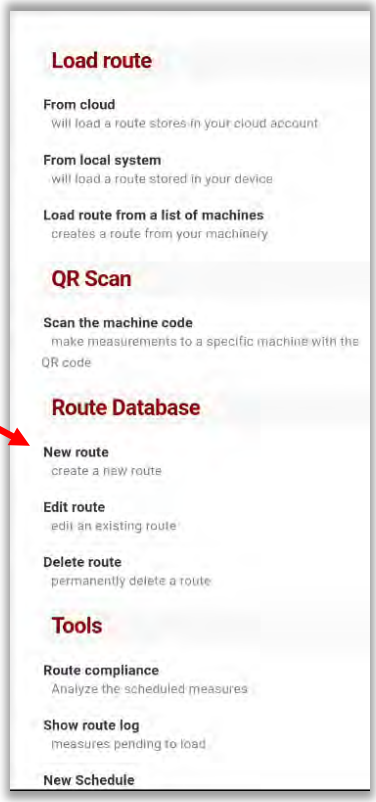
Tap **New route** to add a Route.

Select the Company:



Then the Area and Machines:





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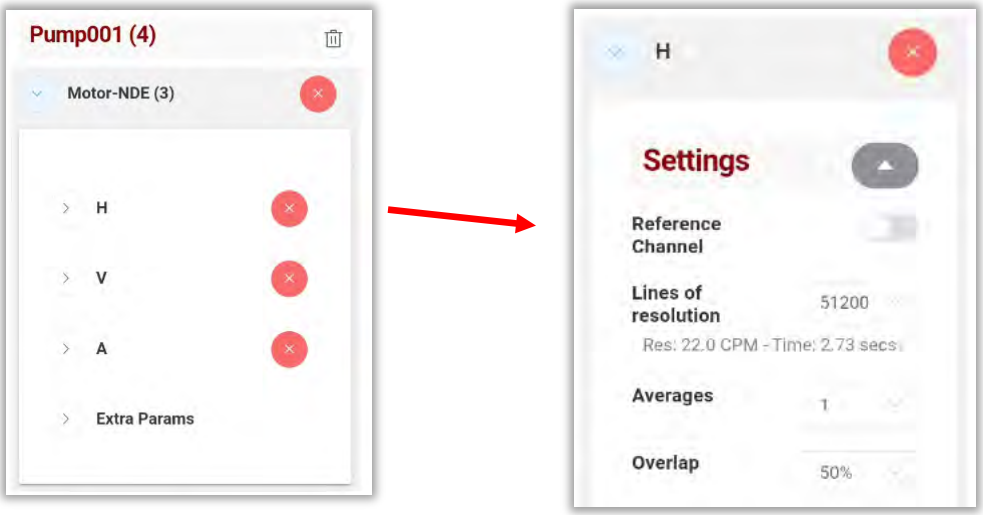
Assign a Name to the new Route and tap **OK**.

Expand the Machine by tapping on the name:

Touch the Down arrow beside a Point to see the Axes and Extra Parameters.



Tap the Right arrow  to expand the Axis for access to **Settings** for:

- Reference Channel on/off
- Lines of resolution. The recording time is displayed based on selection.
- Averages
- Overlap

Individual Machine Points and/or Axes may be excluded from the Route by tapping the  button.

The **Extra Parameters** feature allows the manual logging of paramaters observed while conducting the Route. As an example, an ambient air temperature reading may be desired at the time the vibration data is collected. An expansive list of parameters is available by tapping the right arrow beside **Extra Params**.

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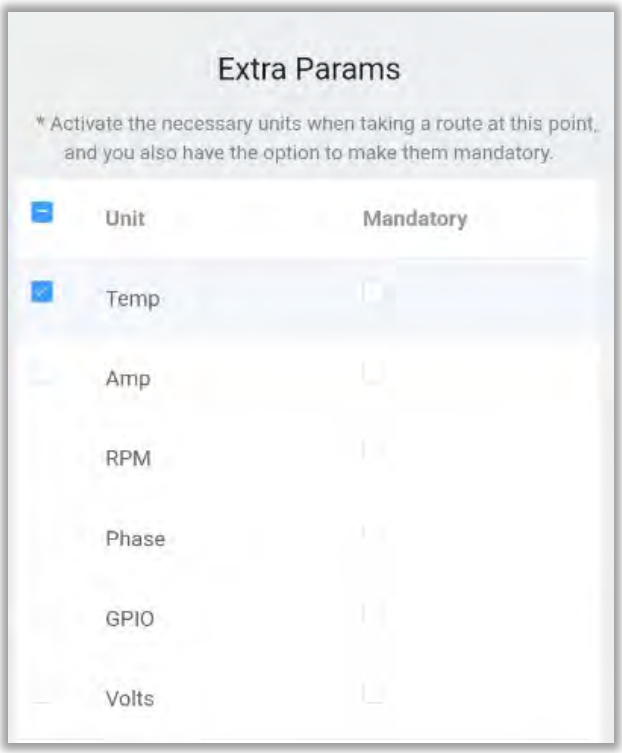
Select which parameters are to be logged during the Route and if they are Mandatory. The extensive list of parameters include:



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Tap the Back button to continue.

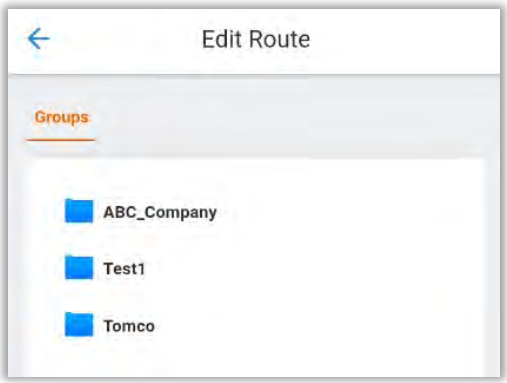
Press **Next** to display the Summary

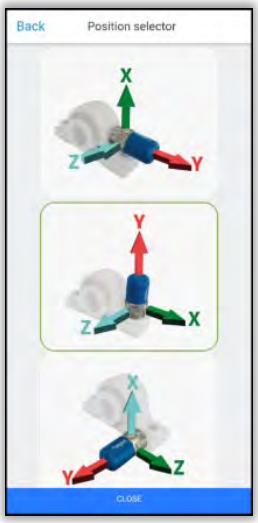
And **Save Route** to finish adding the Route.

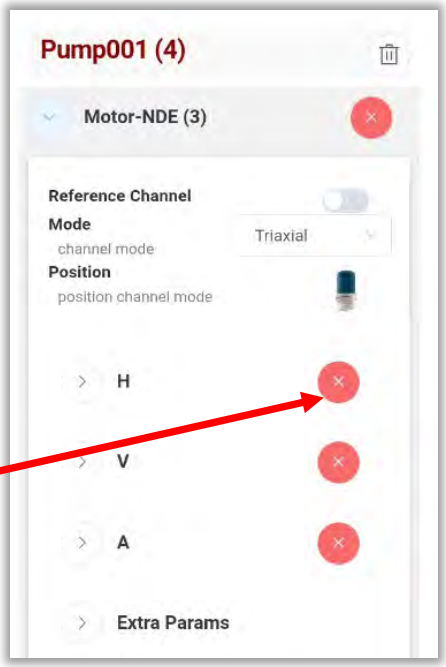
Edit Route

Use **Edit Route** to make changes to exisiting Routes

The WiSER 3X sensor position is saved as part of the Route info, and can be changed by tapping the WiSER 3X icon.







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Route Compliance

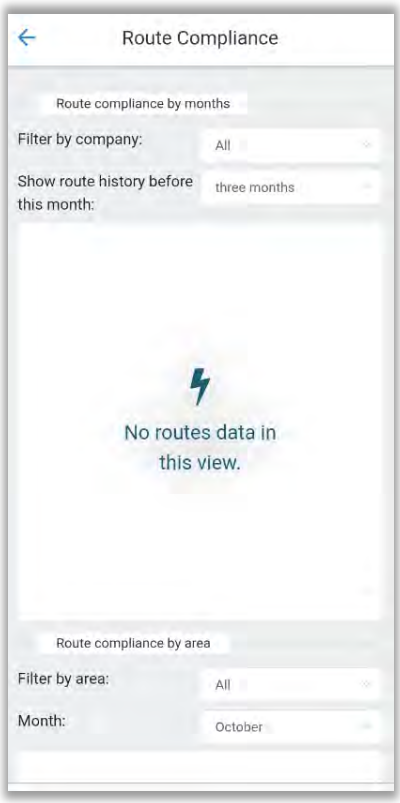
Whenever a new Route is created, an option is presented to create a *schedule* for the Route to track how often the measurements are taken.

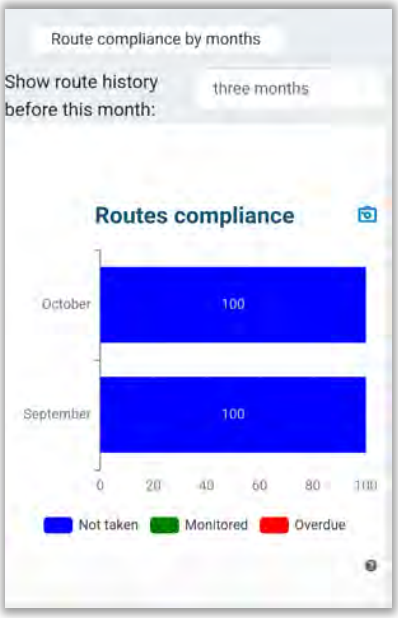
The presence of data in the database determines the state of compliance, divided into 3 types:

Not taken Monitored Overdue

The graphic shows the compliance percentege of each route, for the current month and one previous month.

Select  to choose how many months you want to see on the graph.





Use **New Schedule** to create a schedule for a Route.

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SCADA

The EI-Analytic Supervisory Control and Data Acquisition(SCADA) tool allows the monitoring of a machine's data in a fast, easy way, using a graphic interface. For complete instruction regarding the configuration and use of the SCADA tool, please visit the Erbessd website at :

https://www.erbessd-instruments.com/tutorials/how-to-create-an-scada-scheme/

Task Manager

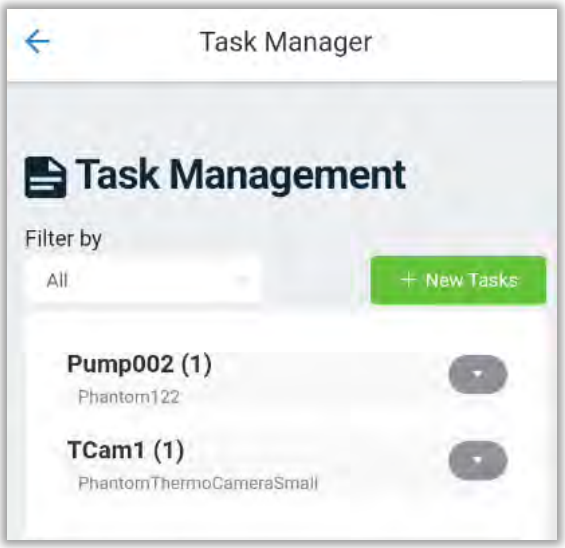
Task Manager is a notification engine for EI-Analytic cloud data service accounts. Email and Push notifications can be configured to be sent when certain configurable conditions of the Machine or Phantom Sensor are detected. Task Manager is not available when a local database is used.

Tasks are assigned at two levels of the database, Machine level or Phantom (point) level. The Task Management window shows all existing Tasks.

Tap on a task to edit. Press + New Tasks to create a new task.

In General Settings assign the task to either a Machine, an individual Phantom sensor, or by item:

For machine tasks, select the machine. For Phantom tasks, enter the Phantom serial number.



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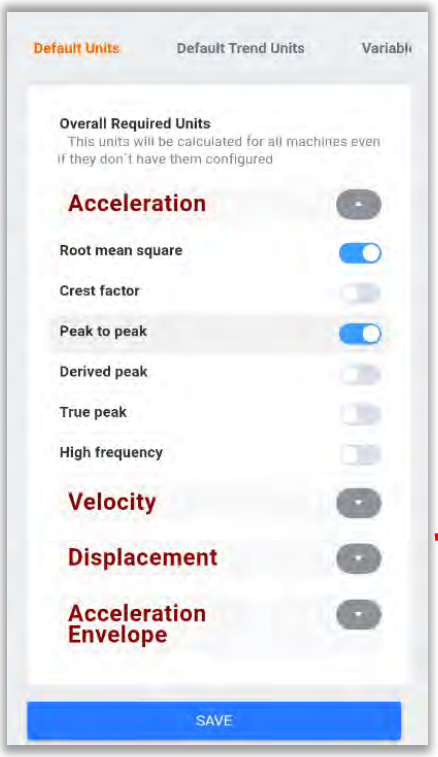
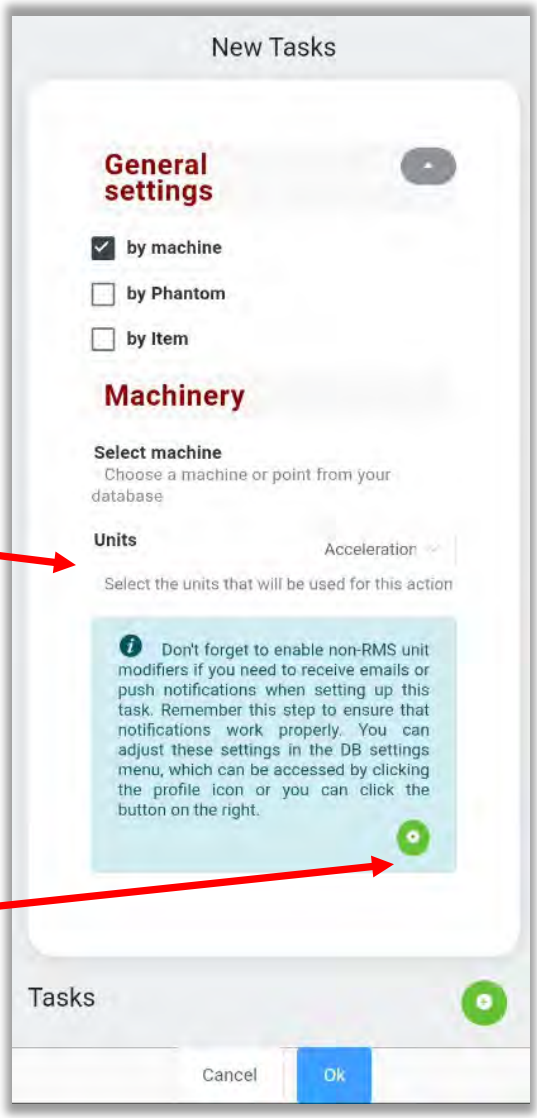
Depending on the General settings, the **Units** drop-down field will have all available options. **Note** - As per the on-screen tip, If you want to use any unit modifier other than RMS, you must edit the DB Settings of the EI-Analytic account. E.g., you want to receive notification based on a peak-to-peak value instead of RMS.

