

El Analytic User Guide

Current to Version 2.15.3

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What is EI-Analytic ?

Erbessd Instruments EI-Analytic is a fully-featured Cloud database service for online Condition Monitoring. The benefits of using a Cloud-based model include:

- Alarm Notifications. Real-time notification of machine alarms enables a proactive maintenance approach, avoiding costly unplanned outages.
- **Sharing of data**. Easily share a database with co-workers or third-party analysts to collaborate in the maintenance process.
- **Ubiquitous access**. Any device with a web browser and access to the Internet can connect to EI-Analytic.
- **Useful Dashboards**. A wide variety of customizable dashboards are available, designed for quick summary views of machine health or in-depth display of individual machines.
- **Auto Diagnosis**. 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.
- **Machine Learning.** Machine Learning algorithms can be applied to machine databases to determine baselines used to show Severity of Velocity and Acceleration Envelope in dashboards. Email and mobile app notifications can also be configured, based on Machine Learning Severity status.

Logging In

Create an Account

EI-Analytic accounts of up to 1 GB in size can be created free of charge. Databases larger than 1 GB require a paid annual subscription. Sizes range from 10GB to multiple Terabytes. To have a paid subscription service activated, please provide Erbessd Instruments Technical Support your EI-Analytic account Username to <u>info@erbessd-instruments.com</u>.

To create a new account, use the following URL:

https://app.eianalytic.com/

Click on New Account:



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- 1. Enter a *unique* **Name** for the account.
- 2. Add the **Email** and **Password** info. The address does not need to be valid, in fact if multiple users will access the account, it would be preferable to create a generic Username in email address format (Ex: user@companyname.com). However, if email notifications are desired when a sensor in the database experiences an alarm condition, an actual email address must be used.
- 3. Enter a **Company** name this must be all lowercase letters and/or digits 0-9. The only special character allowed is an underscore.
- 4. The **Database Name** must be all lowercase letters and/or digits0-9, with NO spaces. The only special character allowed is an underscore.

Register new Account				
•	Name			
	Email			
÷	Choose your Password &	5		
a	Retype your password			
Un	Company			
8	Database Name			
	Create Account			
	Back to login screen			

Click on **Create Account** to complete the registration.

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Home Page Layout

The EI-Analytic Home page contains:

- The Database Area in the left panel .
- Menu Tabs
- The Main Dashboard an overview of all Companies in the selected Database.
- Account Menu with a Notification icon. The number of current alarms is displayed.



canada 🗸 😋	Q Dashboard 🕒 Data	base 🐃 🕸 Devices	LE File Browser	III Route Compliance	Notifications							
+ Vibration	Designatio											
ABC Company ABC Company Solution Interview Unassigned Sensors	Deshboard	rtes				Overvie	w				🖨 Quilek Re	port 🖉 Advanced Rep
	A	1	Val mm/s		Acc Env gE			Vel men/a	3		Acc Env gE	
	0	T items Ov	erall machines se	verities		0 0	Ibern.		Severit	y Score	3	
		0		2 1000	A items					1		
		All 11 items			Vel		(a-	E.				
	Formal - Acceleration	in Envelope										
	Pump 001 Air Handler001 Pump002						(144)	_		-		
	Hoist001 Dryer2 Grinder01											
		Acc Enterns					0 0	5 1	1.5		25 1	3.5
			Bad Actor Lis	te				Highes	at Rate of Ass	et Health Dec	line ø	
			Acc (g)	Acc Env (gE)	Actions	i Me	chine	Vel Slope	1.	Acc Slope	Env Slope	
	Machine	: Vel (mm/s) :								a available		
	Machine + Grinder01	i Vel (mm/s) i	0.0615	0.02	54	Î			There is no dat			
	Machine + Grinder01 + Pump_001	E Vel (mm/s) E	0.0615	0.02	54 54	Î			There is no dat			
	Machine + Grinsar01 + Pump_001 + Air_Hangler001	 Vel (mm/s) : 3.398 2.46 1.14 	0.0615 0.224 0.0279	0.02 0.1 0.05	24 24 24	Ì			There is no dat			
	Medblike + Grinder01 + Pump_001 + Air_Handler001 + Pump002	 Vel (mm/s) 3.398 2.46 1.14 0.959 	0.0615 0.224 0.0279 0.0079	0 02 0.1 0.05 0.08	ದ. ಮ ಮ ಮ	Ì			There is no dat			
a <u>o</u>	Mastine + Grisser01 + Pump_001 + Air_Handler001 + Pump002 + Pump004	 Vel (mm/s) 3.398 2.46 1.14 0.959 0.725 	0.0615 0.224 0.0279 0.0079 0.0211	0.02 0.1 0.05 0.08 0.04	ದ. ಮ ಮ ಮ				There is no det			

The Database Area

Database Selector

If the Account has access to multiple databases, the Selector dropdown box is used to choose which database to view.

When changes are made on the Database Tree, it will update automatically. Use the Refresh button to refresh the database view manually.



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Database Filter

The Filter provides settings for the origin of the colors shown in the Database Tree and which units of vibration are displayed. The default settings are 1) Severity colors are derived from User alarm settings, or Machine Learning settings, if User settings are not configured. and 2) All vibration units.



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The Data Tree

Database tables are displayed in a standard tree format. Database hierarchy is as follows:

- 1. **COMPANY:** This is the highest level in the database Typically this is configured using the Company Name, Customer Name or Plant Location (for service providers or other users collecting data in multiple plant locations).
- 2. **AREA:** This usually defined as a Production or Process Area or a building name.
- 3. MACHINE: Each machine is assigned a unique Machine ID.
- 4. **POINT**: Bearing or measurement location on the Machine.
- 5. AXIS: H (horizontal), V (vertical), A (axial) or R (reference channel for ODS rendering).





Click the Gear icon beside any entry for more functions.



At the **Company** level, there are several options under the **Management** tab.

Reports may be added or viewed

Show Sensors - used to see all assigned Phantom sensors.



The **Area** functions include:



The **Machine** functions allow quick access to common **Management** tasks like **Edit Machine** as well as links to the Diagnose Manager feature, Machine Learning, and the Online File Browser.



The **Point** level functions include:



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The Data tree supports drag and drop functions:

Drag and Drop

- You can move an entire area, along with all its machines, to another company.
- You can relocate a machine to another area within the same company or to a different company entirely.
- You can move an item from any location in the tree, except inside another item or from the 'Unassigned Phantoms' folder.
- You can adjust the size of the container or menu by hovering over the right border.
 Simply click and drag the cursor to the right to increase the size or to the left to decrease it. Experiment and find the perfect size for your display!

Additional Action buttons provide the following:

TreeView

i

Action Buttons

- Units Button: Filter the elements' severities in the tree by unit type.
- Lock/Unlock button:enables movement (dragg & drop) in tree view.
- The second second
- of Click to see the context menu, or alternatively, right-click on any element of the tree.

Clicking on any item in the Data Tree changes the Dashboard display. For example, clicking on a Company causes the Company Overview to be displayed. Select any Area, Machine, Point or Axis to see the Overview Dashboard for that item.

There are default Dashboards for each level of the Database, which can be customized. See the *Managing Dashboards* section below for more details.



Main Dashboard Charts

The Main Dashboard contains four **Charts**:

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

Overall Machine Severities

This Chart contains three pages of information. Page 1 has three 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) .
- Acc Env



Hovering a mouse over a graph shows a list of machines used to determine the colors.

Click the Right Arrow

to advance pages.

Page 2 contains four Charts:

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

	Overall Severities						Overall :	Severities e
Accel	Vel mm/s	Acc Env gE	Temp		All All	Accel g	Vel mm/s	Ace Er gE
1 items - All	— 1 items	1 items	Accel 1 items		1 iten Danger - Velocity		— 1 items	
3 items	— 1 items	••	Acc Env 2 items		- ABC Company	ns - Vei	— 1 items	•••

Hovering a mouse over a section of a chart shows the severity by Company.

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Page 3 contains the same information as shown on page 2, but in bar graph format.



Click on any of the grey boxes to exclude/include the units in the displayed data. Unselected items are shown with a white background.



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

	Drag a columr	n header and	drop it here to gro	oup by that colum	n	0
Table	Units	-1	0	2	6	
Export All Data 🗸	NoSeverity	0	1	0	0	
Restore Chart	Green	1	1	1	2	
lelp	Yellow	0	0	0	0	
lose Zoom	Orange	0	0	0	0	
1	Red	1	0	1	0	

×

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



Severities Score

This graph allows you to see the severity score of children who are at the same level as you. Each button on the graph represents a child, and its color corresponds to the color of the bar on the graph. On the right side, you will find a scrolling bar

and a zoom bar. To zoom in, simply place the cursor over the bar and it will change to a cross. Click on the bar and drag to adjust the size according to your needs. In addition, the vertical dotted lines with an arrow indicate severity marks on the graph, which helps to better understand the severity scores of the children.

The term "children" is used to describe the database item below a given level. For example, Machines are children of an Area, and Points are children of Machines.

Bad Actor List

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

Press the + button beside any Machine name to expand the view to include Points, and further expand to Axis level by

pressing + again.



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

Total of items		Unit	Export Data
20 🔻	Total of items	Velocity 🔹	Excel •
Velocity T	10	Acceleration	Eveel
Export Data	20	Velocity	EXCEI
Excel 🔻	40	Acceleration	PDF
** Options	50 All	Envelope	CSV

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Highest Rate of Asset Health Decline

The slope represents the rate of change of vibration 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.

	The second second		and the second
Machine	Vel Slope	Acc Slope	Env Slope
004 - Pasteurizer - leating Pump	548.26	~	1000
041 - Spare Compressor - Model S 160	#C	-	-
039 CL2 Rinser Fwister Blower to Fille Vest	rA-		
003 - Pasteurizer -	101.08	-	152.64

Company Overview Dashboard

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



At top is shown the Overall Machine Severities charts followed by additional charts for:

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

Last Measures

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

		Last Measures Compar	y > Children Area 🛛	
Area	Vel (mm/s)	Acc (g)	Acc Env (gE)	Date
Area2	1.598		0 1.085	2/5/2024 11:07:57 AM
Areal	0 1.518	÷ .	0 1.044	2/5/2024 11:06:50 AM
Area_51	0 1.429		01.039	2/5/2024 10:55:51 AM

Octave Band Counters

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

Octave Band Counters						
Machine	i Vel (mm/s)	: Acc (g)	Acc Env (gE)			
+ Pump_001	9 (1) 2 (1)	8888	0.000			
+ Pump_002		ere ere	0.000			
+ test2			0000			
+ Air_Handler001		0.00	0.000			

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 graph for the date range selected.



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
- Octave Band Counters



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Octave Band Counters

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

		Octave Band Counters	
Machine	: Vel (mm/s)	: Acc (g)	Acc Env (gE)
+ Pump_001	0 (1) 2) (1)	8888	0.0.0.0
+ Pump_002	0000	(Ex (Ex (Ex (E)	0.000
+ test2			0.000
+ Air_Handler001			

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 graph for the date range selected.



Machine Overview Dashboard

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

The default 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.



Trends Chart

The Trends chart displays separate graphs for Acceleration, Velocity and Acceleration Envelope over time. Temperature(internal)is included by default for Phantom sensor data.

	~		70		Accel		1		-tu a	-	s.	mm/s vul	
a) 000 0 15	22	29 2025	8	15	22 Temp	29 Feb	å	15	22	Mar	8	15 22 29 2025 8 15 22 29 Feb 8 15 22 Mar	
20 15 10 5 0	22	29 2025		15	22	29 Feb		15	22	Mar		13 22 29 2025 18 13 22 29 19 19 13 22 19 19	8
						1							

The Range slider at the bottom allows adjustment of the chosen increment (day, month, etc) from 0 to 100 units.

0		100
[

Click the Options button at top left is used to adjust the display parameters.

Unit selector		Acceleration		
,	RMS Accel	TP Acc	PP Acc	
	Day -			
Requested 10 +4				

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The Unit selector dropdown allows:



NOTE - Additonal Acceleration and Velocity Modifiers such as peak-to-peak may be added to the Trends Graph. by changing the **Default Trend Units** in the EI-Analytic Account **DB Settings**. See the *DB Settings* section of this guide for details. As shown in the example above, True Peak and Peak-toPeak acceleration units have been previously added.

The Range can be set to:

All time
Hour
Day
Week
Month
Year

The Collection Reason can be set to:

Requested	Sensor Alarm
Scheduled	Off Route
Alarm	Small Thermal Image
Route	Trigger
Manual Data	
Soft Reset	
Internal R M S	

Use the Date selector to change the range of data shown on the Trends graphs:

Feb 09 - Mar 11 <

It defaults to the past 30 days. Click the right/left blue arrows to go back or forward in one month increments.

Hover the cursor over any point in a graph to see info for each measurement:



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



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FFT Chart

Below the Trends graph is the FFT chart:



On the top right side of the FFT there are several controls:



Date: 2025/02/27

RMS = 2.35 Max = 1.62

RMS = 0.305 Max = 0.165

RMS = 0.302

Max = 0.162 Sens = undefined 1 RPM: 1667

1798.297119140625

RPM

LR: 6400 Win: Hann

Res: 181 FR: 775350

SR: 25845

Sens = undefined 1 RPM: 1798

Sens = undefined 1 RPM: 1658

- **Open on tab** opens the FFT in a new window for fullscreen analysis. See the *FFT Tools* section of this guide for details.
- Switch to TWF -shows the Time Waveform in place of the FFT.
- H, V or A -click to toggle view of each Axis on FFT or TWF.
- 🖸 -Undo last zoom
- × Reset zoom

To the right of the FFT are the **Legends** containing:

- RMS velocity for each channel(axis)
- Max velocity
- Estimated RPM (based on min/max assigned to Point)
- Number of Lines of Resolution
- Sampling Rate

For more details regarding analysis options and FFT Tools, please refer to the *Visualization Tools* and *FFT Tools* sections of this guide.

Below the FFT are the charts for:

- Overall Severities
- Parameters Severities Score
- Severities Score

For details on these charts, see the Overview Dashboard section above.



Online File List

Next is the Online File List Chart, which shows the **Last** measurement for all points on the Machine, and can be switched to **All** (Historic) view. The values shown in this chart for Acceleration and Acceleration Envelope are shown from the last <u>full</u> data collection.