Tap the  icon to go directly to the DB Settings page:





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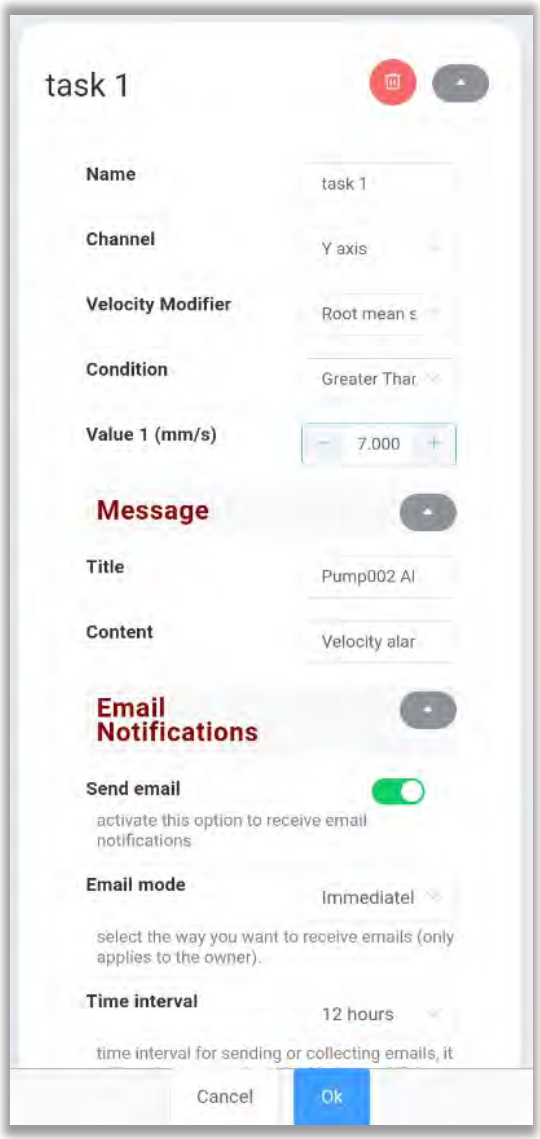
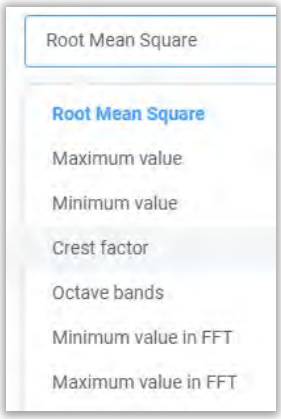
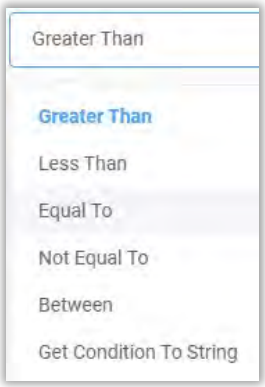
To continue setting the Task, press  the button.



1. In the Tasks Panel, start by assigning the Task a **Name**.
2. Select a **Channel** or all channels
3. Pick the **Modifier** from the drop-down box:



4. Choose a **Condition** from the drop-down box:



5. Set the **Value**. The units shown reflect the account settings(Imperial vs Metric). In this example a Machine is set to notify the Account if the RMS velocity exceeds 7 mm/s on the Y axis.
6. In the **Message** Panel, add the **Title** (displayed in the Task Name field of the email), and the **Content** (shown in the Message field in the email)to help identify which machine/point has experienced an alarm.
7. The **Send email** slider provides a quick enable/disable option.

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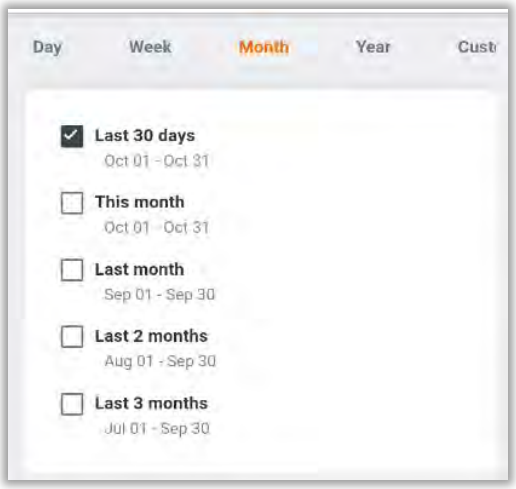
8. **Email mode** allows a choice between Batch and Immediately. Batch emails are sent once daily.This way, if your notification is not considered to be critical, it can be sent only once a day.
9. The **Time interval** provides a buffer between notifications to avoid unnecessary emails. Push notifications to WiSER Vibe mobile app users also have a configurable **Time interval**.
10. Click **OK** to save the Task.

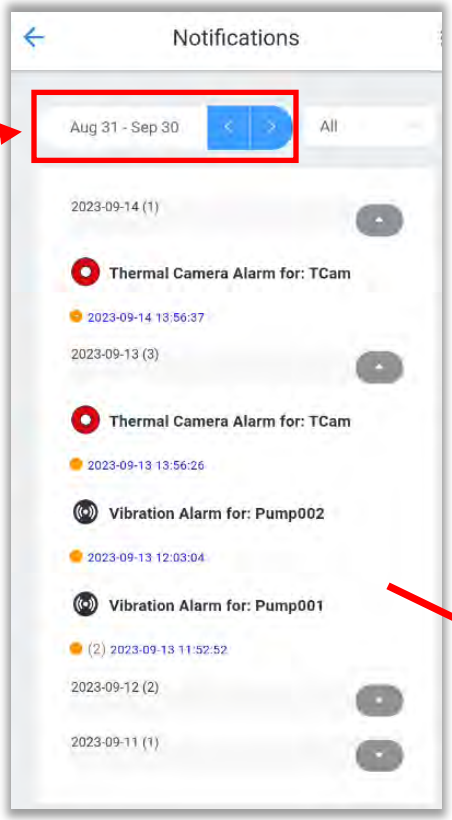
Notifications

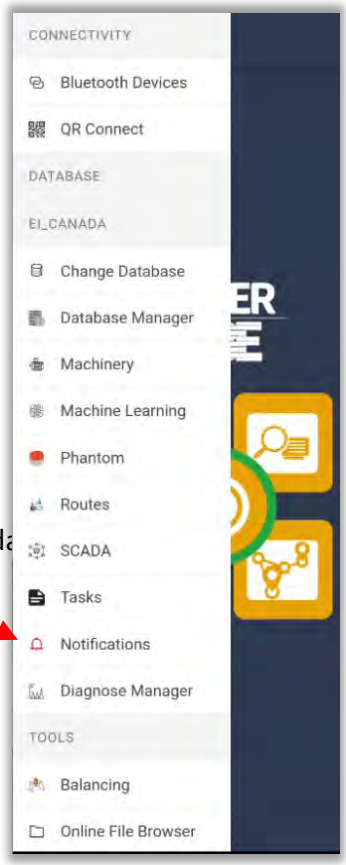
Tap this item to see all notifications, with many sorting and filtering options:

Notifications from the past 30 days are shown by default. Tap on the Date field or the blue arrows to change the date range by one month increments.



Choices range from Day to Year, or set a Custom da





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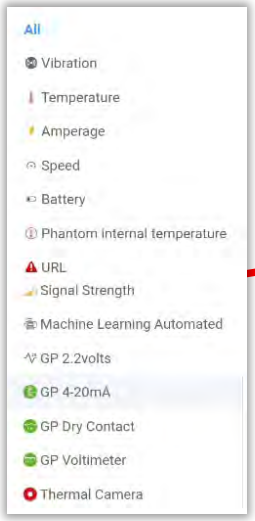
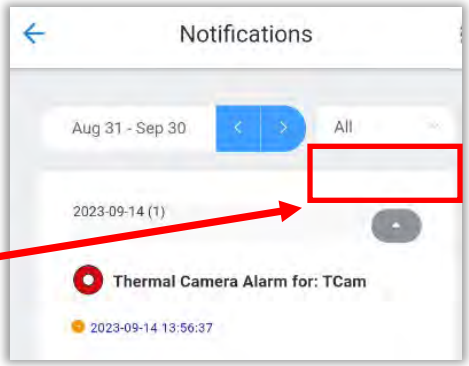
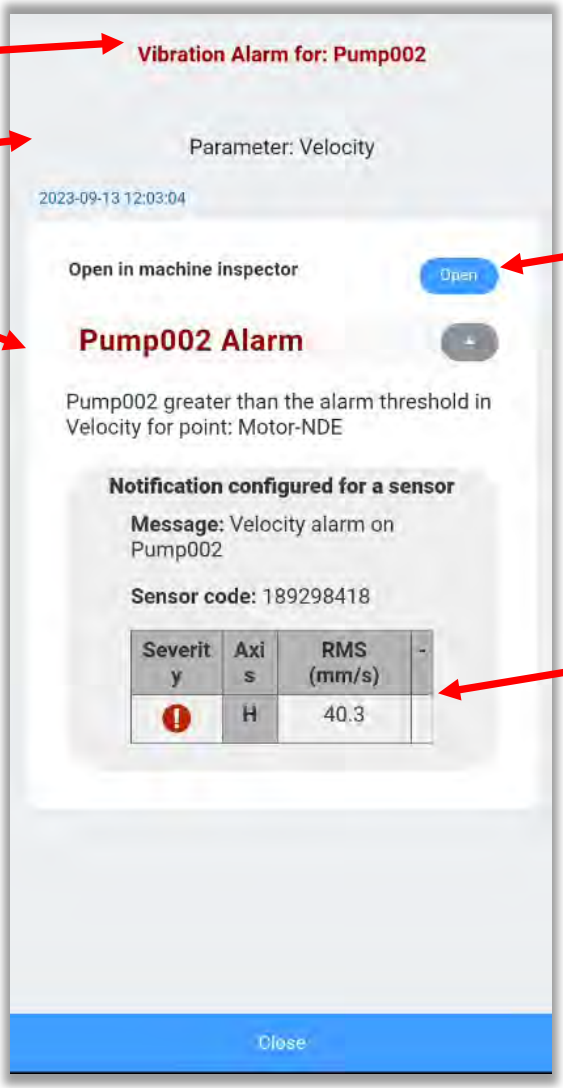
Filtering by **type** can be done using the drop-down box:





Tap on a notification to see the details:



Click Open to display the **Machine Overview,** with all the tools described in the TWF and FFT Tools sections of this guide

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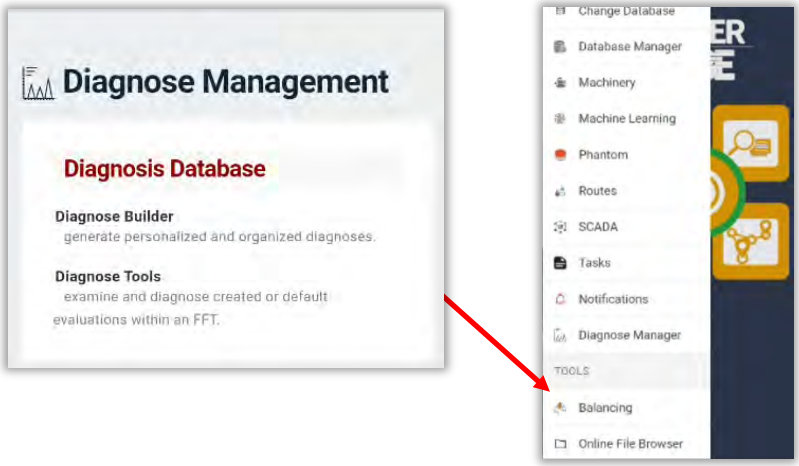
Diagnose Manager

Diagnose Manager analyzes vibration signal files from Phantom Expert triaxial or WiSER 3X portable sensors and assigns a percentage probability to the possible root cause(s) of the vibration measured.

This tool calculates the probability of the following types of failure(**Faults**), based on a set of parameters(**Rules**), including the specific configuration of a Machine and its Points:

- Static Imbalance
- Couple Imbalance
- Dynamic Imbalance
- Parallel Misalignment
- Angular Misalignment
- Bent Shaft
- Bearing Fault: Stage 2, 3, 4.
- Cocked bearing
- Bearing Looseness



For each parameter, certain conditions must be met to a greater or lesser extent, which is reflected in the Diagnostic evaluation.

Diagnose Manager also allows the creation of Custom Faults and associated Rules that can be applied to the machine database. See below for more details.

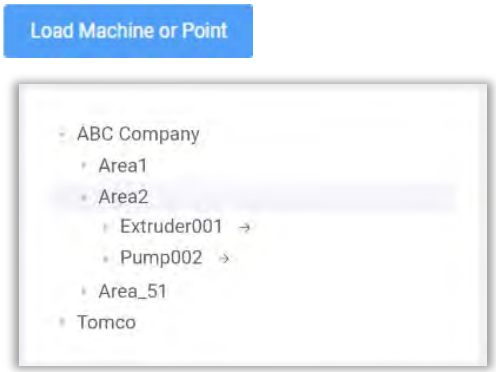
The **Diagnose Management** screen has two functions:

- **Diagnose Builder** – used to create custom rules for diagnostics
- **Diagnose Tools** - Load a machine for diagnostics using defaults or custom values.

Diagnose Tools

The Diagnose Tools screen is used to load a Machine Point for analysis and displays the results:

Press the Load Machine or Point button to open the Machine Tree in order to select a Machine or Point for analysis:



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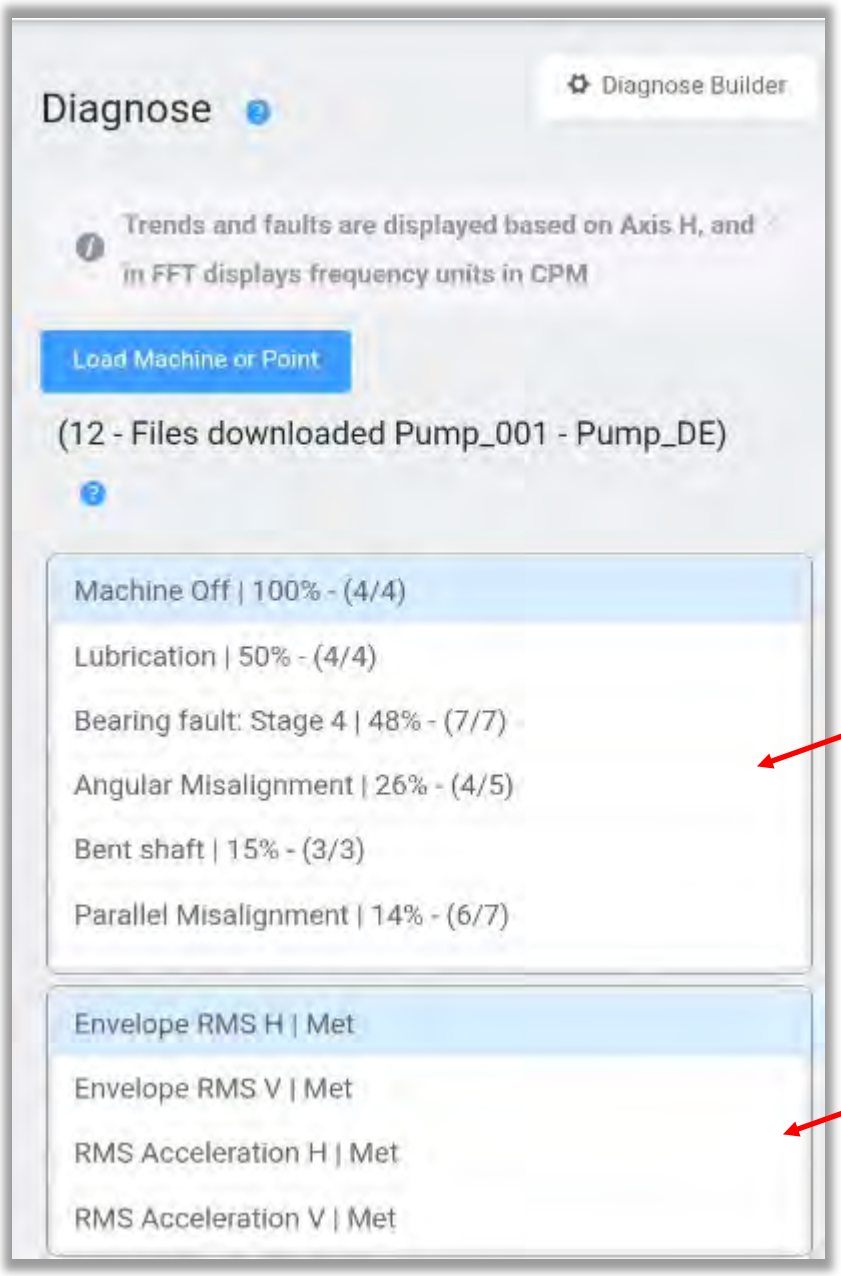
When a Machine/Point is selected, the results are listed by Point. **Note** -The **H** axis is always used for trends and fault diagnosis.

A list of faults and their probability are shown, based on analysis.

In this example, the software correctly diagnosed this machine point as “Machine Off”.



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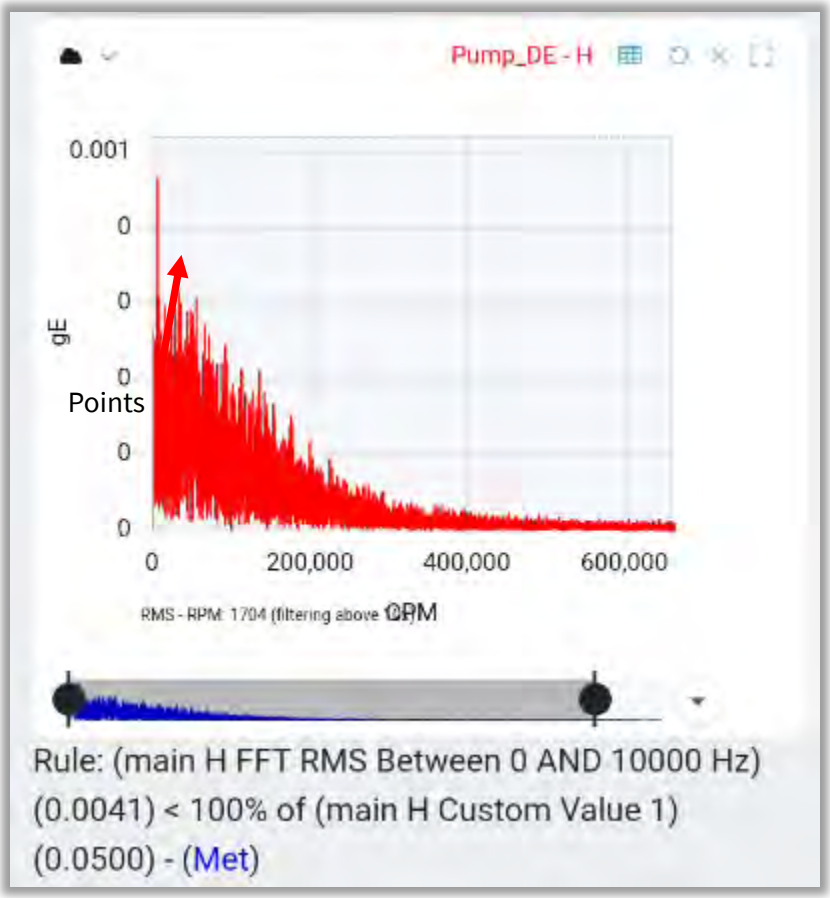
The associated FFT is shown below the Results display:



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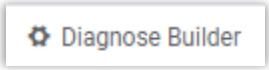
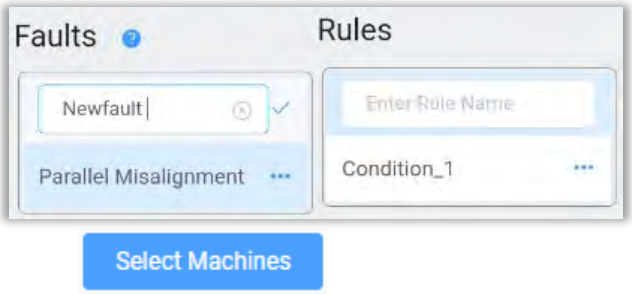
Using Diagnose Builder

To create custom faults, use the Diagnose builder button on the main Diagnose screen

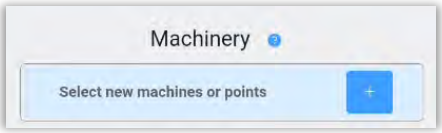


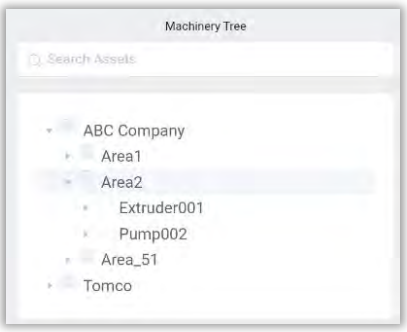
Create a **Group** name for custom Faults by clicking the add button. 

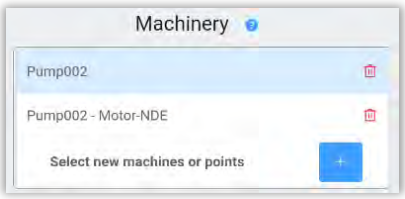
- **Faults and Rules**: Name the Fault and the Rule for the first condition to met. Tap the checkmark when finished.



Next, choose which Machine and Points to apply the Rule using the button.







Tap **Close** and then continue with the Rule:

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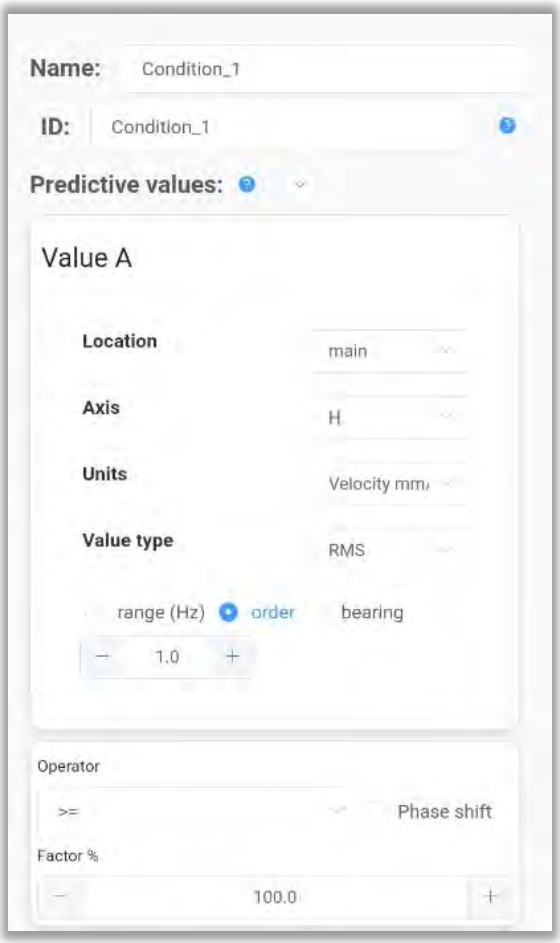
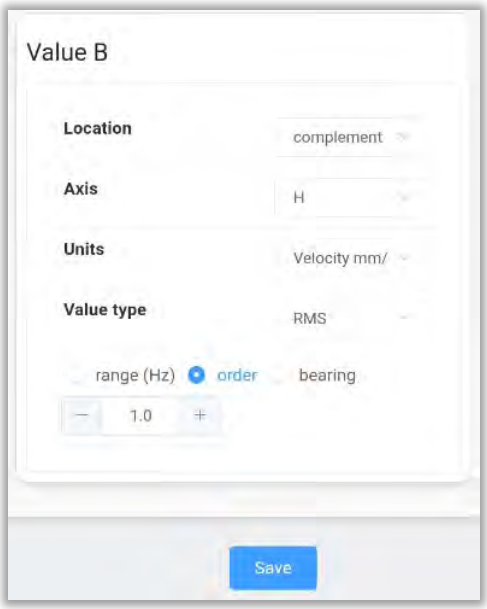


Name and ID: The Name will be used for user reference and ID is used internally to identify the rule.

- **Value A and B** - The equation is composed of two values; both values are taken as reference for comparison and must be configured.
  - **Location –** set to one of three options: 1**)** the point to be analyzed, 2) the complement to compare with, or 3) the coupling between them.
  - **Axis** – Select the axis for the Point to be diagnosed.(the default rules always use the H axis)
  - **Units** – Choose the preferred units.
  - **Value type** - Value of the signal that will be taken as a reference.
  - **Range** – Set the range of frequencies to analyze.
  - **Order** - Select the number of orders.
  - **Bearings** - Choose one or more bearing frequency faults. In case of multiple selections, the highest value will be used.
- **Operator** - used for comparing Value A and Value B. (equal to, greater than, etc)
- **Factor %** - This is a "weighting" factor applied to the result of the comparison of Value A and B. The higher the percentage, the more absolute the comparison between A and B must be to meet the Rule.



Press Save to complete the custom Fault and Rule configuration.

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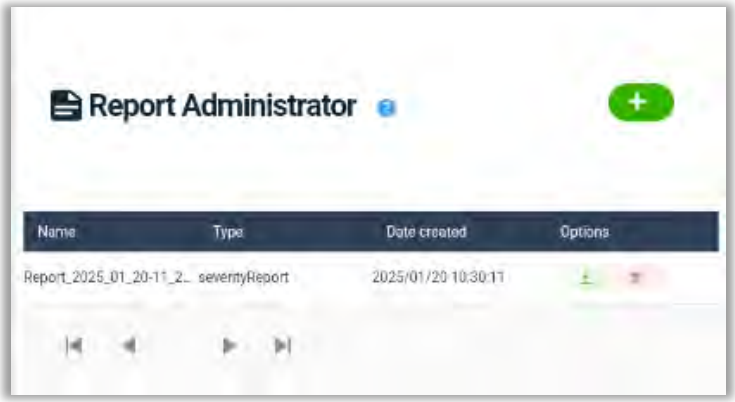
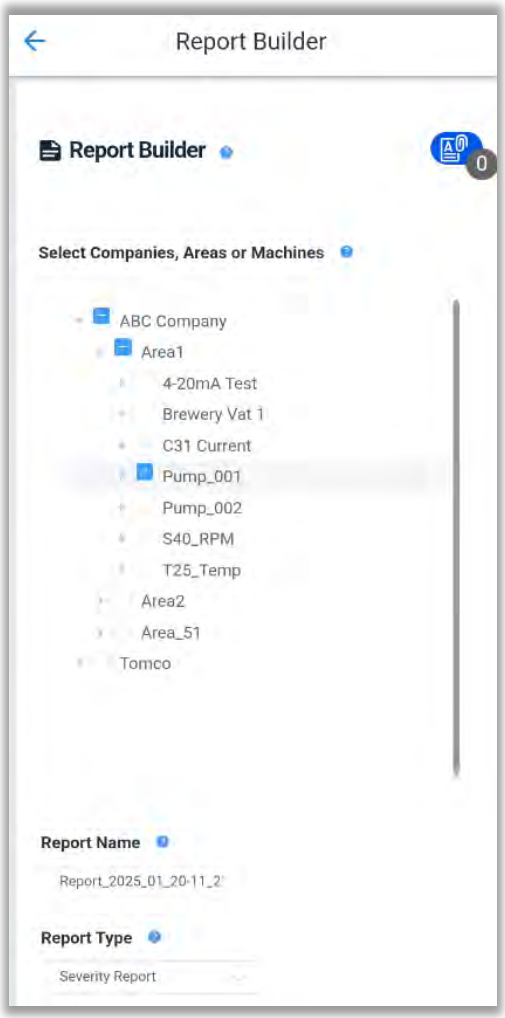
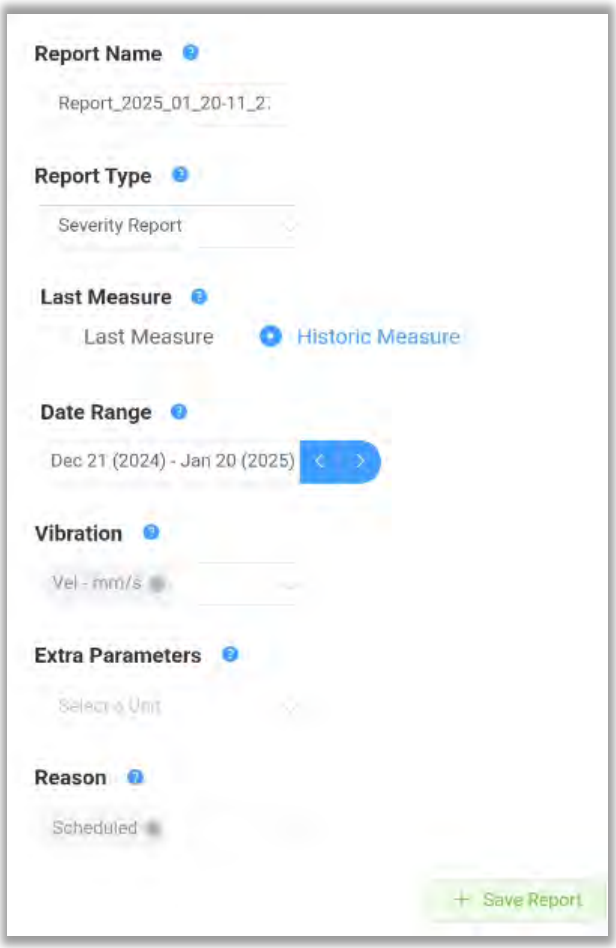
Report Manager



Add a Report by clicking the Add button. 