							LAST	ALL	Cascade Si	gnals V	ibration RMS	-4.1
					Online File List						1	
Date :	Point	Axis	_	Reason	i Vel(mm/s)	1	Acc Env(gE)	-	Accel(g)	i Ad	ctions	÷
2024/11/26 13:34:39	Motor_NDE		н	0	0.7		0.03		0.0581		۲	
2024/11/26 13:34:39	Motor_NDE		y	0	0.3		0.01		0.0338		۲	
2024/11/26 13:34:39	Motor_NDE		A	0	0.33		0.02		0.0403		۲	
2024/11/26 08:03:13	Motor_DE		н	0	0.16		0.01		0.0842		۲	
<												- F

To change the default view from **Vibration RMS**, select **Vibration modifiers** to show other vibration units such as peak-to-peak or **Temperature** from the drop-down menu at top right.

Vibration RMS
Temperature
Vibration modifiers

Set the slider to **ALL** to open Historic mode.

Make a selection and press Save.

Click here to open the Date Selector

Click the blue arrows to go forward or back 30 days



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Hovering the cursor over the **Reason** column icon shows the reason for data collection.

							LAS	T 💽 ALL	Oct 26	- Nov 25 < >	1 2 0	escade/Signals	Select		~	
							Online	File List								
Date :	Point	4	Axis		-	Reason	1	Acc Env(gE)	1	Accel(g)	1	Vel(mm/s)	:	Actions		
2024/11/25 08:38:08	Motor_NDE			A	1	Scheduled		0.02		0.0402		0.37			۲	
2024/11/25 08:37:54	Motor_DE			**	-	ò		0.01		0.0212		0.18			۲	1
2024/11/25 08:37:54	Motor_DE			v		0		0.02		0.0451		0.47			۲	

To filter the File List by **Reason** , click the Options button.

Several Reasons are shown by default, with additional items available to apply:

Add or remove **Reason** types as desired, for example to see only **Route** data, or only **Scheduled**, etc.

Click the Open File icon (I in the Actions column to open the selected signal file in the FFT chart of this dashboard.

Requested	~
Scheduled	~
Alarm	~
Route	~
ManualData	
SoftReset	
internalRMS	
SensorAlarm	
OffRoute	
SmallThermalIn	nage
Trigger	

Point Overview Dashboard

Similar to the Machine Overview, the Point level Overview uses analog style gauge charts:



It also includes

• Trend chart, similar to the Machine level Trends chart, the Points level chart contains an Axis filter in the options:





Axis Overview Dashboard

The Axis level dashboard contains the same style overview as the Machine and Point dashboards:



Plus:

- Trend chart
- FFT and TWF
- Real Values chart
- Online File List
- Octave Band Axes

Gauge Parameter

This chart show gauges of real value and severities score from the selected axis, the value bottom the needle is the real value and the mark is the severity score

Octave Band Axes

All 32 Octave bands are listed, sorted with the bands of highest vibration(peak) shown first.

		Octave Bands Axes @	
Band (Hz)	: Vel (mm/s)	: Acc (g)	Acc Env (gE)
5 (35.5 - 44.7)	0.215	10.0	0.002
4 (28.2 - 35.5)	0.162	194 C	0.001
1 (14.1 - 17.8)	0 t	0.002	1.01
2 (17.8 - 22.4)	10 F	0.001	30÷
3 (22.4 - 28.2)	0-1 C	0.002	
6 (44.7 - 56.2)		0.002	
7 (56.2 - 70.8)	14	0.002	

Managing Dashboards

Dashboard views for each level of the database (except the Root level) can be managed in two ways:

- 1. Edit the *default* template for each level. The modified template can be assigned to one or <u>all</u> items at that level of database.
- 2. Add **new** dashboards.

Edit a Default Dashboard Template

Click on any level of the database tree to open the default Dashboard template. As an example, below is the default

Machine level dashboard. Press the **Examplates** button



The Machine level templates palette will open.

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Dashboard: Machine Template

Seerch by name:

Filter by:

Filter by:

Templates from: Erbessd

Wy templates

Templates are sorted by category.

Templates are sorted by category.

Shared Templates are those created by owner of other databases that are shared with your account, example:.

rch by name:	Search by name	Filter By:	Filter by Keywords	Templates from: S	hareds Shareds	
arada						
areus			inprimenter for	minn	1440	
			my many white			
	- Internet		**************************************		A AMARAINAN AR	
0	=			1		0
-		-	·		titute	
c.		-		EVEL		

My Templates are those you have created using the Templates manager, example:

Search by name: Search by name: Filte	er By: Filter by Keywords	 Templates from: My 	templates My templates S
My templates			
Station .	Kent Land	at at at	
		Manager 175 (a	
0 -	INTERIE		
	-		

Choose a template and either click on To apply it to <u>all Machines</u>, click: Select Template to apply it to <u>only</u> the Machine selected from the data tree.

Set as default for all machines

The modified Dashboard will now be displayed. In this example, **Machine_2** was chosen as the template to use.



The same process can be followed to choose different template Dashboard views for Area, Machine, Point and Axis.

NOTE – if you change a default template and wish to revert back to the Erbessd default:

ilter by Keywords	V Own (Shareds)		Hard Reset Dashboard Settings To Defau
New Blank	NS1	test temp	
NO IMAGE AVAILABLE			
Quick	Company Default	doug test 1	
		La construcción de la construcci	

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Add a Dashboard

When multiple Dashboards are created, switching between them is easy, just click on the dashboard of choice.

Highlighting the star defines which dashboard to open by default.

To add a new dashboard, first ensure the desired level is selected in the Data tree, then click on **Add new dashboard**.

Assign a name and click Add.

Set dashboard name		1.1
Point_Dash_2		
	Cance)	Add

Then select from the palette of **Templates**. **Note** -Templates can be created by any EI-Analytic user and **shared** with other accounts with whom your database is *shared*, made public (shared with all EIA accounts) or saved as "**Own**".

Templates consist of **Charts** that are built using Chart Builder, see *Templates Dashboard Manager* section of this guide for details regarding building custom Charts and Templates.

In this example, a template was chosen from the *Shared* folder called **Sensor Info 1**:

arch by name:	Search by name	Filter By:	iter by Keywords	- Templa	ates from: Shareds Shareds	1	
hareds		-			_		
10	<u>_</u>				Aul .		
	•	-	in the second se		-		
			and and an	1.		1.1	
		4	-	_	_		
SIC DASH							
		Sensor Info	1				

www.erbessd-instruments.com
After clicking **Select Template**, you will be asked if you want to make this template the default (starred).



The added Dashboard is now visible as aTab:





An **Editor** button will now appear on the right side of the screen:



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support@erbessd-instruments.com +1-518-874-2700 NY office +1-877-223-4606 INTL toll free The Editor allows you to change or remove charts from the dashboard, add or remove rows and save this dashboard to other Machine Points (save as):

		ions 🗸 🐽 Save 🗸
	🚳 Row Options 🤟	Save Template
Ø Select AII III Remove Items 2	 Row Layout Remove last row 	D Save As

The Editor also allows:



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Account Settings

To access the Account settings, click on the Account icon located at the top right of the Home screen:

			YOUR ACCOUNT
다. File Browser ~	Route Compliance	↓ Notifications	
Profile			🌡 Profile
This item displays the	account information, including	g the databases owned and shared	Permissions
with other accounts.			E Databases
The Get more space f	or your Databases button links	s to the Databases page – see	Settings
Delow.		B DB Settings	
Click on the Edit button to change the password	on to change the password, acco	ount name, Company or Email	S Database Explorer
🖉 Edi	t		(+ Log Out

Profile	
	○ Cloud Services
-V-)) ERBESSD INSTRUMENTS®	⊖ Databases (2)
	今 Own:1 ① Used 0.0 GB (1%) out of 1 GB
MASTERS OF MACHINE HEALTH	∂ Linked: 1
	1 Get more space for your Detabuser
Name: AETS ERBESSD	
Email: gr @gmail.com	

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hboard > Edit Account	
COMPANY LOGO	
Click to upload file	
AETS ERBESSD	් UPDATE PASSWORD
AETS ERBESSD	Type your climent password
⊈ gri@gmail.com	Choose o new password
2 erbessd	Re-type yout new password
Enable two-factor authentication	Save new password
Email	
Force change password Every 6 Months	
C Type your Password	
Cancel Update user	

Two factor Authentication via Email and Forced password change can be enabled as options.

Permissions

See User Access Permissions section below for details.

Databases

Provides the management of databases within the account, categorized as **Own** and **Shared**.

The currently used capacity is shown for each owned database.**Note** -changes in capacity are calculated and updated nightly at 2 AM (GMT-6)

Database settings may also be directly accessed from the home EI-Analytic page at the bottom of the Data Tree:



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Databases Settings							
Database Management							
Own databases							
ei_canada 05062023080405, erbessd_instruments D Emails received. 7	<u></u>	0.14 CB / 1.00 GB	Ø	đi	<u>A</u>	ø	000
ei_canada_2 20102023115125_el_canada_2 [] Emails received: 0	()X.	0.01 GB / 1.00 GB	Ø	51	Â	Ø	00
newdatabase001 12032024164532,newdatabase001	(1%	0.01 G8 / 1.00 GB	ø	51	۵	0	0,0
Shared databases							
2 O BAKERY 1 technologies D Emails received:27	()s.	0.99 GB / 100.00 GB Expiration date: 2025/11/13				ġ.	8
test_db_erbessd 00042024099438_erbessd_instruments_D Emails received: 0	445	0.44 GB / 1.00 GB				۲	8

To add another free 1Gb database, enter a unique name under Add Database and press Add.



For **Owned** databases, the following functions are available:



- Configure User notifications for **Owned** databases:



Select the Time Interval drop-down box to choose the length of time to silence notifications:



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fime (nlerva)	
1 Year	
6 Months	
3 Months	
2 Months	
1 Month	
15 days	
7 days	

This account's email address will **<u>not</u>** 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).

	Other Notific	ations 🙆
	Phantom	Email Activity
Press	✓ Save Config	to complete changes.





Upgrade – Click here to begin the upgrade process to obtain more storage space in EI-Analytic.



Share - Use this option to share a database with another EI-Analytic account.

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* User e-mail	
someone@company.com	

Enter the e-mail address of the account and press Grant access.

Allowed users	
Chris Keniston chris@erbessd-instruments.com	• • •
AETS ERBESSD	• • •

For each user you can set the:

Access Permissions	
Notifications	
Machinery Tree access	A

See below for more details.

Use the **Delete** button to remove a user from the database. **Caution** - the ¹ button will delete a user immediately, with no chance to abort the action. Use carefully!



Rename -Rename a database. Caution – database names <u>must be unique</u>. Duplicate database names can cause major problems and may result in loss of data. **Only use lower case letters and numerals.** The underscore symbol is the only permitted special character.

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EI_CANADA	
Database Name	
ei_canada	

S	DB Admin -Allows changing the database owner email ad	dress and/or setting up an API Key
	B _b Change admin	
	🗠 Apikey	
Ohanga Admi	~	
Change Admi	n wner: greg@erbessd-instruments.com	
Select e	mail: Keypurerensi	
New ov	wner:	
Subscribe to the	is DB As a linked user	
		Cancel

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User Access Permissions

The User Permissions configuration may now also be accessed from the Profile menu:



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Configure Notifications



Select the Time Interval drop-down box to choose the length of time to silence notifications:

Time (nlerva)	
1 Year	
6 Months	
3 Months	
2 Months	
1 Month	
15 days	
7 days	

This user's email address will **<u>not</u>** 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).



© Options	🗸 🛷 Save Config
3 Months	
Machine tree and other sile	enced notifications.
📑 Machinery Tree 🙆	
ABC Company	
Area1	
Area2	
LI Area 51	

Hoist001

Other Notifications

Tomco





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The button is used to allow/restrict access to items in the Machinery tree by user.

Checked items will be hidden for this user.

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* Hide tree levels for this user
choose the level at which you want to hide or restrict the user.

Search(Assets

ABC Company

Area1

Area2

Area2

Area2

Area2

BArea2

Settings

The Settings menu has six tabs, the first is **General** - Set the <u>default</u>**Units** (Metric/Imperial, CPM/HZ, etc.) to be used for this EI-Analytic Account.

ishboard Settings					
Settings					
General	FFT	Routes	Machinery Defaults	Shortcuts	Länguage
Units					G
Measure system type of unit system to use through the entire app			Metric		
Frequency units prefered type of frequency units to use in the app			СРМ		
Temperature units prefered type of temperature units to use in the app			Celsius		
Mass units prefered type of Mass units to use in the app			Grama		
Information					0
Last modified settings of this account. Last modified settings of this account.					Last update: 11/25/2024, 3:27:31 PM

• **FFT** – Configure the defaults for viewing an FFT or a TWF, including zoom level, units and others.

General	FFT
Def Time Wave Form units	
default units for TWF	
Def FFT units	
default units for FFT	
Initial zoom CPM	
will define the default zoom to be applied on FFT	
Q	
Louis de statute	

Chart Pointers may be modified for the following:

Each type of pointer has a default type: e.g.

Triangle
Empty Triangle
Square
Empty Square
Circle
Empty Circle

Chart Pointers
Marker pointer
Locate pointer
Phase marker pointer
Harmonics pointers
Side bands pointers
Bearing pointers
Octave bands pointers
Transient pointers

The color of the pointer and type of line can also be modified:



Chart Pointers			0
Marker pointer			0
Pointer	Cross		
Color If left empty, the chart will use the polar of the corresponding channel		×	
Line type	None		
C Label visible			
Line length distance in % from the top of the chart to the pointer. Use -1 to put the markers on the series.		-9	÷

The pointer can be toggled on/off and the length can be adjusted.

Velocity RMS Range controls the Min/Max range for RMS velocity calculations:



The General section contains options for loading FFT's :



• The **Routes** tab contains only one parameter which applies to Routed data collections. (defaults to ON).

Settings		
General	FFT	Routes
Auto move point		
Will move automatically to next point after collecti	ng data on route collector	

• The Machinery Defaults tab defines which Severity Type is the default:

Machinery Defaults	Severity Types
Default Machine Learning Settings Default Machine Learning Settings Default User Settings Only Machine Learning Settings Only User Settings	 Types Machine learning icon on the tree Default Machine: shows severities based on machine learning, but if it doesn't have, shows severities based on user settings. Default User: shows severities based on user settings, but if it doesn't have, shows severities based on machine learning. Only Machine Learning: show severities based on machine learning.
	 Only User: shows severities based on user settings.