Select the Machines, Report name, type, Date range, etc. and press Save Report.





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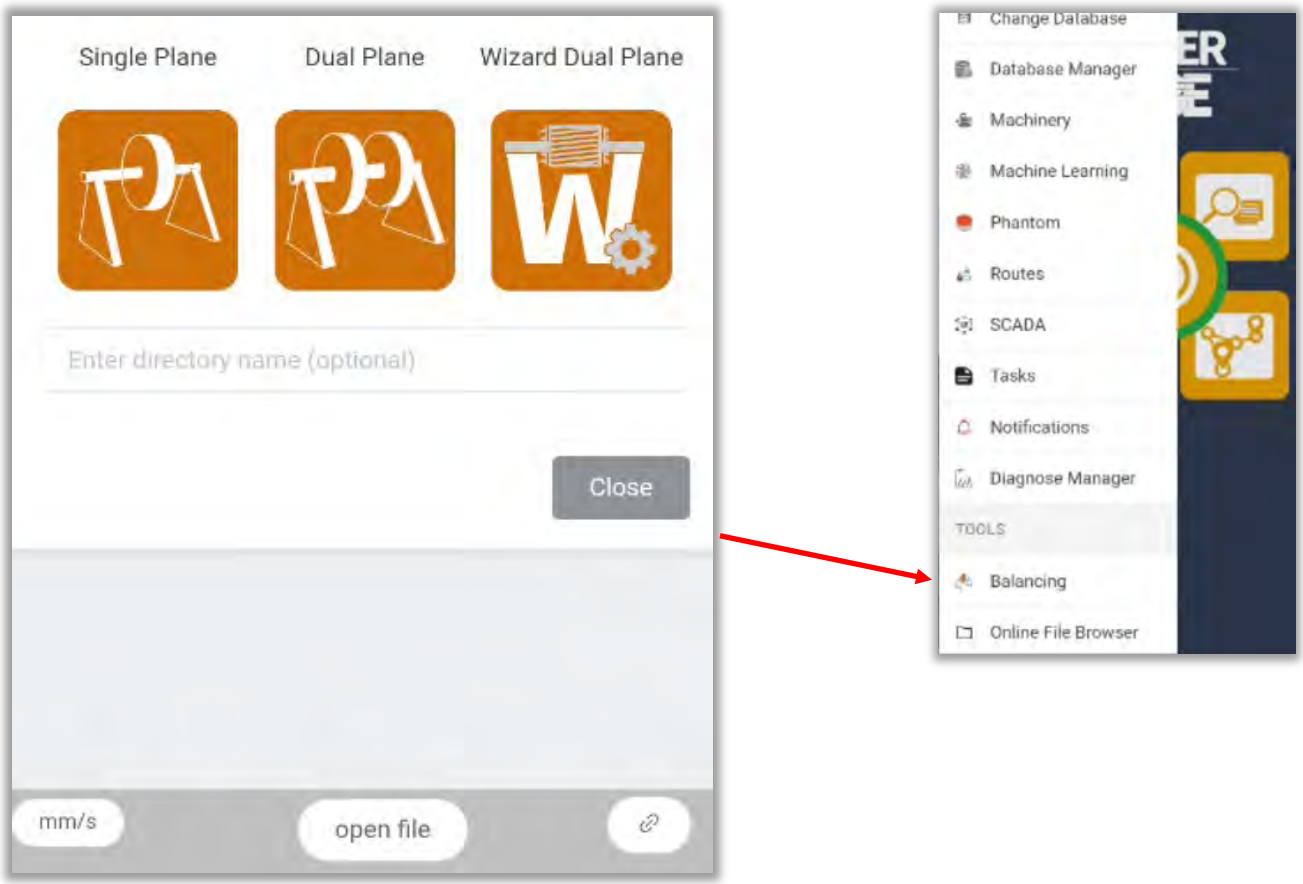
Balancing

The Balancing feature supports **Single-plane** and **Dual Plane In Situ** balancing using the Influence Coefficients method. The wireless WiSER 3X accelerometer or wired accelerometers and a GX400 USB interface can be used for balancing. Both require an attached laser tachometer.



Wizard Dual Plane balancing is also available. This is used with Erbessd EI series soft bearing suspension balancing machines .

Dual Plane and the Wizard both require a DigivibeMX license to operate. An existing Digivibe M10 or M30 license may be *extended* to any number of mobile devices. These activations do not count toward the 3 allowable Digivibe activations for Windows devices.

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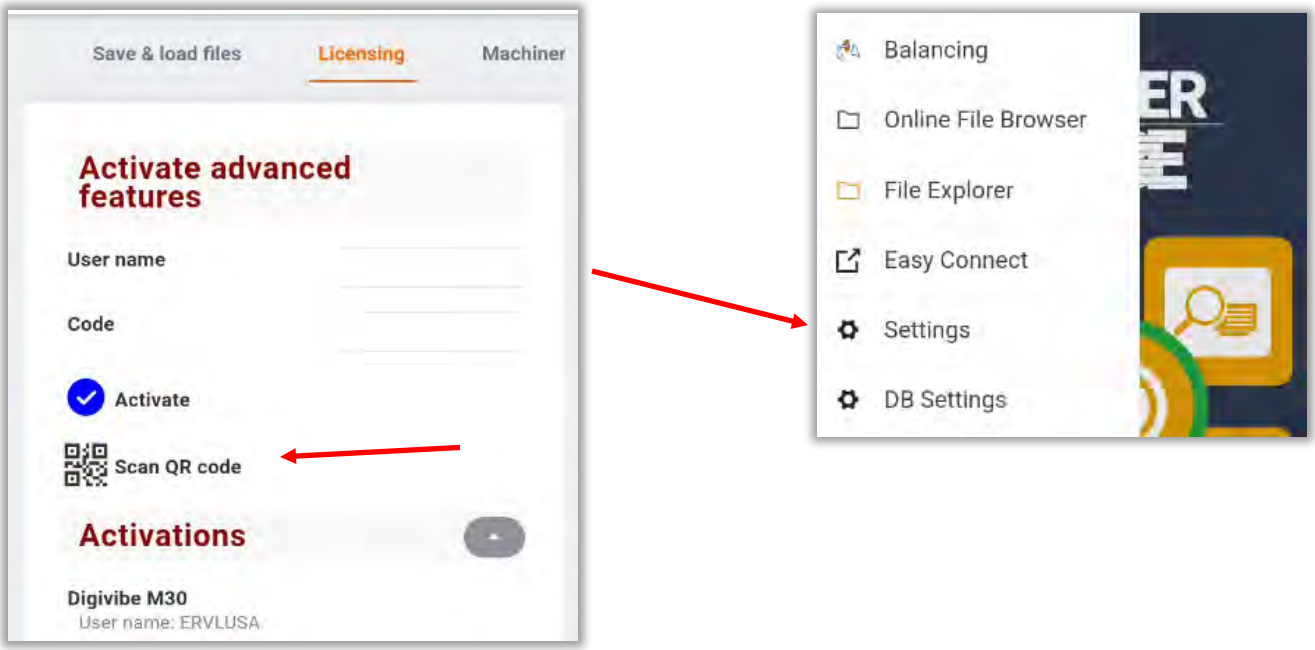
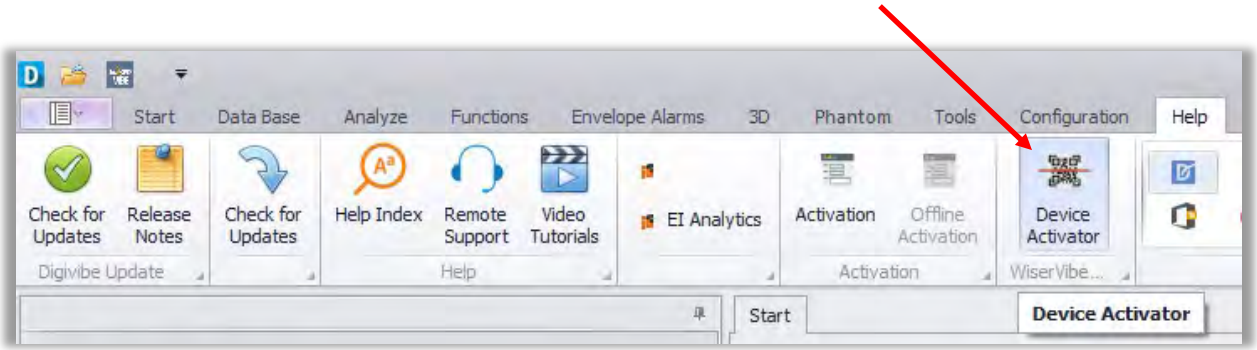
To extend a DigivibeMX license to a mobile device:

5. Open the Wiser Vibe **Settings** screen and scroll over to the Licensing Tab.



6. Open Digivibe and select Help> Device Activator.



A QR code will be displayed on the screen.

7. Press **Scan QR code** in the Wiser Vibe Settings screen and scan the QR code using the device's camera.
8. The license will automatically activate.

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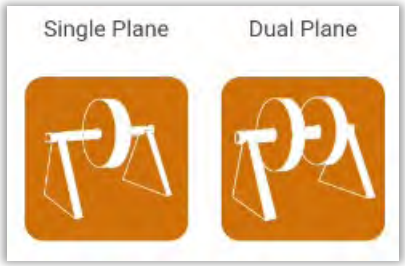
Before You Begin

When attempting to balance an object In Situ, there are several things to consider:

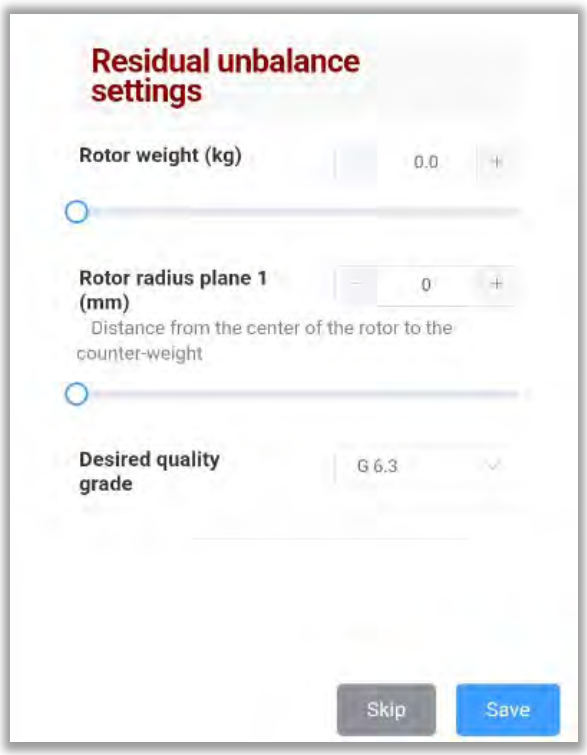
1. Vibration caused by conditions other than imbalance will impact the ability to successfully balance an object In Situ. If faulty bearings, soft foot, misalignment, or other factors that cause vibration exist, it may not be possible to balance In Situ. All sources of excess vibration should be corrected/minimized before attempting to dynamically balance.
2. If a shaft is bent, it cannot be dynamically balanced. Where possible, it is recommended to check the object to be balanced using a dial indicator to ensure it is not malformed in any way.
3. Balancing In Situ is usually conducted at the normal running speed of the object to be balanced. If another speed is used, it should be at least 100 CPM greater or lesser than the natural resonant frequency of the object.

Single Plane In Situ Balancing

Selecting Single Plane or Dual Plane will redirect you to the Balancing Settings.



Enter the rotor weight, radius distance and grade of service.



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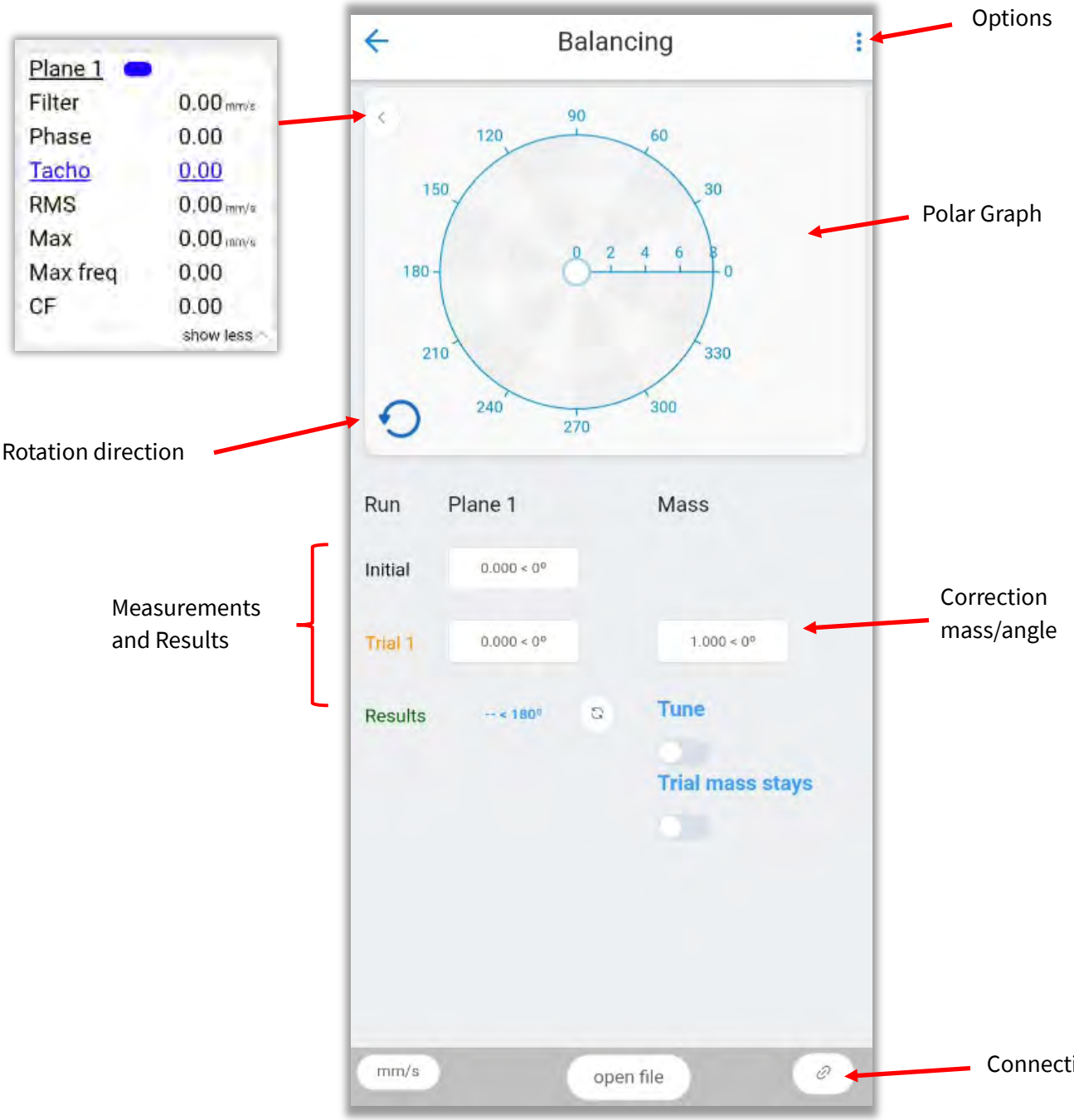
Click **Save** to open the single plane balancing screen:



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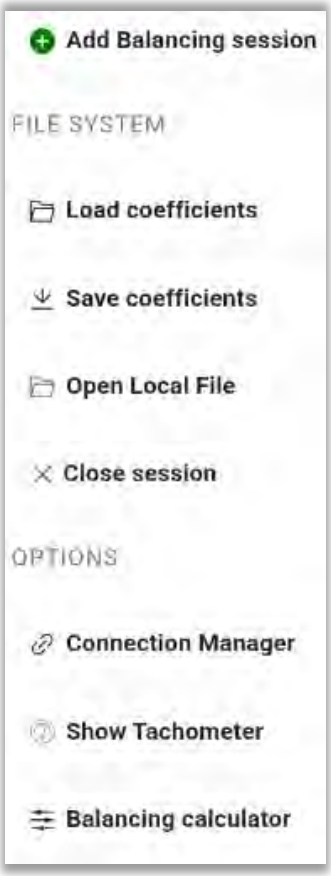
The Balancing Options Menu includes:



Start a new Balancing session

Load a previously saved coefficients file

Save the coefficients from this session for future use

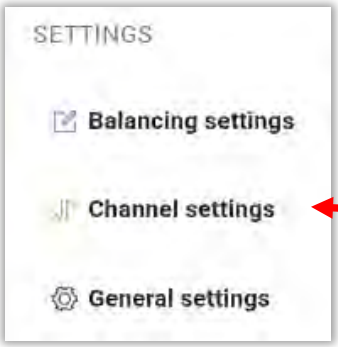
Open a balancing session file

Close the current session

Connect A Wiser3X or GX400

Show the Tach speed in RPM

Use the calculator for trial mass, Split weights, Combine masses,Drill depth and Plate size



As shown previously

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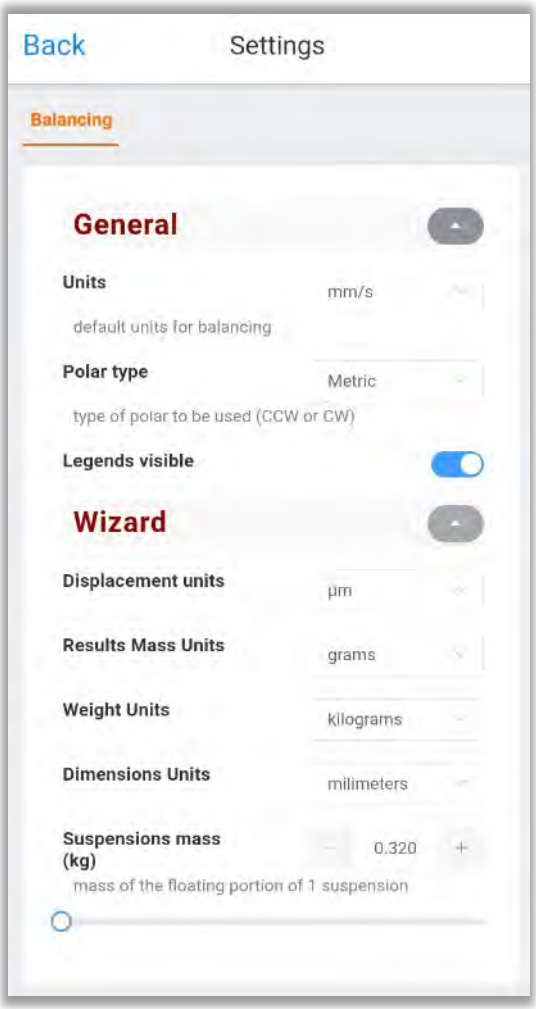
Settings –

- **Units**: Choose the default units for balancing.
- **Polar type**: Type of polar graph to be used.
- **Legends visible**: Show/hide polar plot legends

Wizard (used with Erbessd Balancing Machines)

- **Displacement units**: Choose the displacement units.
- **Results Mass Units**: Choose the units of the balancing correction mass.
- **Weigth units**: Trial mass default units.
- **Dimensions units**: Default dimension units.
- **Suspensions mass (kg)**: Choose the soft bearing suspensions mass in kg. You can also use the bottom slider to change the value.



Balancing Procedure Summary

The Single Plane balancing procedure can be summarized into the folllowing steps:

1. Connect to the WiSER 3X using Connection Manager (See *Connection Manager* section of this guide).
2. Set the rotation direction on the Polar graph.
3. Make a first run without any test weight.
4. Use the results from the test run and the calculator to determine an appropriate Trial Mass and attach at 0 degrees.Take a new vibration measurement with the Trial Mass added.
5. Add the recommended final correction mass shown, or combine masses and take another vibration measurement.
6. Further tuning to improve the balance may be performed by tapping the Tune slider and making additional runs.

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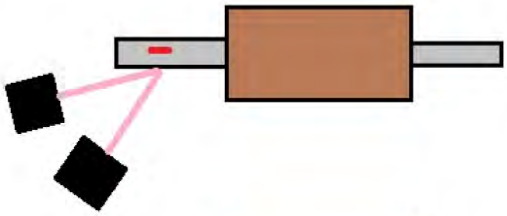
Step 1

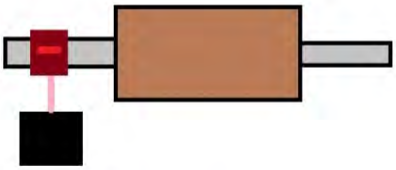
1. Connect the tachometer to the Lemo port of the Wiser3X and place on the object to be balanced.

Position of the Laser Tachometer balancing with Influence Coefficients

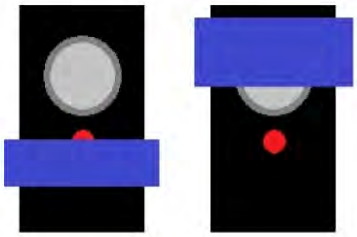
IMPORTANT: When balancing using **Influence Coefficients**, the LASER beam can point anywhere on the rotor.



Recommended angle for the Laser for most of the situations, specially **very polished, bright and/or reflective** shafts.



If the shaft is too bright, put first a matte tape all around the shaft and then the piece of reflective tape.



If the sensitivity is too high (blue led always ON), put some tape on the lens to reduce sensitivity, until the blue led twinkles only with the reflective tape.

The minimum recommended distance between the reflective tape and the tachometer is **15-20cm** (up to 5m).

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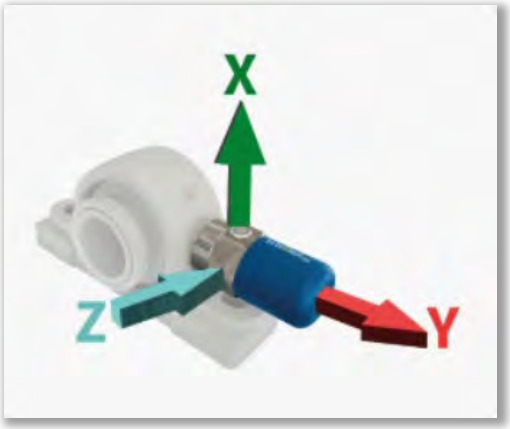
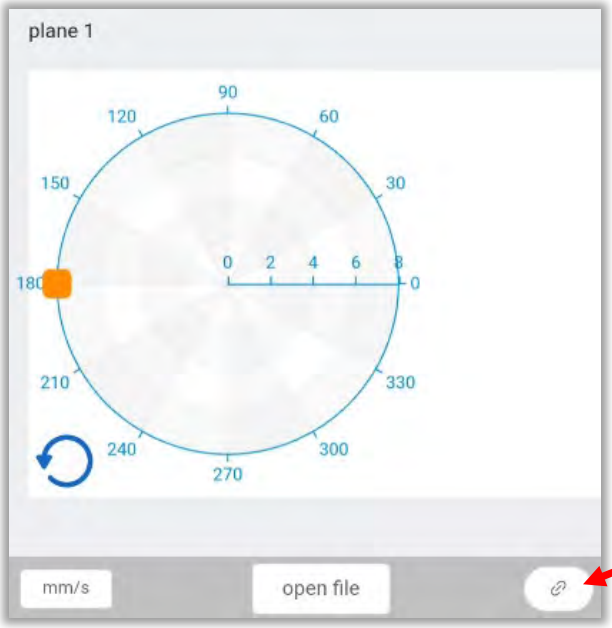
Channel 1 is assigned to the Y axis and is used by Digivibe software as the source of the vibration signal when balancing. It is preferred to position the Wiser3X **horizontally** on the object to be balanced whenever possible as shown below, with the blue LED facing up. **Place the Wiser3X on the same side as the laser tachometer.**



No data from channels 2 or 3 (Vertical or Axial) is available when balancing. If necessary, the Wiser3X can be placed on the object vertically as shown at right. Axial data is not useful for balancing purposes.

Channel 4 is assigned to the 5-pin LEMO connector, which is used for the laser tachometer.

2. Activate the Wiser3X by pressing the button. The blue LED will light.
3. Open the Network settings on your device and connect to the EIWISER Wi-Fi network (See *Connection Manager* section of this guide).
4. Open the balancing tool from the Advanced Menu or the Options menu. Tap **Connection Manager**.



Connection Manager

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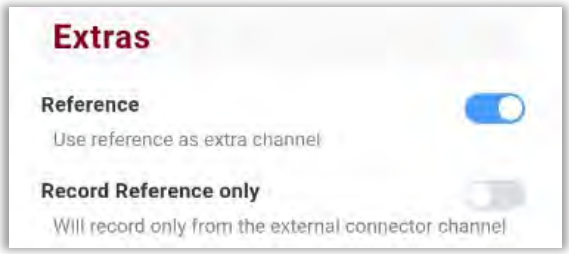
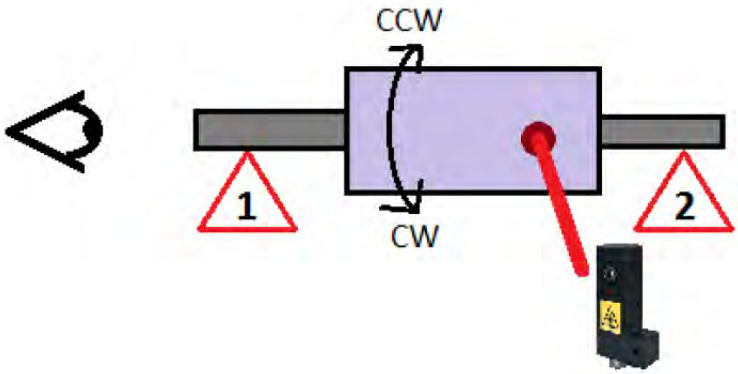
5. Touch **Connect to Wiser**. Review the settings as described previously in the *Connection Manager* section of this guide, ensuring the Reference Channel slider is set **on.**

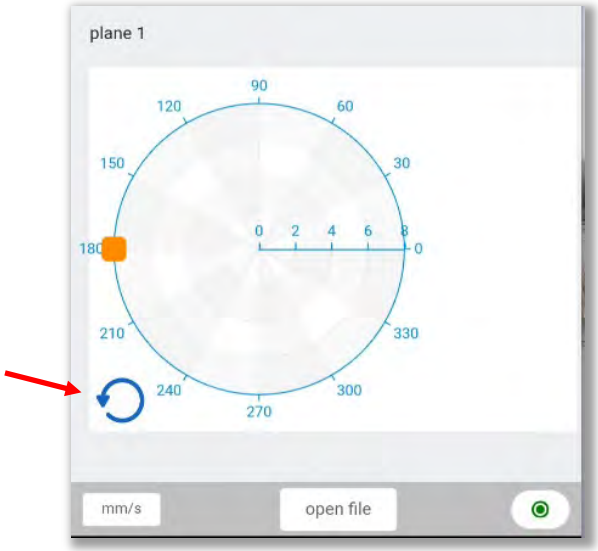


6. Press the **Back** button to return to the Balancing screen. The Connection Manager icon is replaced with a Record button.

Step 2

Set the rotation direction on the Polar graph as seen from plane 1.





Step 3

1. Bring the object to be balanced up to speed and press the **Record** button to measure the initial run for reference.

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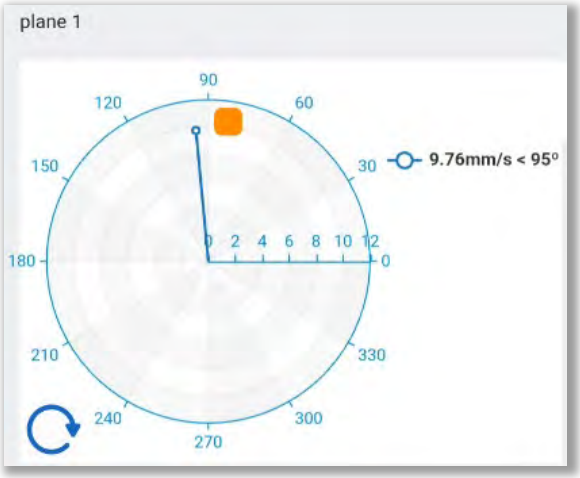
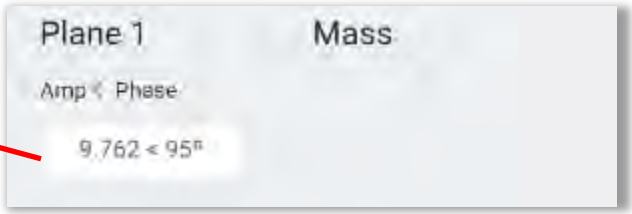
The resulting vibration amplitude and phase angle info is displayed on the polar graph. In this example, the RMS velocity is 9.76 mm/s. This is a Red alarm state,according to the ISO 10816 chart for a Class I motor .This object obviously requires balancing.