• Shortcuts allow use and customization of keyboard shortcuts:

Settings					
General	FFT	Routes	Machinery Defaults	Shortcuts	Language
Shortcuts					O
Enabled Disabled Shortcuts Enable or disable the keyboard shortcuts					
Apply Default Shortcuts Settings Apply the default shortcuts settings					Apply
Shortcuts Options					0
Change Frequency unit - FFT Press the key to assign the shortcut and press "Save" to apply the s	changes.				2. Command: CTRL+F
Remove last cursor - FFT Press the key to assign the shortcut and press "Sare" to apply the o	changes				& Dommand: CTRL+Q
Clear all cursors - FFT Press the key to assign the shortcut and press "Save" to apply the a	changes				& Command: CTRL+Y

To edit any shortcut, click on the associated blue box:

Press the keys to set the shortcut		
Key pressed:		
	Close	Canfinn

• Languages are selected here:

Languages
English
Spanish
French
Translations
Show translation tool
ranslate internal texts Will translate the texts from the background code of the app
dd language Will add a new language to create a new translation
pload the local translation file Will send your local translation file to our team to be reviewed and added in the nest version (applies only for the current language)

DB Settings

This page has five Tabs:

Setting	gs			
Default Units	Default Trend Units	Default Severity Alarms	Variables	Routes

Default Units

Select which Units are available in the Overview Charts in addition to the defaults, e.g. add Peak-to-Peak, True Peak, etc. These appear as tabs at the top of charts:



Note these settings are also used when creating a Task for a Machine or Point. See the *Task Manager* section of this guide for more info.

In addition, once a unit is selected it will become available for severity alarm creation.

Example, if True Peak is activated, then a True Peak severity alarm may now be crerated in the Machine form:

RMS-OctaveBands			~
RMS (2)	the second s	Octave bands (0)	
Velocity	🥚 2.50 🍎 3.80 🔴 7.10		2
Acceleration Envelope	<mark>.</mark> 0.600 ● 1.20 ● 1.80		2
	+		
True peak			X

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support@erbessd-instruments.com +1-518-874-2700 NY office +1-877-223-4606 INTL toll free Use the sliders to select which units are available . Note that all units are calculated by software for all machines, even if they are not selected.

For Acceleration, Velocity, and Acceleration Envelope, the default is RMS only:

Acceleration	O
Root mean square	
Maximum value	0
Minimum value	
Average value	
Crest factor	0.0
Minimum value in FFT	1.00
Maximum value in FFT	100
Peak to peak	
Derived peak	
True peak	28
High frequency	

In Acceleration Envelope, the calculation method may be changed from RMS to peak-to-peak.



Default Trend Units

Select which Units are available in the Trend Charts Options in addition to the defaults, e.g. add Max Acceleration, Peak-to-Peak Acceleration, True Peak, etc:



Unit selector Acceleration	Acceleration	
	Day ~	٥
Requested 10 +4		0

Default Severity Alarms

These settings control the color of the icons displayed in Dashboard Charts and/or the Data Tree.

and ocverity Alarm					+ Add New
Velocity o	Custom - Custom1	8	I Set As	11 Options	
Acceleration	Select	9	- Set As	11 Options	🗇 Delete Alarm
Displacement	Select	S.	Ret As	11 Options	
Acceleration Envelope	Standard Acceleration	Env 😔	🤟 Set As	II Options	

By default only Velocity and Acceleration Envelope **RMS** alarms are configured on machine points in the database. If alarms were added previously for Acceleration and/or Displacement, they will be available to configure as well.

The default RMS Velocity alarms are the ISO Class 2 values. Custom Alarm sets can be created and applied as needed. In this example alarm sets have been created for pumps, hoists, etc. The current default is Custom1.

When adding a new alarm set, add a new **Group** or select a previously-created Group, and assign a **Name**.

	0 mm/s	0 mm/s	•	0 mm/s		
Group	Select 4 group				+	
Name	Name					
Yell	low (mm/s)			0.00		#
Ora	nge (mm/s)	- 3		0.00		+
Der	1 (mm/s)					
0				0.00		+



Use the sliders, the + and – buttons, or edit the box contents directly, then press Save.



This alarm set will now be available to assign to machine point axes, by name.

Any alarm set can be assigned as the Default by selecting Set As

Set As

No default Octave Band Severity alarms exist when adding machine points, they must be added if desired. If previously created Octave Band alarm sets have been configured (through the Machine>Add or Machine>Edit functions), they can be set as the Defaults here.

Octave Band Severity Alarm				
Velocity o	OBV1 - Velocity		- Set As	II Options
Acceleration Envelope	OBV2 - ACENV	×	- Set As	Uptions

Temperature and Amperage are pre-configured. Custom severity alarms can be created for any variable.

To create a Custom Alarm, click on Add new:

Choose a variable (there is a long list):

On / Off - On	/Off
emperature	- ° C
Amperage - A	Amps
RPM - RPM	
phase - °	
SPIO - GPIO	
Octave bands	s Acceleration - OB Acc

Extra Units Severity Alarm
Add New Severity Alarm
Temperature 💿
Amperage 😝
RPM 👂
Avg Temperature .
Max Temperature

51

For example, to set an RPM alarm for a Phantom S40 speed sensor, select RPM from the drop-down:

	0 RPM	0 RPM		0 RPM		
Group	Select a group				+	
Name	Name					
Yell	low (RPM)			0		+
Ora	nge (RPM)		•	Ø		+
0						
Red	I (RPM)		•	0		+
0						_

Add a new Group or select a previously created Group, and assign a Name to this Alarm set.

Set the alarm values for Yellow, Orange and Red and press Save.

ame RPAAborn	1150 KPM	L / / S NPM	
Yellow (RPM)		1750	÷
Orange (RPM)	• [3]	1760	+
Red (RPM)	•	1775	+



This Alarm can now be applied to a Phantom Speed sensor; assigned to a Machine or Point. E.g. If a separate machine is created just for the RPM sensor, the Data tree icon will show the color once new data is received .

Variables

Accesses the Variables and Function settings. Variables can be created and used with Functions when applied to Phantom data. Typically these are related to specialty Phantoms such as Current or RPM. Many are used with GPIO Phantom sensors (4-20 mA or 0-10 Volt). Functions may also be applied to custom Items that are configured in the database. See *Adding Custom Database Items* section of this guide for more information.

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Variables			0
Cost of KW/H	-	5.0000	+ *
Cost of KW/H Night	(E)	7,0000	+ 8
Oil_Condition	-	0.0000	+ 1
TempG	-	0.0000	+ 2-
Add variable			

Functions		0
calculo de valor kw/h	\$(V) * 20.505	3
calculo nocturno	\$(V) * 2	2
test	5+\$(Cost of KW/H)+\$(Cost of KW/H Night)	10
Convert to F	\$(V)*9/5+32	<i>v</i>
Add function		18

Routes

This tab has one option used to change the date format:

Setting	gs		
Default Units	Default Trend Units	Variables	Routes
Change form Change the f	at UTC ormat of the date to UTC whe	en saving the route	in the database

Database Explorer

Caution! The Database Explorer is for advanced users. This tool supports custom queries - created to view the contents of specific database tables. Knowledge of SQL database queries is required!



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Back Database Explore

 Execute

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 Paecia

 Decade

 Restoric querie

 Paecia

 Decade

 Dec

To begin, click on the Query Creator button on the right side of the screen:

Contextual help is provided to guide use of the tool to create a Query.

Table: M_SmachineCode	Join: Select a table to	join 🕓 🔍	
elect Columns and Funct	ions: 👝		
Columns	Function	Name (optional)	
Calumn	~ Function		30
Select Conditions:			
Group By	 Order 	ву 🔗	
o Limit	 Offset 	12	
			Generate Query
			Accept Cance





The Database Menu

The database menu is located on the Home screen and contains the following options:

Ĥ	Machines	
, e	Machine Learning	
	Phantom	
*	Gateway Manager	
-	Routes	
293	SCADA	
民	Notifications Manager	
æ	Templates Dashboard Manager	
Tist.	Diagnose Manager	
-	Report Manager	
Ģ	Notes	
Ø) Work Orders	

Machines

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

Add Machine: Opens the Add Machine window for creating new machines in the database.

Copy Machine: Copies an existing machine's configuration to create a new one.

Create Multiple machines: 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.

Add machines

Add machine Add a new machine to the database

Copy machine Copy the entire configuration of a machine to create another one

Create multiple machines Copy the entire configuration of a machine to oneste multiple machines

Edit

Rename Rename a company, area, machine or point

Edit machine Edit the configuration of a machine

Delete machine Permanently delete a machine from the database

Machine learning

Machine learning manager Add or modify models for machine learning

Apply machine learning Will apply machine learning to a selected machine

Gearboxes

Add gearboxes Add a new gearbox to the database

Edit gearboxes Edit the configuration of a gearbox

Delete gearboxes Permanently delete a gearbox from the database

Notes

Add notes Add a new note to the machine, point or axis to display in trends

Edit Machine: To select a machine for editing, click 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/Delete: Opens the Gearbox window to allow management of gearboxes in the database.

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

Adding a Machine

Machine						
* Company	ABC Company	3		Machine:		
* Area	Area1 J	+		* Company	ABC Company	+
* Machine Nar	me			* Area	Area1	+
Code	1134534162	Collapse settings		Machine Name		
Alárms	General alarms - (0)			Ode Code	1134534162	Open more settings
Severity Type	Default Machine Learnin 🤟				Manua)	· · · · · · · · · · · · · · · · · · ·
Notes	1					
Coefficient	- 1 +					
 Slope Interval (da 	ays) - 90 -					
Tasks	0					
🛛 Faults	1880 ·					
	2D Image 💩 🗅		3D Model 💿			

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.
- Machine Name: The machine name or ID number. NOTE: the only special character permitted in the name field is an underscore.
- **2D Image**: Optional 2D image of the machine may be uploaded to the database for reports. Click 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 EI-Analytic.
- Alarms: General alarms may be configured here for non-vibration Phantom 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.

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emperature	Add
mperage	Add
PM	Add
Phase	Add

- **Severity Type**: The choice is used to determine the severity color (red, yellow, orange, green) of the icons in the data tree. For this Machine.
- **Notes**: Text field for documenting additional machine information.
- Machine learning icon on the tree
 Default Machine: shows severities based on machine learning, but if it doesn't have, shows severities based on user settings.
 Default User: shows severities based on user settings, but if it doesn't have, shows severities based on machine learning.
 Only Machine Learning: show severities based on machine learning.
 Only User: shows severities based on user settings.

Severity Types

vpes

- **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:** EI-Analytic automatically generates a unique code(number) that can be used to identify a machine. Click 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 Tasks window. **NOTE** This feature is only available with an EI-Analytic cloud database subscription; it is not currently supported when using local databases. Task Manager provides notifications via email and/or push notifications to the WiserVibe App, based on configurable thresholds for velocity, acceleration, etc., for a given machine.
- Faults: Open the Diagnose Manager. See *Diagnose Manager* section of this guide for more information.

Setting Tasks for Machines

Tasks can be created to notify users of Machine health changes via email and/or push notifications to the Wiser Vibe mobile App. A free or paid subscription to an EI-Analytic database is required for this feature to operate.

The Machine Manager allow Tasks to be created/assigned in the Add/Edit Machines windows. Click on the green Notification bar to open the Task manager window. When editing an existing machine, previously assigned Tasks will be shown for review or a New Task may be created using the New Tasks button.

Slope Interval (days) - 90 +		
1 Tasks		
🛛 Faults		
Task Manager		
民 Notifications Management		
Porticipas groups	Tivee is not data waitable	9-0 of Q Remo
		14er
New Notification		
New Notification Machine ABC Company AreaT		
New Notification Machine ABC Company AreaT Units Select the units that will be used for this action	Appeleration	
New Notification Machine ABC Company Area1 (Units Select the units that will be used for this action Acceleration Modifier	Acceleration G - Accelerometer mm/s - Velocimeter	
New Notification Machine ABC Company AreaT Units Select the units that will be used for this action Acceleration Modifier Filter Notification By:	Acceleration G - Accelerometer mm/s - Velocimeter µm - Proximeter	
New Notification Machine ABC Company AreaT Units Select the units that will be used for this action Acceleration Modifier Filter Notification By: All Axes	Acceleration G - Accelerameter mm/s - Velocimeter µm - Proximeter Liters - Tank_Level	
New Notification Machine ABC Company AreaT Units Select the units that will be used for this action Acceleration Modifier Filter Notification By: All Axes No tasks found with this filt	Acceleration G - Accelerometer mm/s - Velocimeter µm - Proximeter Liters - Tank_Level OC Number - OC_sensor BPM - VFD1	

Select the Units from the drop-down box for which Notification is desired. This includes vibration units of velocity, acceleration, and acceleration envelope in addition to non-vibration parameters such as temperature, RPM, Amperage, etc.



Then click the Add Notification button to open the **Tasks** window.



loot mean square	Tas	sks Enabled: 1 of 1
- Axis: All Axes		
Task: notification 1 Enable	ed 🕕	
Name	notification 1	
Axis	All Axes	
Condition	Greater Than	
Type of comparison Select the type of comparison	By value	
Value 1 (mm/s) Enter the value to compare	- 10.000	1 ÷
Body Notification		0
Title Enter the little of the natification		
Content Enter the content of the notification		
Send email activate this option to receive email notifications		
Time interval for Push Notifications time interval for sending push notifications (owner and a) hour	
shared users), it will not be sent within this interval if the		

59

- Assign a name for this Task.
- Choose which Axes will cause Notification.
- Depending on the Units chosen, the Units drop-down box will contain an appropriate list for selection. For example, if velocity is chosen, then RMS, Min, Max, Crest Factor, Peak to Peak, etc., will be included.
- Conditions include Equal to, Less than, Greater than, etc.
- Value is set for the chosen Units and Condition, such as the example above where the velocity Max Greater than 10 mm/s will cause Notification to be sent.
- Assign a title for the email Notification.
- Information entered in the Content field populates into the Subject line of the email.
- Check the Send email green slider to enable email Notification.
- Time Interval for Push Notifications allows setting a buffer to prevent repeat notifications from being sent. If the condition repeats during the assigned time window, no notification will be sent.

Click **OK** when finished. Multiple Tasks may be assigned to the same machine. E.g., one for Velocity, another for Acceleration. When initially creating a database, it is recommended to configure Tasks before using the Copy Machine feature.

Configuring Point 1 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. Click on the **Settings** button to open the dialog box.