VIBRATION SEVERITY PER ISO 10816

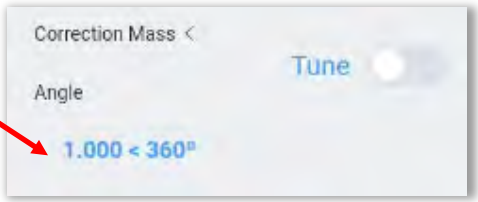
MACHINE			CLASS I	CLASS II	CLASS III	CLASS IV
Vibration Velocity Vrms	in/s	mm/s	Small < 3.7kW-5HP	Medium < 373kW-500HP	Large rigid foundation	Large soft foundation
	0.01	0.28		Excellent		
	0.02	0.45				
	0.03	0.71				
	0.04	1.12		Good		
	0.07	1.80				
	0.11	2.80		Satisfactory		
	0.18	4.50				
	0.28	7.10		Unsatisfactory		
	0.44	11.2				
	0.71	18.0				
	1.10	28.0		Unacceptable		
	1.77	45.0				

2. Touch the Amp<Phase box and select the velocity from the initial run from the drop-down menu.



Step 4

1. Tap the blue **Correction Mass** field to open Tools for:
   - Split weights
   - Combine masses
   - Drill depth
   - Plate size
   - Calculate a Trial mass



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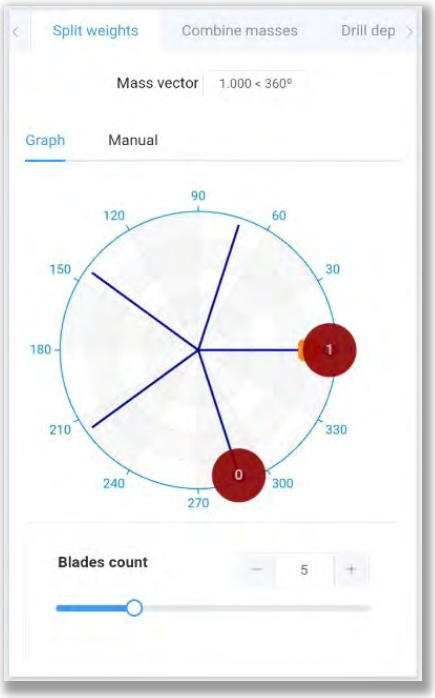
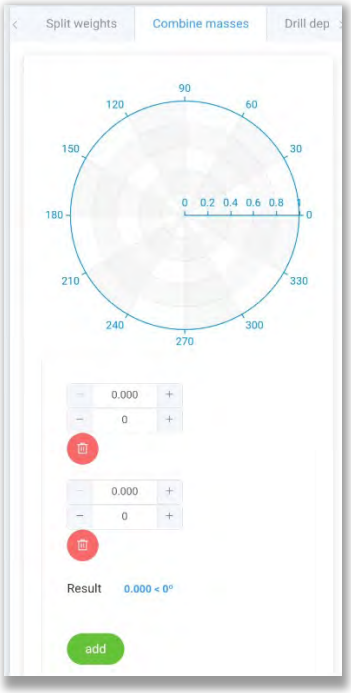


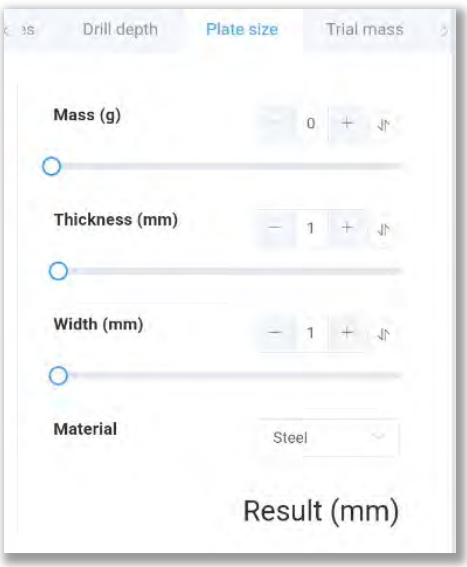


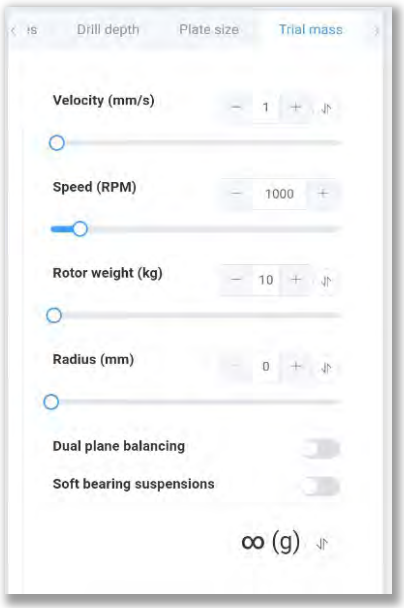
The **Split weights** tab defaults to 5 blades, set this accordingly.

Combine masses can be used to combine the final correction mass with the trial mass.

The **Drill depth** and **Plate size** tabs provide calculators for various materials.

Trial mass is used to calculate the trial mass for different balancing procedures.





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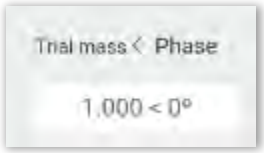
Press the **Back** button to return to the balancing screen.

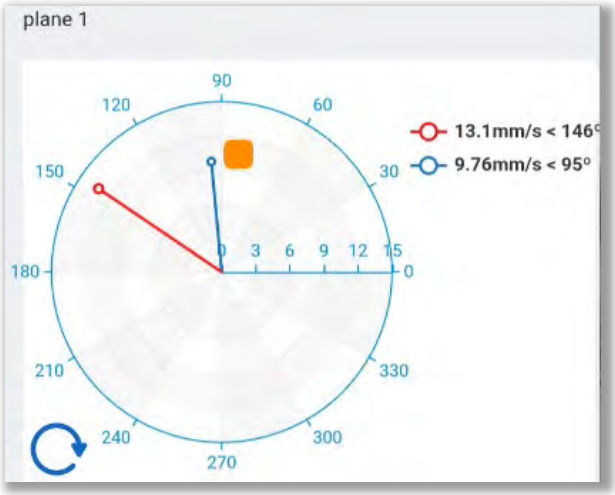
2. Enter the trial mass and phase angle in the Trial mass box(1 g added at 0 degrees in this example).



3. Press Record to measure the vibration with the Trial mass added 

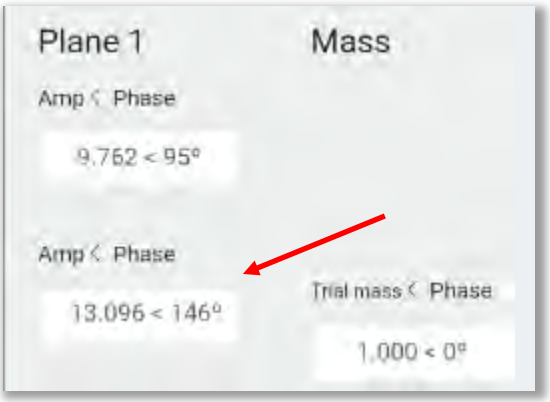
Step 5

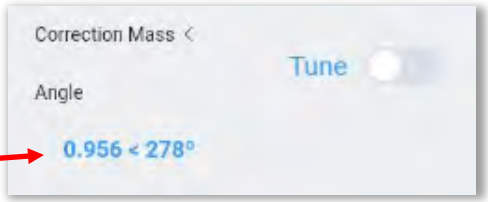
Important-Your trial weight run must change the object's vibration amplitude by 30% or the phase angle of the imbalance by 30 degrees. This common rule of trial weights for dynamic balancing is known as the 30/30 rule. However, it is also important to keep the amount of vibration change to less than 100% for a trial weight run. Adding too much trial weight will negatively affect the balancing calculations.



Check to see if the phase angle changed by more than 30 degrees, or the velocity amplitude changed by 30 to 90 percent. In the example, the phase angle changed by 51 degrees, so balancing may proceed.

1. Select the results from the 2nd run in the lower drop-down box:





2. A Correction Mass and angle will be displayed in blue. Add the recommended mass, or optionally tap the Correction Mass field to combine the trial mass and the recommended correction mass using the tools.

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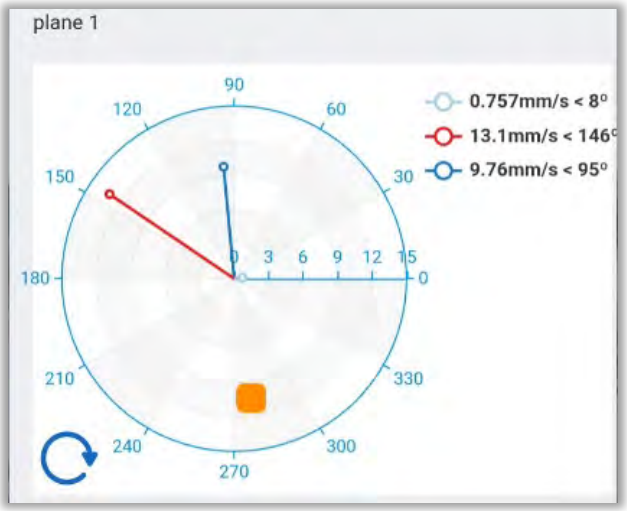
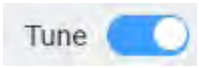
3. Press Record to measure the vibration with the final Correction mass added.

In this example, the vibration was reduced to .757 mm/s, which is acceptable for a Class I motor based on the ISO 10816 chart.



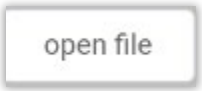
Step 6

Further improvement may be made by conducting tuning runs. Tap the **Tune** slider and adjust the correction mass(es), then re-record until the desired level of balance is achieved.

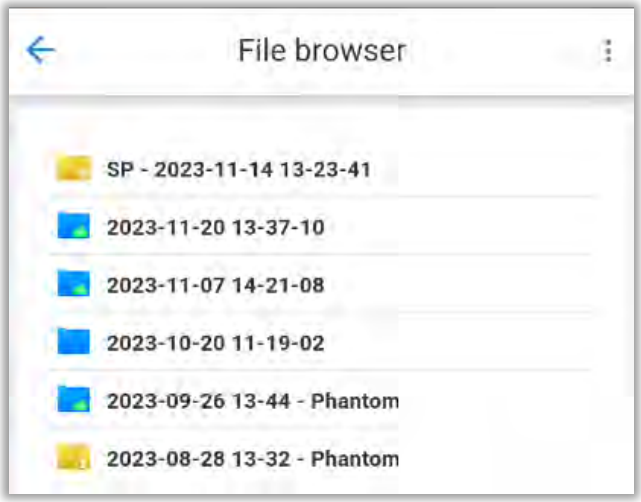


Open files for analysis

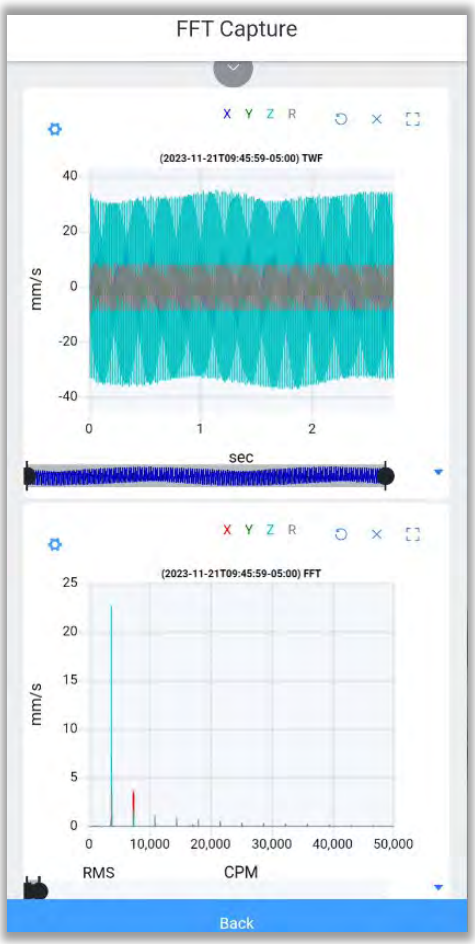
The recorded vibration signals and tach info can be viewed for analysis by using the Open file button.



After the session is closed, the files may be opened using the File Browser on the Home screen.



Folders prefixed with **SP** are Single-Plane balancing signal files.



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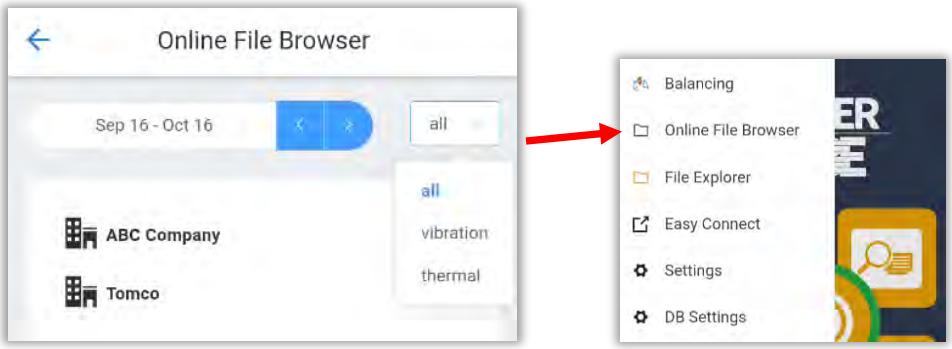
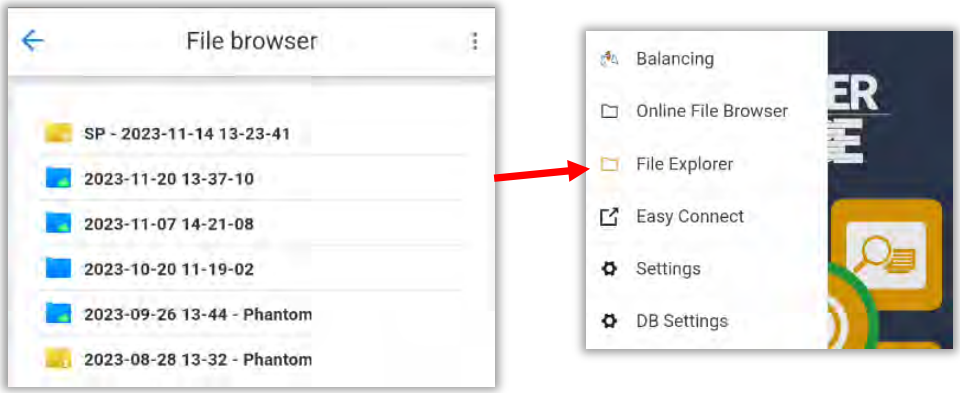
Online File Browser

This is a link to the Online File Browser described in the *Online File Browser* section of this guide.