Index	Name	Axis	RPM	Options
1	Point 1	(H,V,A)	500-5000	va- Settings

-**^-») ERBESSD** INSTRUMENTS®

- Point	1				
* Name	Point 1				
RPM	O Range	Fixed value			
Min	- 500	+	Max -	5000	+
Axes	🛛 Horizontal 🔽	Vertical 🗾 A	xial		
 Alarms 	Same Alarn	n for All Axes			
	Horizontal - (2)	Vertical - (2)	Axial - (2)		

- **Name**: Use a naming convention for points that works for you. Names like MOB (motor outboard) or NDE (nondriven end) are commonly used. Only underscores are permitted as a special character in the name field, spaces are OK.
- **RPM**: Enter a fixed value or the Min and Max RPM Range values for the machine point. An accurate RPM range is required for Acceleration Envelope calculation and identifying the machine's running speed.
- **Axes**: Defaults to triaxial, adjust as necessary.

Alarms

These fields are used to set **Axis**-level severity alarms that <u>determine the color displayed</u> <u>in the data tree</u>. Click on Horizontal, Vertical or Axial to set the alarms for each axis. This opens the Alarm config window.





You can set the same alarm values for each axis by selecting the radio button.

When adding a Machine, if you want to se open the Options Menu at top right of the A	t the alarm values <u>for multiple ax</u> .dd Machine screen:	es, Options ~
Click Axis severity alarms .		SET COMMON VARIABLES
apply to specific Axes or click OK for all	×	Axis severity alarms
	all	Point severity alarms
he alarm config window will open.	APPLY TO POINTS	Bearings
	🤣 Point 1 - H	OTHERS
	Point 1 - V	Add Machine Learning model
	Point 1 - A	Add coupling
	🧭 Point 2 - H	FILE SYSTEM
	Point 2 - V	🗁 Load machine
	Point 2 - A	$\overline{\psi}~$ Save machine locally
		RESET
		Reset form
RMS (2) Octave bands (0)	×	
Velocity 1.1212.8017.10		
Acceleration Envelope 0,600 1.20 1.80	 (a) 	
+		
Can	tel Save	

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-~))

By default, velocity and Acceleration Envolope alarms are created for every Point.Velocity uses ISO 10816 Class 2 standards. Acceleration Envelope alarms are also based on Standard Envelope alarm Class 2 standards.

Q_

Click on the Edit button to change the settings.

This opens the Alarm Settings window.

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Previously created alarms can be applied by pressing Select alarm. Select alarm 1.12 mm/s 2.8 mm/s 7.1 mm/s Alarm selected: Default Greate alarm Select alarm Change values by using the blue sliders, or by directly editing each box, or use the + and buttons to adjust. Once set, the alarm values can Yellow (mm/s) + 1.12 be saved with two options: To apply these values to all selected 1. Axes, press Save Values. Orange (mm/s) 2.80 + Save values 2. To create a new alarm that can be Red (mm/s) 7.10 + assigned to any Axis, press Create alarm. Create alarm Save values Cancel

To create a new Alarm, press

Create alarm

2	2 mm/s	9 2.8 mm/s	7.1 mm/s
Group	Custom		+
Name	Pumps		

Enter a Group and assign a Name, then press Save alarm.

To assign an alarm, press

Select alarm

The saved alarms are accessed via the drop-down box.

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support@erbessd-instruments.com +1-518-874-2700 NY office +1-877-223-4606 INTL toll free As shown, the ISO Class 2 alarms are the defaults. Select the Group and alarm Name – example Pumps2:

1.12 mm/s	2.8 mm/s	● 7.1 mm/s	
ISO 10816			
	Class 1		
	Class 2 - Default		
	Class 3		
	Class 4		

2 mm/s	•	2.8 mm/s	😑 7.1 mm/s	
Custom				
		Custom1 - Default	t.	
		Hoists		
		Pumps		
		Custom2		
		Pumps2		

The settings screen reopens and shows the selected alarm.(Pumps2)

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2 mm/s	2.8 mm/s	• 7.1 mm/s	
	Alarm selected: Pumps2	Create alarm	Select ala
Yellow (mm/s)	• -	2.00	+
Orange (mm/s)	• -	2.80	÷
Red (mm/s)	• [-]	7.10	+
	E Contraction of the second se	Cancel	Save value

Press

Save values

to complete the changes.

By default, there are two parameters assigned for RMS alarms - Velocity and Acceleration Envelope.

Click on the large green **Add** button to add RMS alarms for Acceleration and/or Displacement.

Click on **Octave Bands** to add Velocity and/or Acceleration Envelope alarms.

		×
RMS (2) Octave bands (0)		
Velocity	1.12 2.80 7.10	R.) (m)
Acceleration Envelope	0,600 1.20 1.80	2
	+	
/		Cancel Save

BALANCING - VIBRATION - ONLINE MONITORING - LASER ALIGNMENT - MASTERS OF MACHINE HEALTH

Adding Bearings

The Select Bearing button opens the Bearing window.

Select bearing

EI-Analytic 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 Manual function for adding new bearings and fault frequencies to the database, and a Calculator to calculate bearing fault frequencies using bearing component measurements.

		ate	Find Manual Calc	ulate
6303	General		General	
	Name		Name	
NSK 6303	MFN	FAG	MFN	FAG 📎
SKF 6303E	new MFN		new MFN	
.SKF I-26303	Values	0	Values	C
GPZ 46303 FAG 6303	BPFI Ball Pass Frequency Inner race	0.0000 +	PD Pass Diameter	- 0.0000 +
FAG 6503-2RSR	BPFO Ball Pass Frequency Outer	- 0.0000 +	RD Rolling Diameter Per Row	- 0.0000 +
Name: Select bearing stear bearing	BSF Ball Spin Frequency	- 0.0000 +	NB Number Of Balls	- 0.0000 +
ÖPFI: 0 BSF: 0 FTF: 0	FTF Fundamental Train Frequency	- 0.0000 +	β Contact angle	- 0.0000 +

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

Select GearBox

Adding a Gear Box

To assign a gearbox to this machine point, or create a gearbox in the database, click on

This opens the Select Gearbox window, used to create a comprehensive library of gearboxes. Once created, the gearboxes may be permanently assigned to a machine measurement point or specified during analysis.

Select a previously configured gearbox from the list or click the +Add button to create a new gearbox configuration.

elect GearBox ×	MACHINES			
	← Back ✿ Add GearBoxe	5		
I - I - I - I - I - I - I - I - I - I -	GearBox		Step-1	
	Name	Gearbox1	otep 1	
ABC Gearbox Gearbox1	Notes			
	Manufacturer	ABC Gearbox	Step Name	One
		+ new MFN	_ Input	
				- 18 +
				+ Input Bearings
			Step Input Bearings-1	G
			 Output 	
				- 36 +
+ Ada × Decelert 2			Step Output Bearings-1	+ Output Bearings
Cancel Save			+ Ad	d Step
			Raus	

- Name: Enter the name of the new gearbox.
- Notes: Add any desired notes.
- **Manufacturer**: Select from previously configured list or Click 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 button.
- **Output**: Enter the number of teeth.
- **Output Bearings**: Add an output bearing, if desired.

Select

the button to configure another step in the Gearbox configuration.

+ new MFN

Input Bearings

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

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on the button to configure

selecting the
BALANCING - VIBRATION - ONLINE MONITORING - LASER ALIGNMENT - MASTERS OF MACHINE HEALTH

Point 1 continued:

- Learning: The Machine Learning feature uses algorithms to analyze historical data and determine the colors shown in the Data Tree for Company/Area/Machine/Point/Axis. It can also be used to provide email notification regarding the health status of a machine point. See the *Machine Learning* section of this guide for more details.
- **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 Measurement Point. Click on 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.

Add coupling

Adding a Coupling

To add a Coupling, click the Add coupling button.



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

Bearing

Gear Box

Extra

Select bearing

Select Gearbox

Default | Default

General Alarms - (0)

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

After adding all machine points, click on Save. Save

A confirmation message will be flashed at the top of the screen.

Machine added successfully



Note: The Options Menu is located at the top right of the Add Machine screen.

This provides shortcut access to common functions such as Alarms, Coupling and Bearings configurations.

It also allows applying **Axis Severity alarms**, **Point Severity alarms** and **Machine Learning Models** to multiple selected Axes at once, instead of administering them individually.

Machine configuration may be saved as a text file by using **Save Machine locally.**

Load machine loads a previously saved machine text file.

o	ptions \vee
SET COMMON VARIAE	BLES
Axis severity alarms	
Point severity alarms	5
Bearings	
OTHERS	
Add Machine Learnii	ng model
Add coupling	
FILE SYSTEM	
🔁 Load machine	
\pm Save machine lo	cally
RESET	
Reset form	

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Machine Learning

One of the advanced 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: <u>https://www.erbessd-instruments.com/articles/machine-learning-vibration-analysis/</u>

The signal files created by either Erbessd Phantom wireless sensors or those collected by Routed service using a portable data collector such as a Wiser 3X can be used as the data set for the algorithms. Machine learning is applied to a historic period of data collection, for example 30 days, to establish a baseline condition that represents a normal healthly running condition. Machine Learning will use this as a reference for future data collections.

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/WiSER Vibe) for each Company, Area, Machine, Point, and Axis.



Optionally, a notification may be sent via email and/or Push notifications to devices running the WiSER Vibe mobile app.

Configuration

The Machine Learning feature can be administered from the EI-Analytic Database tab or via the tree. It can also be set using the WiserVibe mobile app or Machine Manager (edit machine) in DigivibeMX.





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.



			+ New M
Model Groups			
General			
Models			فالمربقة والمراجع
Model_1			
Model_3			
(d d b b)			1 - 1 of 1
ct New model to begin. + New	Model		
n a Group name and a Model name:	← Back 🖯 Machine Learning		
	General Model_2		
e Configurations panel, options for	* Group General		+ New Group
city and Acceleration Envelope are			
layed by default. To add another unit, the green add unit configuration	* Name Model_2		
ayed by default. To add another unit, the green add unit configuration on. + Add unit configuration	* Name Model_2		
ayed by default. To add another unit, the green add unit configuration on. + Add unit configuration Back ® Machine Learning	* Name Model_2		Options 😢
ayed by default. To add another unit, the green add unit configuration on. + Add unit configuration Back ® Machine Learning New model	* Name Model_2		Options
ayed by default. To add another unit, the green add unit configuration on. + Add unit configuration Back Machine Learning New model	* Name Model_2		Options 🗸
ayed by default. To add another unit, the green add unit configuration on. + Add unit configuration Back I Machine Learning New model Name New model	* Name Model_2		Options *
ayed by default. To add another unit, the green add unit configuration on. + Add unit configuration Back Machine Learning New model Group Company Name New model Configurations	* Name Model_2		Options *
ayed by default. To add another unit, the green add unit configuration on. + Add unit configuration Back Machine Learning New model Name New model Configurations	* Name Model_2	Axes	Coptions Coptions Coptions Coptions Coptions Control
ayed by default. To add another unit, the green add unit configuration on. + Add unit configuration Back Machine Learning New model • Group Company • Name New model Configurations	* Name Model_2	Axes H. V.A	Options

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The following is a list of other units for Machine Learning:

ack	
Acceleration	
Velocity	
Displacement	
Acceleration Envelope	
Temperature	
Amperage	
RPM	
Phase	

To change the settings for a unit, click the Settings button.



ENERAL					
Model name	Interval Day				
Vel	- 30 + •				
elect notification type	Parameters Set values for alarma				
lotifications for value	Parameter	Yellow	Orange	Red	
on Red	Increment: % alarm will be increased by this factor	20 12	80 Z	250 Ø	
Octave bands	Offset: mm/s this value will be added to the result alarm	0.150 之	0.150 Ø	0.150 2	
xes					
eeot me axes to apply for this model	Minimum: mm/s output alarm will never be smaller than this value	0.360 🖉	0.540 2	1.05 之	
Vertical	Maximum: mm/s output alarm will never exceed this value	120.00 夜	180.00 <i>&</i>	350.00 企	
Axial					

- 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.
- **Axes**: Select the axis that will be used by the model(defaults to all 3 axes).

Machine Learning may be configured to alert for **RMS**, **Crest Factor** or **Octave Bands** values. For each of them it is possible to determine whether the notification alert will be sent for the yellow, orange or red color values.

- **RMS values:** Applies to Vibration Amplitude units only.
- **Crest Factor**: Check to use crest factor in calculations, and if notifications are desired.
- Octave Bands: Select to use Octave Band information in calculations, and notifications.

For Octave Bands, click on **Select Bands** to assign a **name** to any octave band. 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.



Notification for value: Select the condition upon which notifications via email and the WiSER Vibe mobile App are sent:



• **Increment %:** Choose a percentage value that will be applied to the highest measurement found within the selected range of days.

Parameters Set values for alarms			
Parameter	Yellow	Orange	Red
Increment: % alarm will be increased by this factor	20 &	80 Z	250 Z
Offset: mm/s this value will be added to the result alarm	0.150 🖉	0.150 🖉	0.150 🖉

- 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 values that are used to determine the colors in the Data Tree. If Notifications are set, Machine Learning Tasks are automatically created for the Units specified in the Model, e.g. Velocity and Acceleration Envelope.
- **Minimum:** Setting the minimum thresholds for an alarm condition to be reported.
- Maximum: Setting the maximum thresholds for an alarm condition to be reported.

Minimum: mm/s output alarm will never be smaller th an this value	0.360 Ø_	0.540 &	1.05 🖉
Maximum: mm/s output alarm will never exceed this v alue	120 &	180 之	350 Ø

Click on

Save to finish adding the model.

Once a Model is created, the following buttons apply:



Edit Model - make changes to existing models.

Apply Model to one or more machines.

Copy – use an existing Model as a template to create a new one.

Delete Model deletes a Model from your database completely and permanently.

Apply Machine Learning Models

Machine Learning Models may be applied to Machine Points in several ways. From EI-Analytic, select **Apply Machine** Learning from the Machine Learning menu.





Click on Not set

Not set	
	Not set

This opens a list of previously created Models to choose from, or create a new Model:

	Machine Learning		
			Hew Mode)
Model Groups			
Models			-
Model_1		\odot	
Model_2		\bigcirc	
Model_3		\bigcirc	
H 4 F N			1 - 1 of 1 items

- 3. If using an existing Model, click on the associated arrow and it will open the Model.
- 4. Press Select to continue or change the settings to create a Custom Model to be applied.

1. The Data tree opens to assign the chosen Model to a Machine :



 Click the Data volume button for all Points, by Machine or select by individual Point. If Machine is selected, choose which Points the Model is to be applied and click Calculate ->

Data	volume		
Point 1	Point 2		
		Cancel	Calculate>

The calculated values are shown, according to the model applied to the point. These values can be modified per axis. In this example the red alarm for velocity is set at 13 mm/s, based on a 250% increase in the Model for the highest amplitude found in the 30 days of data, as specified.

Avia		
Horizontal		
	Avia Alarma: Harizantal	
RIMS (2) Octave bands (0)	Ans Alams, Honzolla	
velocity	● 4.56 ● 6.76 ● 13.0	۲
Acceleration Envelope	● 0.240 ● 0.360 ● 0.700	
Vertical		
		Cancel Open machine Save Re

Save Results

3. Once you are satisfied with the severity alarm values, click

You will see several messages flashed at the top of the screen indicating that Machine Learning Tasks have been created. See the *Task & Notification Management* section of this guide for more details.

Machine Learning models can be confirmed or changed in Machine Manager(on the Points panel). Use **Edit Machine** to begin.

Machine: P	ump_001	Alarms Same Alarm for All Axes
Location	Change Location	Horizontal - (2) Vertical - (2) Axial - (2)
+ Company	100 00000	RMS Range Hz
Company	Add Company y	Min 10 + Max 1000 +
* Area	Amest 🥥 +	
* Machine Name	Pump_001	Bearing SKF 6303
		Gear Box Select GearBox
Code	19/1899898	S Learning General Velocity_30
	Mandal	
Alarms Gen	eral alarms - (0)	Alarmis ML Horizontal - (2) Vertical - (2) Axial - (2)
Severity Type De	fault Machine Learnin 👒	Extra General Alarms - (0)
otes		Close

Open the first Machine Point Settings. The Learning field shows the Model applied to this Point.



Ensure the **Severity Type**field for this Machine is set to either "Default Machine Settings" or "Only Machine Learning Settings". This field controls the color of the Severity indicators (red, orange, yellow, green) shown in the Data Tree in DigiVibeMX and EI-Analytic) for each Machine, Point, and Axis.

_	
	Only User Settings
	Only Machine Learning Settings
	Default User Settings
	Default Machine Settings

A Model may be deleted from any Machine Point by clicking on the delete button beside the Learning field.

Another method to apply a Machine Learning Model to a machine point is:

- 1. Open the Machine Learning Mangement window from the Database Menu
- 2. Select the Model that is to be applied and click the Apply button:



Pick the Company, Area and Machine from the drop-downs, then select the Points

ABC Company	~ Area1	Pump_001	M. F	ilter by point name
				Points
				Check All
				Point Motor_NDE
				Point Motor_DE
				Point Pump_NDE
				Point Pump_DE
Contractor of Contractor				

Press Paste to save.

Setting the Due Date

In the EI-Analytic Data tree, Machine Learning options can be accessed by right clicking on a machine.

Pump_001	Apply Saved Model
Management •	Change Due Date
Diagnose 🕨	Apply Custom Model
Learning	
Reports	Machine Learning: Pump_001
Add Item	Select option:
Notes	• Set due date only for points with expired models • • • • Overwrite due date at all points
OnlineFileBrowser	Choose a new due date to apply the models:
Show Sensors	Cancel
Go to Machine Dashboard	

Select Change Due Date to set the processing date:



Set the desired Due date .

As noted, if you set the Due Date to the following day from the present and the number of days assigned to the Model is 30, a report will be sent the next day using data from the past 30 days (if it exists).

If you set the due date to 30 days from the present date, a report will be created at that time for the next 30 days.

Alternately, the Due Date can be set from the Edit Machine form.

Phantom

Opens the **Phantom Management** window. For complete details regarding Erbessd's Phantom wireless condition monitoring solution, see the *Phantom Setup Guide V5*.



Devices

The Devices tab allows management of Phantom sensors;

ei canada 🗸 🗧	(2) Deshboard	🗟 Database 🐇	17 Devices	LE File Browser
+ Vibration	Dashboard 🕥 🐵 Devi	ices		
ABC Company Company Company Company	Phanto	m devices		
🔹 👜 Unassigned Sensors	Denide Code	D Fil	iters 🗱	

See the Devices section of this guide for more details.



Adding Phantoms

1. Click the **New Phantom** button in the Devices screen:

+ New Phantom

an Phantom Code				
	8		Enter code manually	
Sensor: - Name: Description:				
0				
Scan	Broup	Assign	pilinoC	(F)
Phantom	and Market	10000		

2. Either scan the QR code of the sensor using the device's camera, or click **Enter code manually**, which opens a new screen:

11-189300650	 ii) 	
Example: 11-123456789		
	and the second second	
	Cancel Confirm	

3. Enter the 11-digit code and click **Confirm.** Technical info is then displayed for the sensor, based on the Phantom code provided.



4. Verify the type of sensor is correct and click **Next**.

Note -If the sensor is already in use, a message will appear indicating the machine and point to which it is assigned (if in the same database). For other errors encountered at this step, contact Erbessd Tech support for assistance. (see the last chapter of this document for details)

5. Configure the Group and Name screen.

*Fields with a red asterisk are required entries.

Phantoms are configured in Groups (you can administer them all in one group). Enter a **Group** name. For example, if a machine has 4 Phantoms assigned, the Group name may be the same as the Machine name. It is NOT recommended to use special characters other than the underscore in the Group name or Phantom name fields.

- The **Phantom name** should indicate the location of the sensor or anything else meaningful to distinguish it when all devices are listed. An example might be "Pump001NDE".
- The **Description** field is auto-populated according to the type of sensor being added.
- **Data Sending Interval (minutes)**** (For Gateway v1 ONLY!) is the time between Full data collections (RMS data interval is configured separately). The default is 720 mins (12 hr). The minimum interval for Phantom vibration sensors is 10 minutes. The maximum is 1440 minutes (24 hrs). For Gateway 2.0, data collection options for vibration sensors are configured via the Gateway Admin Console. See the next section for details.
- Alarm Check Interval (seconds)**(For Gateway v1 ONLY!) This is the time between alarm checks performed by the sensor. For Gateway 2.0, the **Sensor Update** interval serves as the Alarm check interval.
- **Save Internal Temperature:** Uncheck if the internal sensor temperature is not required as part of the RMS data sent by the sensor.

* Group	AccelGroup + New Group
* Phantom name	
Description	Low Range / Low Noise Accelerometer
* Data Sending Interval (minutes)	- 720 + •
* Alarm Check Interval (seconds)	30 + 0
Save Internal Temperature	
	Previous Next

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support@erbessd-instruments.com +1-518-874-2700 NY office +1-877-223-4606 INTL toll free 6. Click **Next** to open the Assignment screen. Expand the Company>Area>Machine tree and select the Point where this Phantom sensor is to be installed. There is also an option to create a new Machine at this step, by clicking the **Add Machine** button. Points with previously assigned Phantoms cannot be selected.

Q Search Assets			+ Add Machine
ABC Company			
- Area1			
Compressor002			
VerticalPump001			
Area2			
F Tomco			
	Previous	Next	

- 7. Press **Next** to open the Configuration screen:
- Check and adjust, if necessary, the sensor
 Axis configuration . All Expert Phantoms have the axis orientation marked on top: The default setting is top-mount. For side mounting, invert X and Y axes.
- In the Sensor Alarm section, set values of RMS velocity for each axis as a threshold for Notification via email and push notification to Wiser Vibe app.

Click **Next** and the summary page is dsplayed.

Click Save Phantom to complete.

Horizontal		
Vertical		
Axial		
	0.00	+
	0.00	+
	0.00	+
-	0.0	+
		0.00



BALANCING - VIBRATION - ONLINE MONITORING - LASER ALIGNMENT - MASTERS OF MACHINE HEALTH

Gateway Manager

8 Machines	
Machine Learning	
Phantom	
🖌 Gateway Manager 🛛 🔶	
Routes	
ŧ¥ SCADA	
Notifications Manager	
🕸 Templates Dashboard Manager	
🕼 Diagnose Manager	
Report Manager	
D Notes	
🕄 Work Orders	

Click Gateway Manager to review or add/registered Phantom Gateways. The list is searchable and exportable.

shboard 🕥 🖲 Database 💛 🎽 Phantom G	ateways			
← Back Phantom Gateways				
Phantom Gateways	3			
Service available only for Gateways 2.0				
SN or Name				DP DF CSV HAdd Gate
GW Name ‡	Serial Number ≑	Auth Token	Remove Gateway	Admin console
Gateway_1	589245253	942c6e09-f878-6a05-efa6-d6adf4365d57	圃	8

Note – if you share a database with another user, the ability to use the Gateway Admin Console is controlled by permissions in the User Access settings for that account. See the *User Access Permissions* section of this guide for more details.

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Routes

Opens the Routes Management window

New Routes may be added, existing Routes edited or deleted.

Add a Route

Click New route.

Select the Company, Area and Machines:



Dashboard 🗧 🗄 Database 🛛 🗟 Roules
💒 Routes Managemen
Route Database
New route
create a new route
Edit route
edit an existing route
Delete route
permanently delete a route
Tools
Route compliance
Analyze the scheduled measures

New Schedule Add new scheduled routes

Click the Next button



Select a Group or add a new Group, then assign a Name to the new Route and press Next.

Group name		ABC_Company	+
Name		Please anter e nome	
ID			
	Previous Nevt		

The Machines included in the Route are then displayed:

Pump_001 (4)
Company: ABC Company Area: Area1
Pump 002 (4)
r unip_002 (4)
Company: ABC Company Area: Area1

Click the Machine Name to expand:

Pump_001 (4) Company: ABC Company Area: Area1	
> Motor_NDE (3)	
> Motor_DE (3)	
> Pump_NDE (3)	
> Pump_DE (3)	

The order of Machines or Points can be altered by clicking on an icon and dragging it to another spot on the list.

To enable or disable the ability to drag and drop Machines or Points, click the button at top right.

	Option	
Collapse All	Enable Drag and drop 🔒	0



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Pump_001 (4) E.g. click and drag to move a whole Machine. Back 6 Add Route Pump001 (4) Click and drag to move a Point. Motor-NDE (3) Motor-DE (3) Pump-NDE (3) Pump-DE (3) Click the Right arrow to expand the Point for **Settings**: Reference Channel on/off • Mode -single axis or triaxial • Sensor Position selector Sensor Position Pump001 (4) 前 Motor-NDE (3) Reference Channel 120 > H > V > A Extra Params

Points or individual Axes may be removed from the Route by clicking the

button.



Click the WiSER 3X icon to set the position selector:



Press the Right arrow to expand the Axis **Settings** for:

- Reference Channel on/off
- Lines of resolution. The recording time is displayed based on selection.
- Averages
- Overlap
- Synchronous averages
- Sync to Frequency (Hz)

Reference Channel			
Lines of resolution Res: 22.0 CPM - Time: 2:73 secs	\$1200		-
Averages	Ť		-4
Overlap	50		
Synchronous averages number of averages to perform		0	+
Sync to frequency (Hz) by default it selects the detected 1X on your last recording. If you wish to change 1x go to Frequency Units - Set 1x		60.0000	+

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 clicking the right arrow beside **Extra Params**.

× Extra Params		
* Include the parameters necessary when taking a route.		
Notes Enable adding required notes when taking a roure		10
Units Add units required when taking a route	Deter	+ Select Units

Select which parameters are to be logged during the Route and if they are Mandatory by clicking

+ Select Units

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HOU	vate the necessary units when taking a route at	this point, and you also have the option to make them mandatory.	
	Unit	Mandatory	
	Temp		
	Amp		
	RPM		
	Phase		
	GPIO		
	Volts		
	Bat Status		

Group Name: ABC_Company	/	
Name: Route_2 ID: -1		
Machines:		
Pump001		
Dump004		

Click **OK** when finished.

Press **Next** to continue. A summary is displayed. If OK, click **Save Route**.

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 three previous months.



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

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/



Notification Manager

Notifications are available for EI-Analytic cloud data service accounts. Email and Push notifications can be configured to be sent when certain configurable conditions of a Machine, Phantom Sensor or Item are met.

This feature is not available when a local database is used.

Note -With EI-Analytic accounts, Phantom V10/V11 sensors natively support email/push notifications for RMS Velocity alarms, however for other vibration parameters such as RMS Acceleration, only Tasks can provide notifications.

For non-vibration Phantom sensors this is the only method to receive email/push notifications

Tasks are assigned by Machine, Phantom, or to custom *Items* added to the database.

Machine Learning Tasks are created automatically when a Learning Model is applied to a Machine Point.

Expand a Notification group to see existing Tasks:



						+ MewTask
Notifications groups						
- Machine						
- Phantom						
	Code	Asset	Location	Unit	Actions	
0	189262176	T25_Test	ABC Company - Area1 - T25_Temp	Temperature	(4)	*
0	189275016	TCam1	Tomco - Garage - TCam	Max Temperature	2 💼	
8 4 6 8						1 - 2 of 2 items
# Options						

Press the New Task button at top right to create a new task.



For Machine tasks, select the Machine. For Phantom tasks, enter the Phantom serial number, for an Item add the Item name. In this example, a Task is added to report alarms for a Phantom T25 temperature sensor (thermocouple).

New Notification			
Select type notif	ication:		
by Machine	or by Phantom	by	Item
Phantom			
1	1	25-189262176	13/13
25-1292621761725_Test (The	ermooduple 3 channels sensor)		
Units Select the units that will be	used for this action	Temperature	
Temperature Modifier		Get value	
Filter Notification By:			
Show All Tasks			C Add Notification
Get value			Tasks Enabled: 1 of 1
- Channel: Ch 1			
Task: Contact Temp	Enab	led 🚺	ē
			Gancer

Either scan the QR code on the sensor or enter the serial number.

The **Units** drop-down field will show all available options, based on the Phantom Code entered. **Note** - As per the onscreen tip, If you want to use any unit modifier other than RMS for vibration sensors, 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.



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ilter Notification By:		the second second second second
All Channels		Add Notification
et value		Tasks Enabled: 2 of 2
Channel: All Channels		1 7
Task: Over Temp Alarm E	nabled	0 0
Name	Over Temp Al	am
Channel	Ch 1	*
Condition	Greater Than	
Type of comparison Select the type of comparison	By value	*
Value 1 (°C) Enter the value to compare	191	40:000 +
Body Notification		0
Title Enter the title of the notification	Temperature	Alann
Content Enter the content of the notification	Temp on Mac	hine X is Over Limit
Send email activate this option to receive email notifications		
Email mode select the way you want to receive emails (only applie the owner).	es to	-
Time interval for Sending Emails time interval for sending or collecting emails, it will m executed within this interval if the condition repeats.	ot be 12 hours	
If you are the owner of the database, you is applies to you. To enable email notification for subscription is required. Once you have subscrib notifications and allow your shared users to receiption.	can enable "Email Mode sature for your shared red, you can easily config rive them.	e, which only users, a paid gure the email
Time interval for Push Notifications time interval for sending push notifications (owner shared users), it will not be sent within this interval if possible is sensed	and all 1 hour	

likewise has a configurable Time interval.