File Explorer

Tap this link to open the File Browser (the same as using the File Browser button on the Home screen). See *File Browser* section of this guide.



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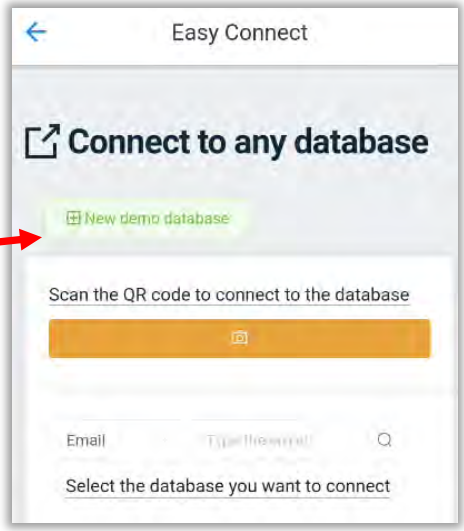
Easy Connect

Connect to a EI-Analytic database by eitherscanning an associated QR code or entering the database login credentials.

An option to create a new Demo database allows quick creation for demonstration purposes:



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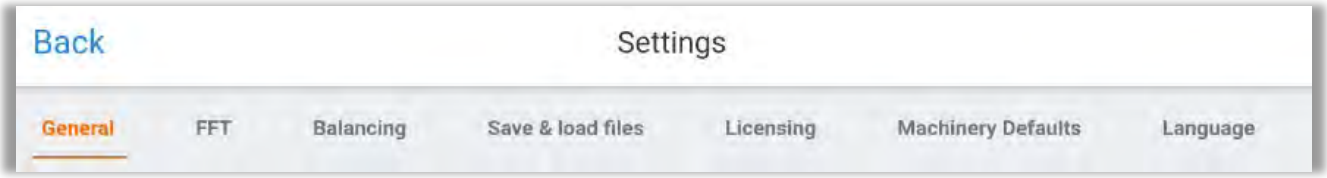
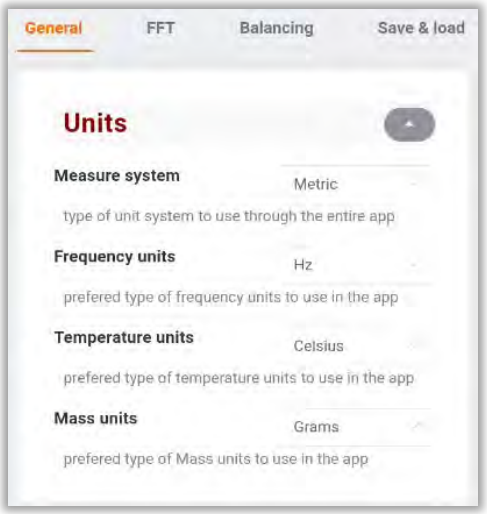
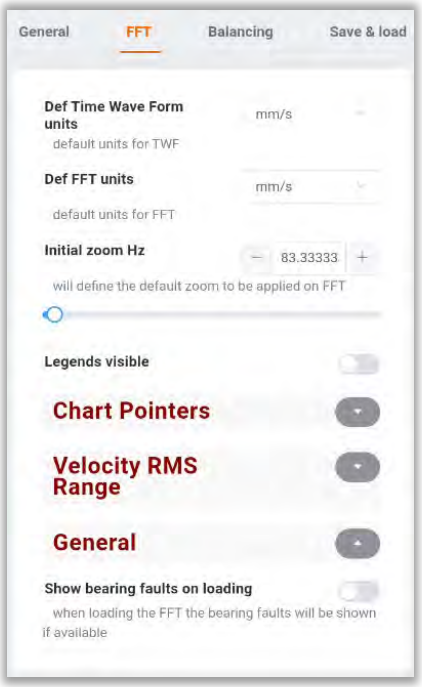
Settings

The **Settings** page has several tabs; when using a phone to view, rotate to see all options:



The **General** section has settings for the **Units** of vibration measurement, Metiric or Imperial. Also, settings for Frequency (CPM or Hz), Temperature and Mass may be changed.





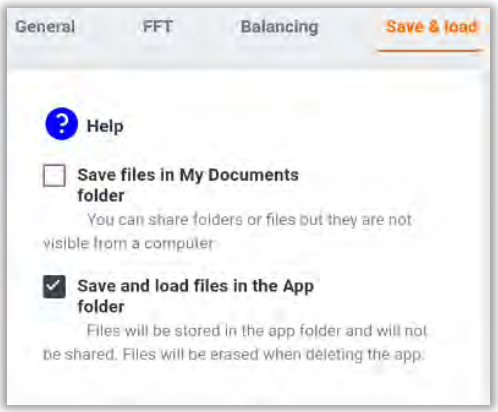
In the **FFT** tab, set the units for both TWF and FFT, as well as the **Initial zoom**.

The **Legends visible** slider toggles the Legends from view on the FFT.

The remaining settings in the FFT tab are described in the *Analysis Options* section of this guide.

Balancing settings are described in the *Balancing* section of this guide.

Save & Load is used to set the location for file storage on the device.



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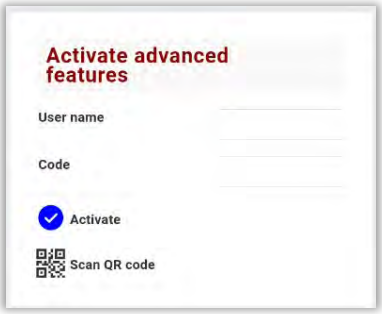
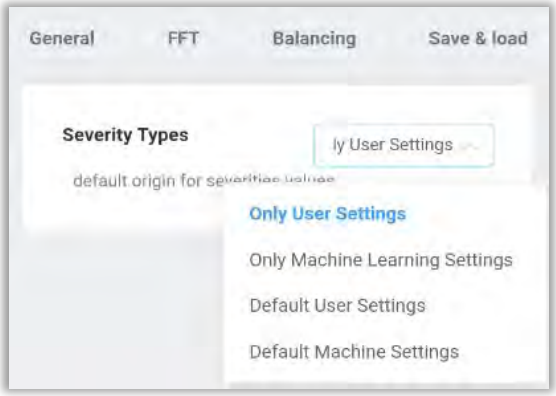
The **Licensing** tab is used to activate advanced features such as dual plane balancing. Enter the same Username and Activation code used for DigivibeMX software. This does not count as one of three activations allowed for a DigivibeMX license.

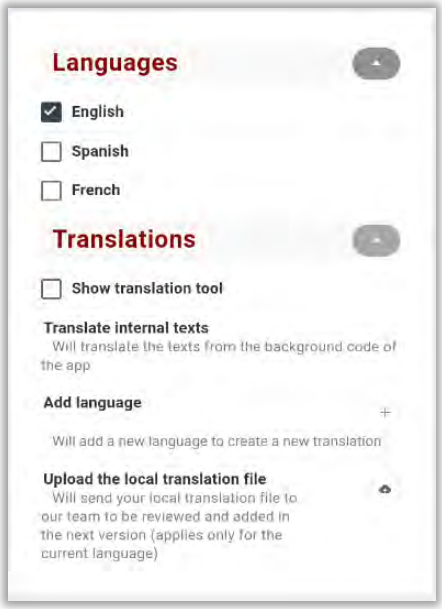


Machinery Defaults defines the source of the data used to determine the color of the icons displayed in the Data Tree.

- **Only User Settings** - shows User-defined alarm colors only.
- **Only Machine learning Settings** – shows colors based on Machine Learning only.
- **Default User Settings** – Shows User settings as source for colors, if configured. If not, shows Machine Learning settings.
- **Default Machine Settings** - Severity colors are shown based on Machine Learning, if configured. If not, colors reflect User settings for alarm colors.



Language - Choose a language and/or use the Translation tool



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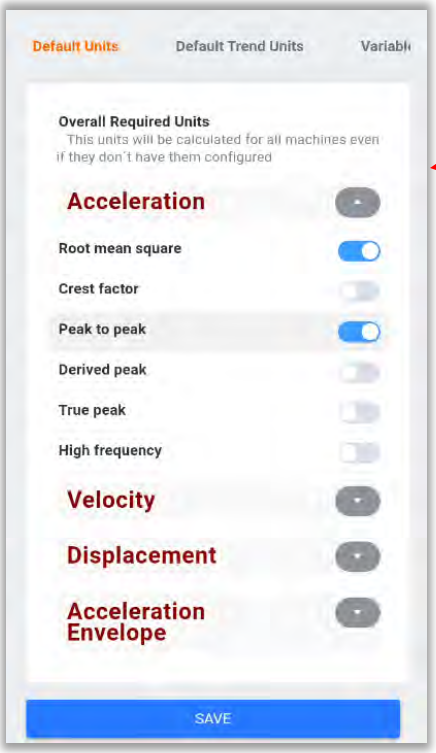
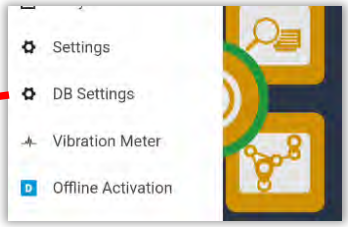
DB Settings

The **DB Settings** page has the **Default Units** and **Default Trend Units** tabs for vibration settings. Use the sliders to select which units are available for display on Dashboard charts or when creating a Task for a Machine or Point. See the *Tasks* section of this guide for more info.



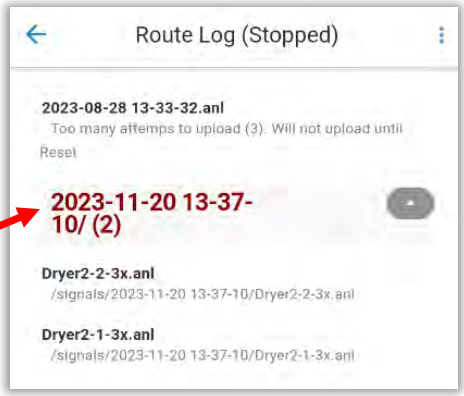


Show Route Log

When a Route is completed, a log event is kept. Files in queue to be uploaded will be shown here.

Pressing the **Stop** button will disable the upload process!

The queue may be cleared or reset as well.



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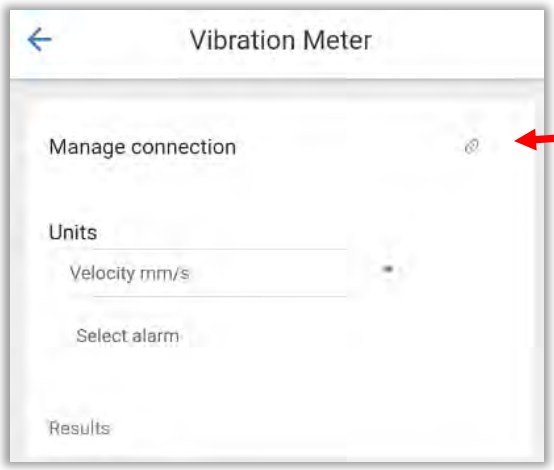
Vibration Meter

Use a WiSER 3X or WiSER Mini accelerometer as the source for a quick vibration measurement with this tool. Connect the WiSER via Wi-Fi to the device, then tap the Connection Manager button. See the *Connection Manager* section of this guide for more details. Make sure the **Triaxial position** is set correctly before recording.

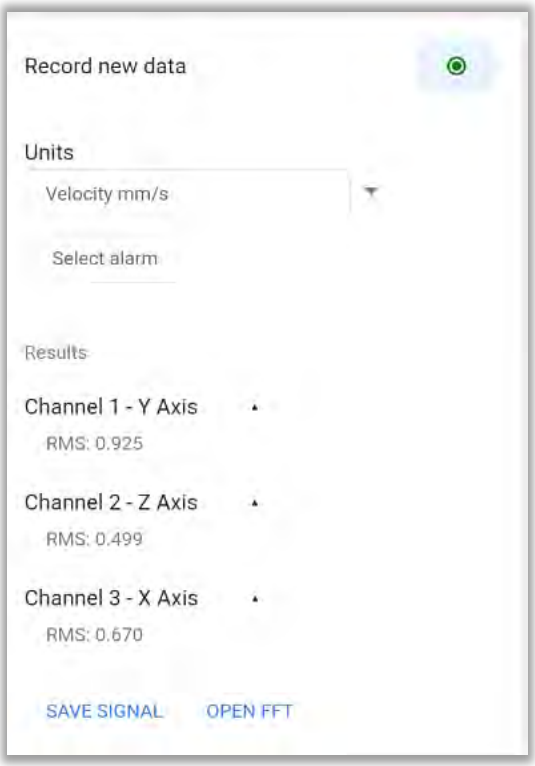


Connection Manager

Once connected, the green Record button will be available.

Tap to begin; recording progress is shown, and the results displayed:

Press **Open FFT** to view the signal file or **Save Signal** to save this file on the device.



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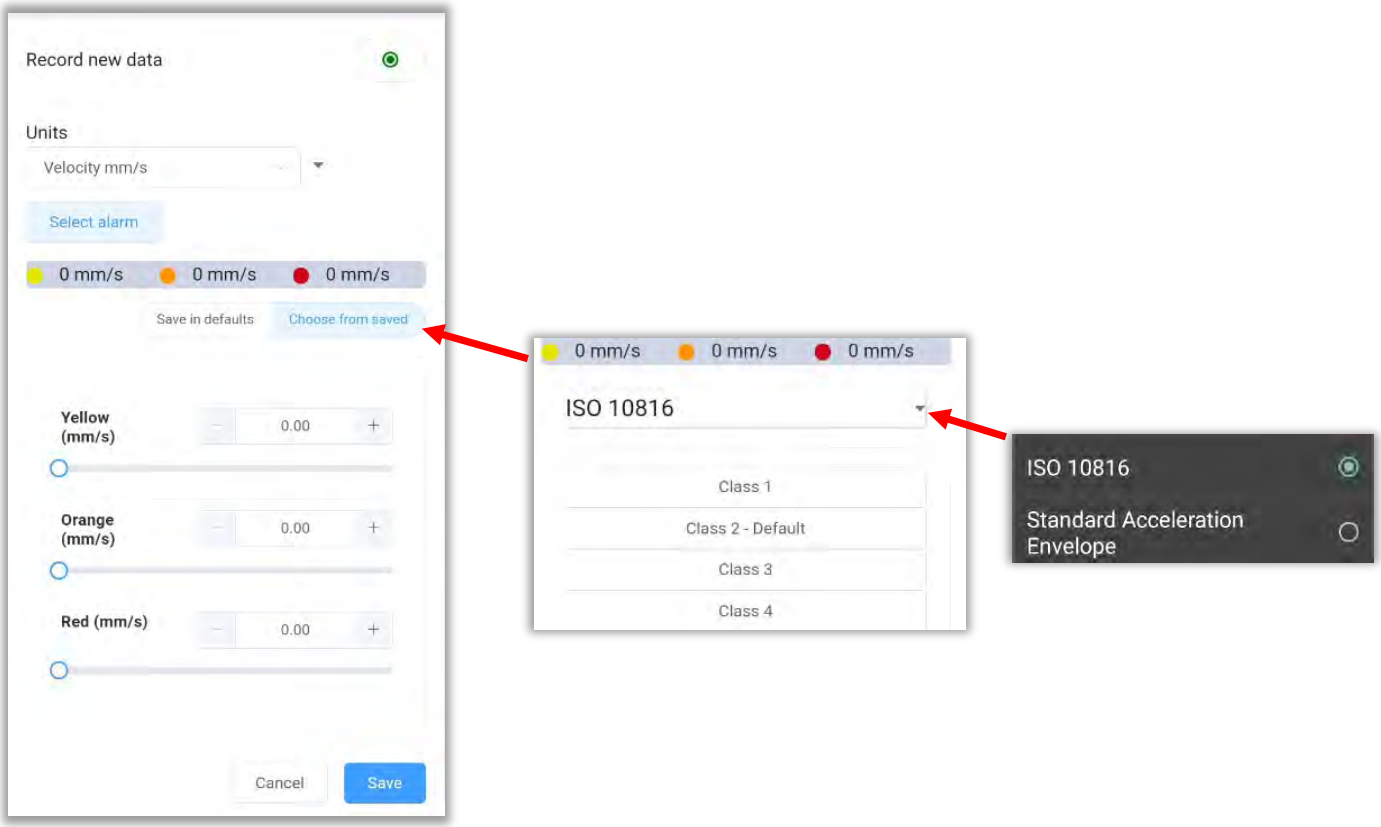
Press the Select alarm button to apply alarm values to the recorded data.