9. Click **Save** to complete the Task addition.

The Task Management page now shows the new Task, it can be easily edited or deleted.

1.	Start by assign	ing the Ta	ask a Name .
----	-----------------	------------	---------------------

- 2. Select the Channel (1-4 for a temp sensor).
- 3. Choose a Condition

Greater Than	
Greater Than	
Less Than	
Equal To	

4. Set the **Value.** Note the Units shown on the left of the screen. Here temp is selected, so the units shown is C, based on account settings (Imperial or Metric).

5. Add the **Title** (displayed in the Task Name field of the email), and the **Content** (shown in the Message field in the email)to identify which machine/point has experienced an alarm.

6. The **Send email** slider provides a quick enable/disable option.

7. **Email mode** allows a choice between Batch and Immediately. Batch emails are sent daily (usually between 9 and 10 AM EST). This way, if your notification is not considered to be critical, an alarm is sent only once a day.

8. The **Time interval** provides a buffer between notifications to avoid unnecessary emails. Push notifications to WiSER Vibe mobile app users

Drag a column header and drop it here to group by that column					
	Code	Asset	Location	Unit	Actions
\\ ^x	189300650	P1_Motor_DE	ABC Company - Area1 - Pump_001 - Motor_DE	Acceleration	Edit task
0	189262176	T25_Test	ABC Company - Area1 - T25_Temp	Temperature	0
0	189275016	TCam1	Tomco - Garage - TCam	Max Temperature	

Example 2 - set a Task to report an Peak-to-Peak Acceleration alarm for a V11 vibration sensor.

A reported value over 2.5 g on any axis will cause a Notification to be sent:

by Machine	A by Phantom		by Item	
by muchane.	of thankon		by treat	
Phantom	-	11-180	300650	15015
		111.00	00000	1
1-1893006501P1_Motor_DE.(He	gh Kange Acceletometer)			
Select the units that will be use	id for this action		Acceleration	
Acceleration Modifier			Peak to peak (1 tasks)	- •
Filter Notification By:			_	_
All Channels				Add Notificati
Peak to peak			Tasks Enal	bled: 1 of 1
- Channel: All Channels				0.0
Task: Acceleration Alarm		Enabled	0	0
Name			Acceleration Alarm	
Channel			All Chennels	
Condition			Greater Than	
Value 1 (g) Enter the value to cor	mpare		- 2.500	+
Body Notific	ation			0
Title			P-P Accel alarm	
Enter the title of the r	olification			
Content Enter the content of t	he notification		Accel alarm on Machine X	
Send email activate this option to	receive email notifications			
Email mode		r	Lauring Barrolin	
select the way you wa the owner).	nt to receive emails (only app	oliesto	Immediately	1
Time interval for Sen	ding Emails		12 hours	
executed within this inte	arval if the condition repeats.	not be		
O If you are the	owner of the database, vo	u can enab	le "Email Mode", which only	
applies to you. I subscription is re notifications and	To enable email notification quired. Once you have subsc allow your shared users to re	feature fo ribed, you o ceive them	r your shared users, a paid san easily configure the email	
Time interval for Pus	h Notifications		1 hour	
time interval for send shared uzers), it will no condition is repeated	ling push notifications (own It be sent within this interval	er and all If the		

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Below is an example email notification received for a Task assigned to a Phantom Thermographic camera.

Task notification for database:	ei_canada					
Machine: TCam Tcam alarm -	eianalytir@erhersd+lin	astruments.com=			(iii) T Reply (iii) Reply (iii) Reply	sly Ali - 3" Eorward 🗰 This #104/2003
f Ineré are promens with now this message (s Circle here to downlined pictures. To beto profe	disarbyed unit mere to view	E in a web Drowsel- ented automotic download of some	and make or the module or			
20220914-1136-paf U.	and a second second second					
		The TO	Cam machine triggered	I the following not	tifications.	
Owner: Greg Grummett						
Database: el_canada						
Company: erbessd_instruments - Ar	rea: Garage					
Machine: TCam						
Notification time: 2023-09-14 01 56	37					
Notification configured for a sensor						
Task name: Tcam alarm Message: Alarm Sensor code: 189275016						
	Severity	Channel	Thermal Camera (Temp)	Condition	Task value set at: (Temp)	
	1	1	33.07	Greater Than	33 edit	
the second second second			PRIVACY OF TH	HIS MESSAGE		
This message is addressed exclusion	vely to users from EI-A	nalytic. If you have received	this message by mistake, you must not reveal, copy	, distribute or use its content for any reas	on. This message is sent automatically from a server, please do not r	eply to this email account
			If you need technical sup	oport, you can contact		
			FROM U.S. *1 (FROM MEXICO (55) S30 WORLDWIDE (TOLL FR OR LEAVE A	518) 874 2700 7 2302 (55) 6280 7654 EE) +1 (677) 223 4000 MESSAGE		

Templates Dashboard Manager

Used to manage Charts and Templates shown on Dashboards.





Chart Builder

This tool is used to create **new** or **customize** an existing chart for use in Dashboards.

ack Chart Builder/	Options ~
<pre>is isotochart = (</pre>	Select one of the next compatible levels from the tree: Company, Ana; Machine, Point, Axia
<pre>> observe [</pre>	show / hide Fft 🔊 Create New
<pre>polition'tesp; valamination'true, formatter: '[b]: {c}' } } ; t]; t]; t];</pre>	

If you do not wish to see the underlying code for your chart, click the **Options** drop-down menu, then **Hide Left panel**

	Select chart.
	Add to cloud charts
	Database Explorer
Dashboard 🕤 🕸 Test Components 🔿 Chart Builder	Accept 11
	Hide Left panel
← Back Chart Builder/	Show Main Tree
	Show JSON Editor
	Hold table
	Transpose
Select one of the next compatible levels from the tree: Company Area, Machine, Point, Axia	Files
	Save file
	Copy chart code
	About
	Show Chart Documentation

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Chall

Set Level Info

- 1. Choose the level for the new chart by selecting it from the data tree. Example, click on a Machine.
- 2. Select **Charts** on the right side of the screen:

Options V Charts

Currently, there are over 50 charts to choose from - in 4 categories.



As an example, select a Machine from the tree, then click on **Charts** and **MachineTrends** from the Erbessd charts folder as shown above. The JSON code for the chosen chart is displayed in the Left pane (if open). This can be modified to suit individual needs by JSON programmers.

← Back Chart Builder Machine: Pump_001	Options v Charts
<pre>1 - SesterChert - { 2 - version 2, 3 - IsseterChert - { 4 - Version 2, 4 - V</pre>	$\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \end{array} \end{array} \end{array} \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \\ \\ \\ \\ \\ \end{array} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\$

Create New

To modify this chart, change the JSON code, then click on

10 Name* States have for the phane	
Labela for filteis do search by type, level, data (pas, etc. (argonomed by dominic)	
Status Estilus for the churt. If violate or trus	•
Public Chart "The Public Chart is a status of flag that allows the allow the displayed contribution of here's overe	0
Config Jacon ⁴ Jacon with the Alars consignantian	end: config [Vession 2, the bit of the second interview [Vession 2, the second interview [Vession]] [Vession 2, the bit of the second interview [Vession 2, the second 2, the second interview [Vession 2, the second
Image Preview*	

Assign an ID Name and optionally label tags that can be searched.

The Chart can be made public by using the slider.

The JSON programming code is shown in the **new config** box, and a small preview of the chart is shown at bottom right.

When finished, click **Save**.

Chart Manager

This tool is used to preview a chart using data from the tree, and to assign charts to the various levels of database to make them available to be added to a Template using the Templates Editor tool.



Available Charts are displayed by Level, and **optionally** by Measure type and Parameters from the drop-down menus:

1		
Company	Vibration	Severity
Area	Temperature	Real Value
Machine	Amperage	
Point		
Axis		
Items		

Charts can also be sorted by using the filters on the left side of the screen:

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Hover the cursor over any chart, and options appear:



Show default chart
Show deradit chart
TIA 🛣
Comunity Charts
a Own charts
Multiple Chart
🏽 On Dashboard
Line مدا
C Pie
III Bar
🤊 Gauge
⊻ Updates Availables
≚ Updates Availables

Preview

∿•))

allows this chart to be displayed using data from a selected database item from the Tree. In this example, a Machine level chart for Machine Trends is previewed with data from a specific Machine(Hoist001).



Select adds the chart to the list of charts to be applied, if multiple charts are to be added at the same time.

button.

If only one chart is added, or to upload all selected charts, press the

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AVARABLE

ashboard 🖉 🗐 Database 👘 🚱 Templates Dashboard Builde

← Back Template dashboard Builder

Template Dashboard Builder

Used to build a new Template.

Hover the cursor over the **New Blank** box and click on **Create a new template** to open the Template Dashboard Builder Tool.

Select a **level** from the drop-down menu and set the number of **Columns** and **Size.**

	Container	
Selact a Level	Select a columns number 👘	Select height content
Main Dashboard	2	small
Company	3	medium
Area	4	large
Machine		
Point		

Click the Add Container button.

Container



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ow click on Change Char	L [
		new1 평 Change Chart
Select a chart		
O Parameters	C Machine Trends	C Largest Machine Step
· Putaneter Value	Programacion Text - Computadora_1 Programacion Text - Computadora_1	
-		A A
Press.	allow a vi	
Trends Temp	○ Testtrends	Octave Bands Axes
Torris a cal sized their	Ver Here mer averagione	
· · · · · · · · · · · · · · · · · · ·		
	· · · · · · · · · · · · · · · · · · ·	
O Currenttrends	Fft Capture	
-		
		Close Ok

Select a chart from the list, and press **OK** It will be placed on the template according to the number of columns and content size settings.

Back Template dashboard Builder				Option
	< Select Template Mad	chine COLUMNS: 2	CONTENT SIZE: medium	
				• Upload
Vel mm/	s Parameters C Change Chart Acc	Env		
0	Parameter Value	0		
5	Vel	> 5		
4.		▶ 4		
3		3		
	Acc Env			
C 8		2		
· · · · · · · · · · · · · · · · · · ·				
0	Parameters			
		Container		

Press Ocontainer

again to add another chart.

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Select the chart and press **OK**.

The new chart will be placed on top of the existing chart. Drag it to the right of the screen. The charts may be dragged into any new position using a mouse.



This can be repeated for 3 or 4 column templates.

When finished, click

🚯 Upload

The Template will be uploaded to Erbessd Instruments for review before it can be made public. This is to ensure the integrity of all Public Templates.

Once reviewed and passed, the Template will appear in the list of available Templates.

Diagnose Manager

Diagnose Manager is an EI-Analytic feature that 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.

Links to Diagnose Manager have been added to many screens in EI-Analytic. In the Machine Tree, right-click on any Machine or Point, and an **Auto Diagnose** option is now available. Machine and Point views, as well as the Bad Actor List all now have links to the Diagnose feature.

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

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



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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, then select a Machine or Point for analysis:

Load	machine or point	
d s	wich Assista	
-	ABC Company	
	- Area1	
	4-20mA Test →	
	Brewery Vat 1 →	
	⊢ C31 Current →	
	- Pump_001 →	
	Motor_NDE(→)	
	Motor_DE →	
	Pump_NDE →	
	+ Pump_DE →	
	⊢ Pump_002 →	
	⊧ S40_RPM ⇒	
	⊢ T25_Temp →	



When opened, a graph with data for the past 30 days is displayed.

Diagnose 💿		O Diagnose Builder
O Trends and faults are displayed based on Avis H, and in FFT displays frequency units in CPM		
Load Mischinet or Point		
(12 - Files downloaded Pump_001 - Motor_NDE)		
Machine Off 1 100% - (4/4)	4	Envelope RMS H1 Met
Bearing fault: Stage 4 61% - (4/7)		Envelope RMS V 1 Met
Bearing looseness (housing) 29% - (5/6)		RMS Acceleration H Met
Angular Misalignment (21% - (4/5)		RIMS Acceleration V Met
Parallel Misalignment 18%-(6/7)		
Cocked bearing 18% - (4/4)		
■ temps - 0.002 0.002 0.002 0.003 0.001		Motor,NOE-H 🕥 🔿 🗴 😷 Desrmatiens
0001 0 22000 #0.000 60.000 100.000 122.000 140.000 160.000 220.000 240.0000 240.000 240.000 240.000 240.000 240.000 240.000 2	300.000 320.000	Muther for an and and a function of the formation of the
Carlishop and an addition of the addition of the second second second second second second second second second		· · · · · · · · · · · · · · · · · · ·
Rule: (main H FFT RMS Between 0 AND 10000 Hz) (0.0283) < 100% of (main H Custom Value 1) (0.0500) - (Met)		

The Dignosis for the machine point is highlighted. In this example it was correctly dignosed as **Machine off** condition, based on the rules.

Diagnostic results are listed by Machine 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. The Rules used are listed in the right panel. Click a Rule to see the results in the FFT, with more detail displayed at the bottom of the screen, including the default operators and values used.

The FFT can easily be zoomed by using the slider tool at the bottom.

Using Diagnose Builder

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

Diagnose Builder

Dashboard 😪 🗽 Diagnose Builder	
← Back Diagnose Builder	
Group: Common Faults +	
Faults 🖕	Rules
Enter Fault Name	Enter Rule Mame
Parallel Misalionment	Condition 1

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



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



Now select which Machine and Points to apply the Rule using the

Assign Machines button.

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Machinery Select new machines or points

Machinery Tree

Search Assets

ABC Company

Close
Save
Tomco

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

/alue A		
Location	main	
Axis	н	
Units	Velocity mm/s	- 01
Value type	RMS	
range (Hz) O order bearing		

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.