Tap Choose from saved to set previously configured alarms.



Select the alarm from the drop-down box(defaults to Class 2)

Tap **Save** to proceed.

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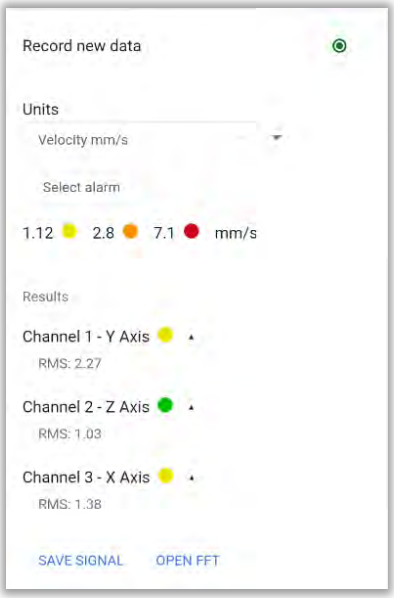
The alarm colors will now be assigned to each axis, based on the data collected and the alarm values chosen.

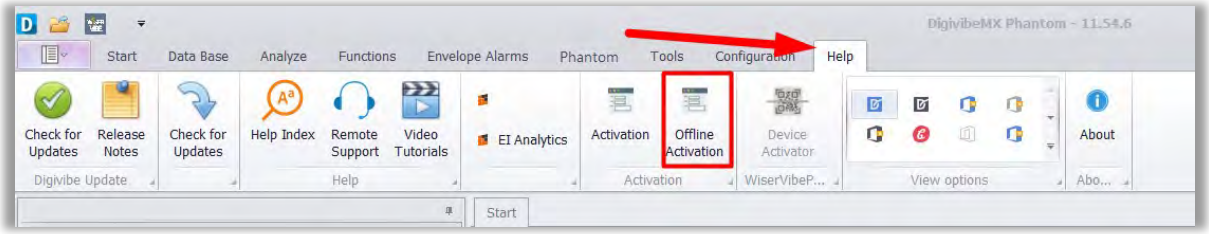
Tap Record to take another measurement, the alarm colors will automatically be applied to the new data.



Offline Activation

If no Internet service is available to activate the DigivibeMX license on a computer/tablet, this feature may be used for activation using a mobile device with WiSER Vibe.

Step 1 – Open DigivibeMX and select the Help Menu, then click the Activation button:



Step 2 – Enter the license **username** and **activation key**, select your software version, and click on **Create Code**, this will generate a QR Code.

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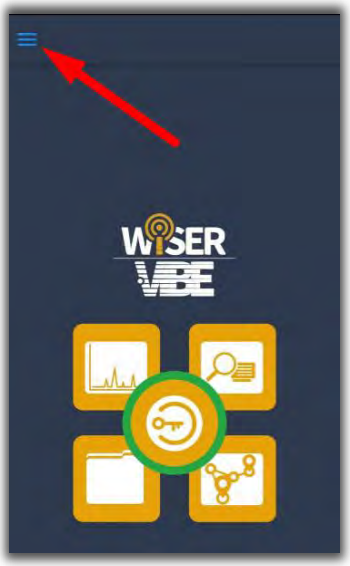
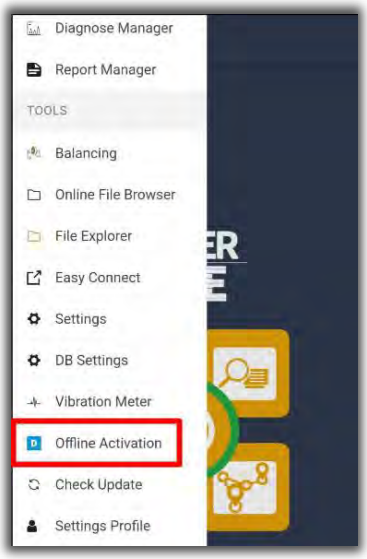
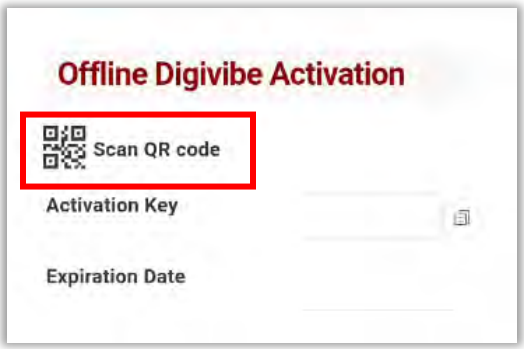
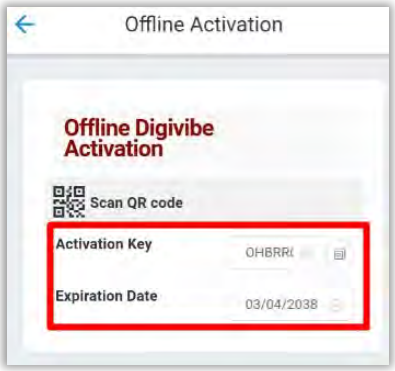
Step 3 -Open the WiSER Vibe App, go to the upper left settings and tap on **Offline activation**





Step 4.- Click on **Scan QR code** to use a mobile device's camera to scan the generated QR in DigivibeMX. This will generate an Activation key and an expiration date:





Step 5. -In DigivibeMX, enter the activation key and expiration date, then click on **Activate.**

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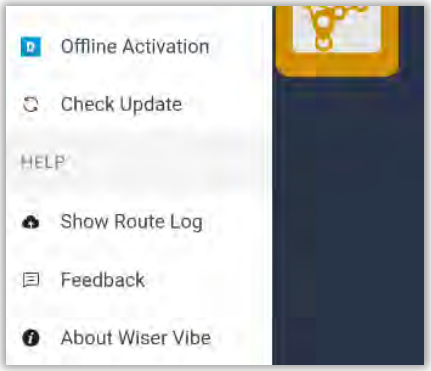
Check Update

Used to check for software updates. This also happens automatically when the app is opened.



Feedback

Provide feedback regarding this app.

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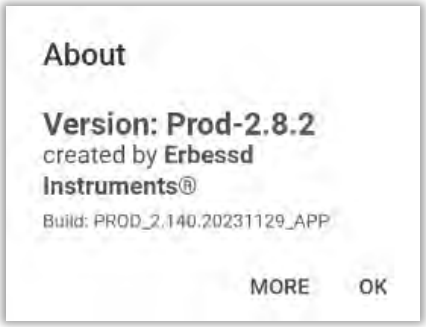
About WiSER Vibe

Check the current version. Click on **MORE** to see the release notes:



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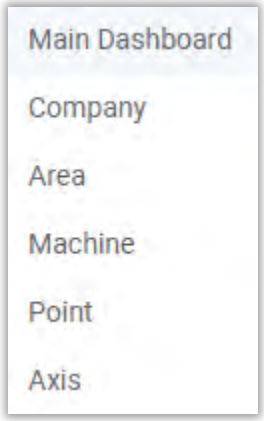
Managing Dashboards

While it is possible to create new Dashboard views using WiSER Vibe, it is highly recommended to add or change Dashboards using the EI-Analytic web portal.



See the *EI-Analytic User Guide* for details.

- Separate Dashboards exist for each ***level*** of the database.
- Dashboard views are assigned by using ***Templates***.
- Templates are built using ***Charts***, arranged in the desired order for display.
- Charts and Templates can only be built in EI-Analytic.

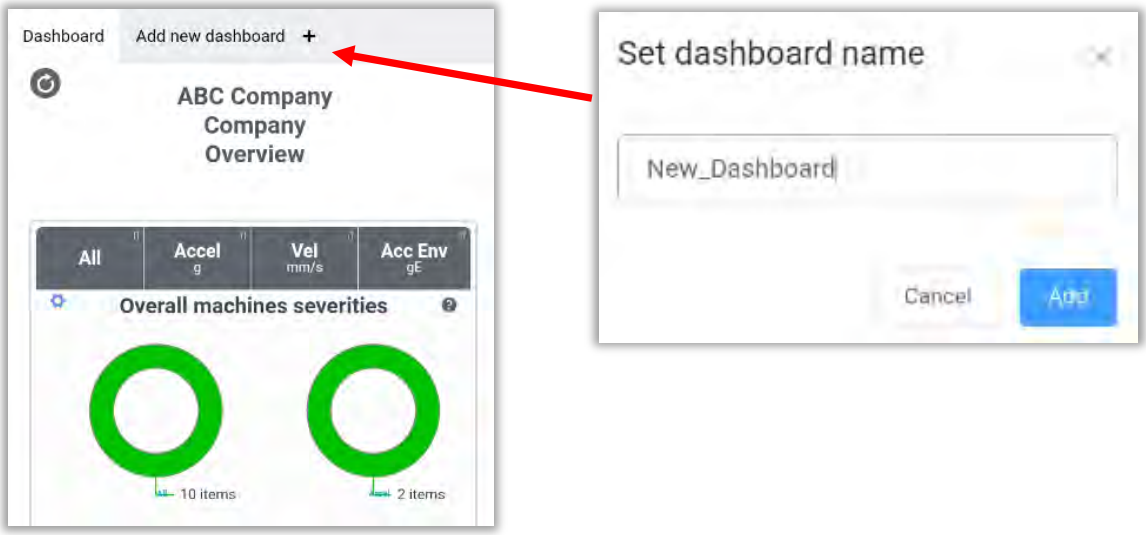
In WiSER Vibe, new Dashboards may be added for the Company level and below(not the Main Dashboard)by selecting a pre-configured Template.

Upon login, the **Main** Dashboard is displayed, which contains the following **Charts** by default:

- Overview
- Severity Score
- Highest Rate of Asset Health Decline
- Bad Actors List

After accessing the Company, Area, Machine or Point level, the **Add new dashboard** tab will now be visible:

To set up a new Dashboard, start by entering a name and press Add.



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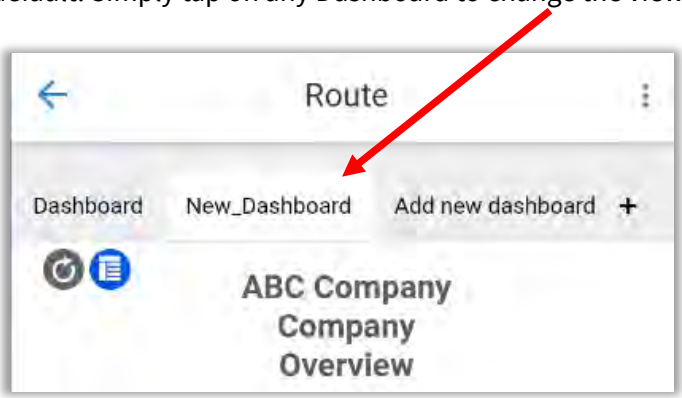
Select a Template from the list and tap **Select Template.**

The Company level Dashboard will now reflect the Charts included in the chosen template.In the example, a template called “Quick” was previously created in EI-Analytic, containing 4 charts.

Whenever a Company is selected, the New_Dashboard view will be the default. Simply tap on any Dashboard to change the view.



The same process may be followed to change the Dashboard view for Machine, Point and Axis level screens as well.

NOTE – Dashboards can be reset to default by selecting the hard reset option in the three-dot menu:

This will delete all custom Dashboards.

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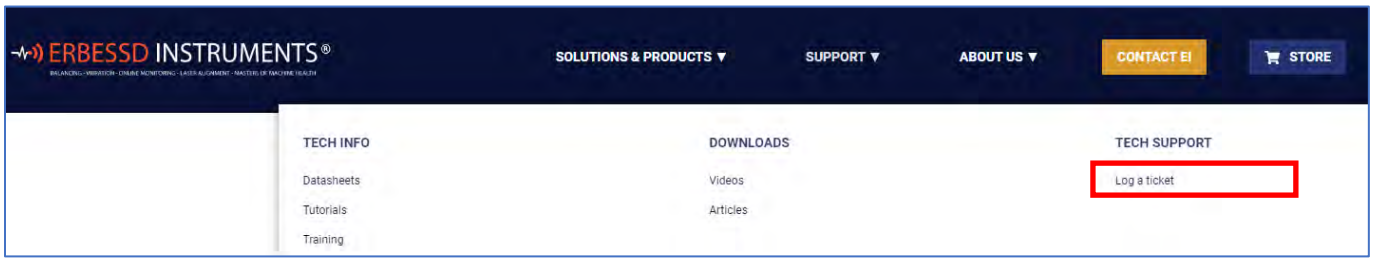
Technical Support

If at any point this guide does not answer your questions or resolve an issue, please contact Erbessd Instruments technical support using any of the following methods:

1. Visit our website and leave us a support ticket, to report minor software/firmware/device functionality concerns. Go to www.erbessd-instruments.com. From the Support menu, select Log A Ticket. Or initiate a Live Chat.



2. For more urgent assistance, contact our support team by email at: support@erbessd-instruments.com

3. For the most immediate emergency assistance, contact us by phone at +1 877-223-4606 (International Toll Free)