Operator	r	
>=		Phase shift
Factor %		
-	100.0	+

Location	an and fore one	
	complement	
xis	Н	
Inits	Velocity mm/s	
alue type	RMS	
range (Hz) o order bearing		



Delete Faults

Used to delete Custom Faults or Rules

Dashbo	oard 🦻 🗄 Database 👒 🛅 Diagnose Manage
÷	Back 🖾 Delete Faults
	Parallel Misalignment 🝵
	- Rules

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Report Manager

This tool is used to Add or Edit custom Reports.

rd 🗇 🗇 Dstabase 🕜 🖺 Report Manager	Dashboard 👋 📑 Report Builder
eport Management	← Back 🕒 Report Builder
dd Report	🖹 Report Builder 💿
nt Builder rate personalized and especific reports for companies, areas or machines,	
dit Report	Companies, Areas, Machines, or Points
port Administrator	
Download, edit and delete especific reports for companies, areas or machines.	 ABC Company
	* Tomco

To create a report, open the Report Builder.

Identify which Company, Area, Machine, Point, Axis is the target of the report.

	Select the Report Type from the drop-dow
Report Name 🛛 😰	Adjust the Date Range as needed. The blue
Report_2025_03_18-13_5	month, or click the date box to open the se
Report Type 💿	Severity Report
Severity Report	Machines
Last Measure 👩	Bad Actor List
Last Measure Historic Measure	Highest Rate of Asset
Date Range	Octave Band List
Feb 18 -Mar 10	Custom Query
Vibration 💿	Day Week Month Year Custor
Select a Unit	
Extra Parameters 9	Cec 09 (2023) - Jan 08 (2024)
Sellect & Unit	Jan 01 - Jan 34
Descon	C Last month Dec D1 (2023) - Dec 31 (2023)
Salart a Rasson	Last 2 months Nov D1 (2023) - Dec 31 (2023)
-nelective Magaoni	Last 3 months Dot 01 (2023) - Dec 31 (2025)

enu.

ows change the date by one tor tool.

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You may also specify a **Reason** for data collection as a filter for the Report.

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FFT Options		
FFT Spectrum		
FFT		
Maximum per point	gE	
All axis		
Frequency / Zoom		
CPM Hz	50000	
Notes		
Add notes		

The FFT Spectrum may be included /excluded in the

Reports Available

Report. Options for Max/point or All axes, the units for frequency, and the zoom level are available. The option to add any Notes recorded for the Machine/point may also be included.

+ Save Report

Click on Save Report to complete the process.

The Reports icon on the Dashboard will now show the number of available reports.

To download, edit or delete a report, click on **Report Administrator**.

All existing reports are listed on this screen.

Report Administrator 🔹				+ Add report
Name	Туре	Date created	Options	
Report_2025_01_20-11_27_55	severityReport	2025/01/20 10:30:11	🛨 Download 🥒 Edit 🔳 Delete	*
* * * *				1 - 1 of 1 items

Each report has a Download, Edit and Delete button.

Click on **Download** to save copy of the report in PDF format to the computer's default download location for web files.



A new report may also be added here by selecting the **Add Report** button.

Quick Report

A new feature is available on each Dashboard to generate a Quick Report. A report may be generated for the Overall view in addition to an individual Company, Area, Machine, Point or Axis view.

Navigate to the Dashboard view for which a report is desired and click the Quick Report button.



Select the report parameters and press Get Quick Report.



The resulting PDF file will be automatically downloaded to the default location for your web browser's download files .

Notes

Notes may be added as part of a Routed data collection or added using Notes Manager.

The **Tool Tip** portion of Notes are displayed in the Trends graphs. Notes may also be included in Reports and in custom Charts built using Chart Builder..

Click any Machine or Point in the Data tree to open or add Notes.





Notes are displayed by Date:

🕞 Notes Manager	
Pump_001	
2025-03-17	
Coupling shroud is loose Notified meintenance dept	
2024-04-16	
Tool_Tip_1 Test Note	
	Add Note 🕥
	Click to Add a Note:
Add Note	
New note	
Note to Machine : Pump_001	
Date	
E late	
Select e date to your note	
ToolTip Will show toolbp in trends chart	
Message Will show a custom message	
Add file Will upload document or image file	Uploade
	Max size 5MB Close Save

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Work Orders

The Work Orders feature allow creation of work orders that are sent to Supervisors and/or Technicians via email.

Supervisor and Technician email adddresses are identified by EIA accounts with whom you have shared your *own* database



In the Permissions settings for the EIA accounts that are designated for Supervisor or Technician, you must enable the following:





Click New Work Order to begin:

Create Wor	k Order		
* Title	(Enter title		
Description	Enter description (
* Priority	Medium		
Status	*The status initial of the work order is Pending.		
Assigned Supervisors	Saled users		
Assigned Technicians	Salect uzerzi e		
Notification Type	*The type of notification is Email.		
* Assets Assigned	+ Select Assets		
* Expiration Date	Select expiration date		
Notes	Enternotee		,
Attachments	Upload		
	Only support.jpg/.jpeg/.png/pdf/docx/xlsx and maximum size of 5MB		
		Cancel	< Create

The fields are self-explanatory. Only previously configured EIA accounts with the correct Permissions will be available in the Supervisor and Technician drop-down boxes. If both are selected, both will receive an email when the work order is created.

Select the Assets and an Expiration Date.

Attachments up to 5MB can be included using the Upload button.

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Devices

The Devices tab is used to display amd manage Phantom sensors assigned to the database.

TIP - Click on any Machine or Point in the Data Tree to only see the Devices(Phantoms) assigned to that Machine/Point.

	Demos Obder 📿 Filters 🛍	
s	• O 😸 Dry_Contact	
	Code: 189250019 Model: EPH-G62	♥ [®] Firmware Version: 110
	G31_Test	
	Code: 189261227 Model: EPH-C31 C ABC Company Area1 C31 Current	Ø ₆ ^o Firmware Version: 136
	T25_Test	
	Code: 189262176 Model: EPH-T25 ABC Company Area1 T25_Temp	Q ^o Firmware Version: 120

The following information is displayed for each sensor in the database:

- Status: Shows a Green or Red icon to indicate communication status between sensor and database.
- **Name:** Shows the name of the sensor created in the Phantom database.
- Code: Shows the serial number of the sensor
- Model: Shows the Device Type name. E.g. EPH-V11
- **Firmware**: Shows the installed firmware version.
- Location: Indicates the Company/Area/Machine?point/Axis where the sensor is assigned.

- Last update: Shows the date/time of most recent Sensor Update transmission or full recording file.
- **Temperature:** Shows the internal temperature of the sensor. NOTE: This temperature value is for the internal circuit temperature of the sensor <u>not room temperature or surface temperature</u> where installed.
- **Signal Strength:** Shows the signal strength between sensor and gateway in dBm. (-50 to -75 is Good, -76 to -90 is OK and less than -90dBm is considered Poor).
- **Battery Level:** Shows the remaining battery percentage:

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	Gen 1 1/6D 3.6v	Gen 2 CR2032 3V	Gen 3 CR2477 3V	2XAA lithium(3V)
Green	3.2+	2.5+	2.7+	3+
Yellow	2.8 - 3.2	2.3 - 2.5	2.4 - 2.7	2.8 - 3
Red	< 2.8	< 2.3	< 2.4	< 2.8



Devices tools

The date and time of the last Sensor Update (includes RMS velocity for vibration sensors) are displayed for each sensor.

Devices Sensor Toolbar Icons include:

- 💿 Sensor Alarm Log
- Tasks for this sensor see *Notifications* section of this guide for more details.
- 🖉 Edit Sensor config change settings for this sensor.
- Geplace Phantom exchange one Phantom for another (same model only, e.g., V11E for V11E)
- Delete sensor. Provide serial number to confirm deletion.

A sensor may be disabled from processing data by using the slider. For example, a machine has been taken out of service for a period of time, and any data collected by this sensor is unwanted.

- Sensors can be searched using "fuzzy search" by entering a value in the search window. Example:
- Phantom code 18931939 was found by searching on the last two digits of its code.
- Use the Filters option for more ways to search:

Fi	nd devices by:
[All Devices
	All Devices
	Connected
	Disconnected
	Point. V
	PDF DCSV

39		×	Filters 👪			
● 15 P	1_Pump	NDE				
O Code:	189301939	Model:	EPH-V11			
O ABC Co	mpany	Area1	Pump_001	Pump_NDE	X	-> H
O ABC Co	ompany 5	Area1	Pump_001	Pump_NDE	Y	-> V
O ABC CO	mpany	Area1	Pump 001	Pump NDE	z	-> A

• Devices may also be searched by type:

All Devices	Date	Temperature	Battery
1		1	1
Fermopar 3Ch			/
PIO 4-20mA	Oldest first	Ascendant	Full
PIO VDC	Newest first	Descendant	Half
hamel Orman			Lower
nermai Camera			
-2 High Range Vibration			
ow Range Vibration			
High Range Vibration			

The display can be sorted by Date, Temperature or Battery level as well.

File Browser

Online File Browser

The Online File Browser provides access to all sensor data stored in the EI-Analytic cloud database, sorted by date.

Select any Machine, Point or Axis from the Data Tree to open the Online File List chart:



If a Machine is chosen, the Online File List shows the **Last** measurement for <u>all points on the Machine</u>, and can be switched to **All** (Historic) view. The values shown in this chart for Acceleration and Acceleration Envelope are shown from the last <u>full</u> data collection.

						LAST O ALL Feb 10-Mar 18 <	2 12 Cascade Signala Sens	- (=)
				Online File	List			
Date	i Axis		Reason	: Accel(g)	: Vel(mm/s)	i Acc Env(gE)	: Actions	1
2025/03/18 08:22:52		н	0	0.0593	0.42	0.03	۲	*
2025/03/18 08:22:52		v	0	0.0343	0.34	0.01	۲	
2025/03/18 08:22:52		A	0	0.0403	0.4	0.02	۲	- 1
2025/03/17 08:22:14		н	Ø	0.0595	0.64	0.03	۲	- 1
2025/03/17 08:22:14		V	0	0.0347	0.36	0.02	۲	- 1

At the Point level you can change the default view from **Vibration RMS** to **Vibration modifiers** to show other vibration units such as peak-to-peak or **Temperature** using the drop-down menu at top right.





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



Hovering the cursor over the **Reason** column icon shows the reason for data collection.

File Lis	Online				
1	Reason		: Axis	: Point	Date :
	Scheduled	н		Pump_NDE	2024/04/08 05:36:39
	õ	- 10		Pump_NDE	2024/04/08 05:36:39
	0	A		Pump_NDE	2024/04/08 05:36:39
	0	н		Motor_DE	2024/04/08 05:36:24

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Several Reasons are shown by default, with additional items available to apply:

Requested 💮 Alarm Scheduled 💮 Alarm Route		
Requested	~	
Scheduled	~	
Alarm	~	
Route	~	SensorAlarm
ManualData		OffRoute
SoftReset		SmallThermalImage
internalRMS		Trigger

Add or remove **Reason** types as desired, for example to see only **Route** data, or only **Scheduled**, etc.

Click the **Open File** icon on the Actions column to open the selected signal file in the Time Waveform (TWF) and Fast Fourier Transform (FFT) charts.



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Local File Browser

Use this option to upload signal files (.anl file extension only) and view/analyze the TWF anf FFT.



Press **click to upload** to browse for the .anl file(s) to upload.



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Visualization Tools

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

Horizontal and Vertical zoom

Horizontal or vertical zoom is supported by drawing with the cursor. Use a mouse or trackpad to click, hold and drag over the area of the signal you want to enlarge. The zoom bar below the TWF and FFTcan also be used to zoom horizontally on the graph, however you cannot use this bar to zoom vertically.

Horizontal zoom:

Drag the cursor over the area to zoom, it will be highlighted in grey :



Enlarged view:



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Vertical Zoom:

Use a mouse or trackpad to select the vertical area to zoom:



Undo Zoom

The Undo tool \bigcirc found at top right of TWF and FFT graphs, deletes the last zoom that was made, vertical or horizontal.

H V A OXD

Delete Zoom

The \times deletes the zoom on the graphic, returning to the default setting.

Expand TWF & FFT

Use to toggle the TWF, or FFT graph from split screen to full screen mode.



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TWF Tools

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

Channels (1)	 Channel 1	~
Units (CTRL+U)	Visibility	
Legends (CTRL+L)	Marker	
Markers	Locate	
Zoom		
Advanced		
Short Cuts		
Export		

Channels

For the selected channel (axis), there are three options:

- **Visibility** This option toggles the visibility of the selected channel to on or off.
- **Marker** Allows placement of Markers on this channel (axis). Roll the **cursor** over the graph and click to place a marker or use the bar below to move the marker.



• 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.

When a marker or locate is added, they can be cleared by clicking on Clear Markers at top right of the screen.

н	(O	×	-
	Clea	ar mai	rkers



Units

~~))

Select the units displayed on the TWF graph.

Units (CTRL+U)
g (CTRL+SHIFT+A)
m/s² (CTRL+SHIFT+A)
mm/s (CTRL+SHIFT+V)
inch/s (CTRL+SHIFT+V)
µm (CTRL+SHIFT+D)
mils (CTRL+SHIFT+D)
gE (CTRL+SHIFT+E)

Legends

Toggles the visibility of the Legends on or off.



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Markers

Clear markers (CTRL+Y)

Markers	Max Values – click amplitudes measured	ત to expand. Auto-apply markers to the Max 10, Max 5 લ તે.
Max Values 🔗	May Values	
Marker	- max values	
Measure Horizontal	Max (CTRL+G)	
Transient	Max 5 (CTRL+H)	
Edit markers	Max 10	

- Marker Place a marker on the channel of your choice as described above. .
- Measure Horizontal measure the time between two points on the TWF. •
- 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 \checkmark to cancel. Then move the first transient (t1) with
the bottom bar. The rest of the transients will be pla	aced equidistant to t1 to the right, the distance between
them is the same distance from F to t1 . Select +	— to add/remove a transient. Use the 🔀 to cancel
and 🚩 to confirm the process.	

1

Use the arrows to move the current position to the immediate right/left transient.



Clear markers delete all markers previously added.



Edit markers

Used to edit previously added markers. The name of the marker is displayed In the Text column. The Freq column

shows the frequency at which the marker is placed. Lastly, each marker can be deleted using the 🔍 button.

Text	Freq	
h1	5.86	
h2	11.7	
h3	17.6	
sb1	39.0	



Click the numerical value of the frequency and/or the name of a marker to modify.

Zoom

For a TWF, the Y Axis defaults to Auto Zoom mode, which can be deactivated by using the slider:



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Advanced TWF Tools

The **Advanced** section contains five 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. Only works when in split-screen mode.



Advanced	^
Circular TWF	
Orbits	
Bode plot	
Filter	^
Play sound	

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

• **Orbits** – Opens an Orbit plot in a new window. At least 2 channels of vibration must be open in the TWF or FFT to construct the plot.



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Filter

Band Pass

Band Reject

PulseVue

Clear Filter

Play sound

- **Bode Plot** Opens the Bode Plot window. The Bode Diagram is a coast-down or run-up test that integrates vibration and RPM measured by a tachometer or RPM sensor. This test calculates the FFT and the phase related to the RPM signal at each time interval.
- Filter
 - o Band Pass Applies a band-pass filter to the signal.
 - Band Reject Applies a band-stop filter to the signal.
 - **PulseVue** Applies a PulseVue filter to the signal see below.
 - Clear Filter Removes any filters previously applied to the graph.
 - **Play Sound** -plays back the recorded vibration using the device's speaker.
- **Export** Export the TWF or FFT as an image or CSV file.

PulseVue Filter

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.

ard Add new da	ashboard + 2-F1	×																
																0	Dopen on tab 🖁 📕	o x
						10 - BREAD 0	VEN RECIRC FAM	• 2 • F1 • FAN IB • F	+ - (2024-04-30 04:0	(7:42) TWF								Date: 202
20 HIMMAN	i Annaldalla a hai bian bakis	LINE MONTH OF	AND AND ADDRESS	Allandel Mildelaub.	CANTERNAL AND	ARKI JARKA	ALL CALIFICATION OF	No. OKUDIA	MANDUMAN	AND DESCRIPTION OF THE	INCOMPACT AND INCOMPACT	PALATHRICAN	SUMMER AND ADDRESS	IN ALCOHOL	INCOMPACT	CANCERCOLLE	A MALEY AND A MALEY AND	 RMS: 1
0													en lan di	TI IN CASE			un sauce ra	SR: 13041 Rec: 1.26
-20	and the state of the	hd ind.	an in and	J. L. H.	and David	والمراجع الم	ing	وليرابط والمرابط	LLL MARKE	1.11	da la later	L. Mail I		a hali ha	a dan bab	m al da	ni dil den	
The state state of the	A NATE AND A DATE OF	AND A MANAGEMENT	This a subsidial party	AUTO-DELLE MANDER	a lant attimuting and	INTERNA ADALIAN	NET REPAIR	H-MARSHING IN INC.	ALCONDUCTION OF	I I AL COLUMN I I AL	ICOMPRESSION OF THE OWNER	INTERNAL IN STATE I HOUSE	SCOTT THE DESIDER OF	TER CONTRACT	Instrument	IN BELICOMORY	ANTAL OF LAND OF MARKE	
Table 1								and the second second		100 C	2.4.5							

Click on **PulseVue** from the Options>Advanced menu to open the range selector:

Units		Hz CPM		
Min Freq (CPM)	-	60000		1.8
Max Freq (CPM)	2	1440000		
				-0
			Close	Ok

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.





Acceleration Envelope alarms may now also be set, based on the filtered data.



Shortcuts

Keyboard shortcuts are now available, and enabled by default. They can be disabled here:



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FFT Tools

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

Channels

For the selected channel (axis), 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 \checkmark to confirm and save the marker, or \checkmark to cancel.

• **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.

Channel 1

Visibility

Marke

Locat Phase



Channels (1)	~
Units (CTRL+U)	~
Freq Units (CTRL+F)	~
Legends (CTRL+L)	~
Markers	\sim
Zoom	\sim
Envelope Alarms	\sim
Window	\sim
Advanced	\sim
Short Cuts	~
Export	~

When a marker or locate is added, they can be cleared by clicking on Clear Markers at top right of the screen.

g



Phase - Moving the cursor along a channel displays the frequency value with .

its phase, at the analysis points. Select [×] to cancel and ^v to confirm and place the marker.

Units

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

Freq Units

Sets the frequency units shown on the X axis on the FFT.

Freq Units (CTRL+F)
CPM
Hz
Orders
Set RPM (1X)



Ó

3,582 : 179°

-110°

Legends

Toggles the visibility of the Legends on or off. Note this can be set as default using the





Markers

Markers	• Max Values – click to expand. Auto-apply markers to the Max 10, Max 5 or the Max amplitudes measured.
Max Values	Max Values ^
Marker	Max (CTRL+G)
Measure Horizontal	Max 5 (CTRL+H)
Phase	Max 10 (CTRL+.)
Harmonics	
Side Bands	• Marker Lise the surger to place a marker anywhere on the graph or use the lower bar
Bearings ^	Select \times to cancel and \checkmark to confirm and place the marker.
Edit markers	• Measure Horizontal -Click anywhere on the FFT to set the starting point, then drag to
Clear markers (CTRL+Y)	expand and show the desired distance.

• **Phase** – Same as shown on previous page.





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 \times to cancel and \checkmark to confirm and place the harmonics.





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 v to confirm and place the side bands.

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• **Bearings** – Select the bearing type for this machine point if not already configured. See *Adding Bearings* on page 53 of this guide for details.

Bearings	^
Select	
Clear List	



• Clear Markers – Erases all markers

Zoom

Choose the maximum frequency displayed on the FFT. The Auto Zoom slider allows the FFT y axis to be adjusted to show the peak amplitude.



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Envelope Alarms

Show all

Auto Calculate

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.



Window

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



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Advanced

The Advanced menu contains:

• FFT Output - default is RMS:

FFT Output	
RMS	
0 to Peak	
Peak to Peak	

- Averages From 1 to 10, default is 1:
- **Overlap** Select percentage, default is 0%:

Overlap	
0%	
25%	
50%	
75%	

- Real Time Options Used when live recording:
- Circular TWF see TWF Tools section.
- **Orbits** see TWF Tools section.



Advanced	^
FFT Output	~
Averages	~
Overlap	~
Real time options	~
Circular TWF	
Orbits	
PulseVue	
Filter	^
Low Frequency Atenuation	

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Averages

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BALANCING - VIBRATION - ONLINE MONITORING - LASER ALIGNMENT - MASTERS OF MACHINE HEALTH

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- **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
- **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.



Shortcuts

Keyboard shortcuts are now available and enabled by default. They can be disabled here:



Export

Allows the export of the currently open signal file using two different formats, CSV, or Image file. **Note** – the exported file will be placed into the default download folder of the browser.

Export	-
csv	
Image	



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Band Pass

Band Reject

PulseVue

Clear Filter



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TWF/FFT Settings

Beside the Options menu at top left of the TWF or FFT is the Settings menu:



Save as specific is used to assign settings to the <u>individual signal file</u> being analyzed. If you open the file after saving, and select **Load Specific** setting, the saved settings will be applied.

Save as common allows the settings to be used on any axis of the machine point being analyzed. Open any axis on the same machine point and select **Load Common** settings to apply the saved parameters.

If you have set a **Specific** setting for a given axis and want to then apply it to the other two axes on the machine point, select **Save Specific settings for all**.

Route Compliance

Whenever a new Route is created, an option is presented to create a *schedule* for the Route to track how often 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 three months previous.

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

Dashboard 🤄 🏭 Route Compliance				
Route compliance by months		Route compliance by area		
Filter by company:	All	Filter by area:	All	U
Show route history before this month:	three months	Month:	January	

Notifications

Notificationss from the past 30 days are shown by default. Click the Date field or use the blue arrows to change the date range by one month increments.

< > All
1
All
Vibration
Temperature
 Amperage
n Speed
D Battery
O Phantom internal temperature

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

Day	Week	Month	Year	Custom
0	Last 30 days			
	Dec 20 (2023) -	Jan 19 (2024)		
C	This month			
	Jan 01 - Jan 31			
0	Last month			
	Dec 01 (2023) -	Dec 31 (2023)		
	Last 2 months			
	Nov 01 (2023) -	Dec 31 (2023)		
C	Last 3 months			
-	Oct 01 (2023) - I	Dec 31 (2023)		
			Cancel	Save



Click on a notification to see the details:

	Vibration	Alarm fo	r: Pump_00	D1		Date/time
Date 🛛				2025-0	25 10:21:12	Machine name
Open in machine insp	ector				Open	Sensor code Reason for notification
Parameter: Velocity					•	Values measured
Value Alarm N	otification					
Pump_001 greater t	han the alarm thresho	ld in Vibration 1	for point: Motor_	NDE		Click Open to display the Machine
	Notification of Message: Val Sensor Code:	onfigured for a ue Alarm Notifi 189286917	sensor			Overview.
	Severity	Axia	(nm/s)	1		
	0	н	8.49			
	0	, A.	13.7			
	-			-		
		Class				

Adding Custom Database Items

EI-Analytic supports creating custom *Items* at various levels of a database. These *items* appear on the Database Tree at the assigned level as an icon.

As an example, An *item* can be created to represent an individual Phantom Specialty sensor. These non-vibration Phantom sensors output values to the database, but are not shown on the Data Tree with a colored icon to reflect an alarm condition. Historically, these Phantoms have been assigned to a Machine or a machine Point. Custom *Items* may be added to the database at the root, Company, Area, Machine or Point level of the database. Clicking on an *item* in the Data Tree provides direct access to trended data from the sensor.

As an example, the following steps were used to add an *item* to represent a T25 Temperature Phantom. Selecting this new item from the Data Tree will display the trended data from the sensor.

Step 1 - Right-mouse click on the desired level of the database tree and select **Add Item.** In the example, an *item* is to be added to ABC Company.



This opens a config window:

Step 2 – In the Item panel, choose a Name that will appear on the data tree, and an Item Description.

Step 3 -Click on

to assign an icon appropriate to the type of sensor.



Step 4 – In the Child 1 panel, press

Q Search Phantom

to assign a specific Phantom sensor to this item.

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Phantom Type Select Phantom Type	Phantom Code Select Phantom Code		
Select	Select v		
		Enter code manually	
Sensor -			
Description			

Step 5 – Press Enter code manually

	Q/12
Example: 11-123456789	
	Contract Contract

Enter the Phantom code and press Confirm.

The screen will update with the sensor info:

ect Phantom Type	Select Phantom Code	
EPH-T25 - Termopar 3Ch 🔗	189262176	*
0		25-189262176

Press OK.

Note – if the Phantom is already assigned in the database, a warning message will be displayed indicating the machine point to which it is assigned.

Step 6 – Assign the **Channel**(1-4) of the sensor to be used, and give the channel a **Name**.

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Alarms(0)

Enter an Element Description, Input Unit, and Output Unit (often the same setting).

Step 7 – Set alarms by pressing

and **Save** when finished.

25 ° C		30 ° C		40	° C
			Save i	in defaults	Choose from sav
Yellow (°C)	~		-	25.0	+
Orange (°C)	0		E	30.0	+
Red (°C)	0		F	40.0	+

This determines the color shown with the icon on the data tree.

Optionally, a **Function** may be applied to the data received from this item.

A previously created Function can be assigned from the drop-down menu, or click *Adding Variables and Functions* below.



to complete the addition of this *item*.

Check the Data Tree to see the new item:



to add a new Function. See

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ABC Company

Area1

Area2 Area_51

DryContact Temp001

C1

Ξ.

💽 🔍

.0

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Adding Variables and Functions

The add button opens the DB Settings Variables and Functions screen:

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Examples of manually configured **Variables** are included by default, named Cost of KW/H and Cost of KW/H Night.

Variables	
Cast of KW/H	- 5,0000 +
Cost of KW/H Night	- 7.0000 +
Oil_Condition	- 0.0000 +
TempC	0.0000 +

Other examples above are **Oil_Condition** and **TempC**. The value should be left at 0 if the data from a Phantom sensor is used as the variable. In this case, a T25 Temperature Phantom is configured in the *item* Child 1. The input unit is set to temperature in C. The latest value reported from the sensor is stored in this variable, e.g. 32 for 32 degrees C.

The Oil_Condition number is reported by an EPH-G61 4-20mA Phantom, and populates the value of that variable.

Variables need to be defined here first, before they can be used in a **Function**.

A variable can easliy be created by clicking the button.



Only the name needs to be added:

New variable	د
Invalid Name	
	Cancel OK

In the **Functions** section, example functions are included by default. The first calculates the value of Kw/h of electricity used , the second calculates the amount used at night. In both cases, the data received from an EPH-C31 Current Phantom sensor will provide the \$(V) number for use in the function.

calculo de valor kw/h calculo nocturno	\$(V) * 20.505		
calculo nocturno			
	\$(v) * 2		
test	5 + \$(Cost of KW/H) + \$(Cost of KW/H Night)		
Convert to F	\$(V)*9/5+32		
Add function	-		

In our example, the **Convert to F** function converts Celsius to Fahrenheit by using a simple math formula.

Click the Add function button to create and test a function:

1 1
 - 1
·
_

🕜 New name		
Newfunction		
		-
	Caricel	OK

Assign a name and press OK.

The Function Tester window will open:

Function tester			
Function	-CASE WHEN S(V) = 5 THEN 500 WHEN S(V) = 10 THEN 10005 ELSE 0 END		Value Hour Day Mult Month Dase Vehicles V
Teut Deta	- 10 - + -	- 2024-02-14 11:26 46	
Result	800		
			-

Replace the default code with your new function. Example - the **Convert to F** formula:

\$(V)*9/5+32		Value Hour
		Variables \sim
- 34 +	(S) 2024-02-14 11:34:38	Functions 🗢
93.2	Cancel	Save

By setting the value of \$(V) in the **Test Data** box, the result is displayed in the **Result** field. Use this to ensure the function is working as desired. The example shows the value 34 results in 93.2. (C to F)

Preset buttons on the right can be used to add code to the function.

Press Save when completed.

With no Function applied, the value in the Trend graph is shown in Celsius, since the account settings are Metric.

			2024-02-15 09:53:15 • - DEG 122.918 undefined
	2024-02-15 05:57:40 • - DEG 54.85 undefined		
00	08:00	04:00	08:00
-			1
3 2	Sensor status	< >	Sensor status

After applying the **Convert to F** function to this item, the temperature is now displayed in Fahrenheit <u>for subsequent</u> <u>measurements</u>.

All other temperature values for other machines/points will still be shown in C.

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:

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

	S ®	SOLUTIONS & PRODUCTS T	SUPPORT V	ABOUT US 🔻	CONTACT EI	T STORE
	TECH INFO	DOWNLO	ADS		TECH SUPPORT	
	Datasheets	Videos			Log a ticket	
3	Tutorials	Articles				
	Training					

- 2. For more urgent assistance, contact our support team by email at: <u>support@erbessd-instruments.com</u>
- 3. For the most immediate **emergency** assistance, contact us by phone at +1 877-223-4606 (International Toll Free)