

HAVWEAR

This is a quick start guide to setup and use the system.

For more detailed information and to download the full set of user guides, templates, training videos and other support material click here: <http://www.reactec.com/support>

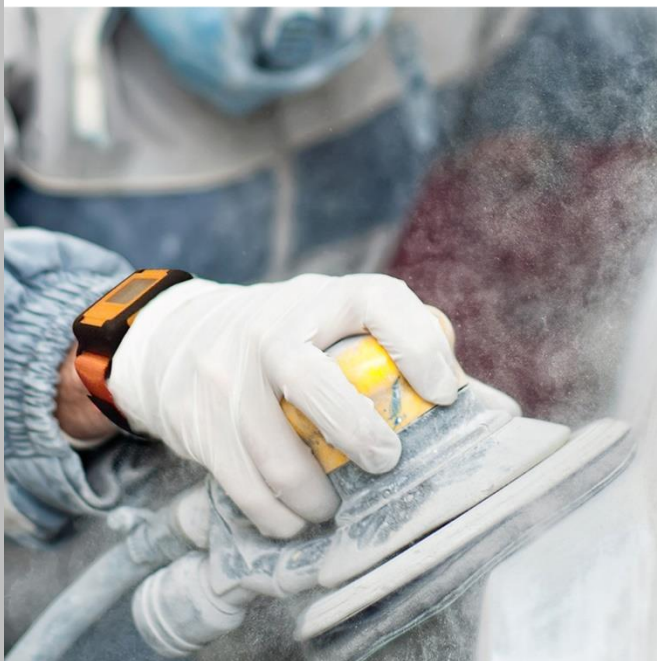
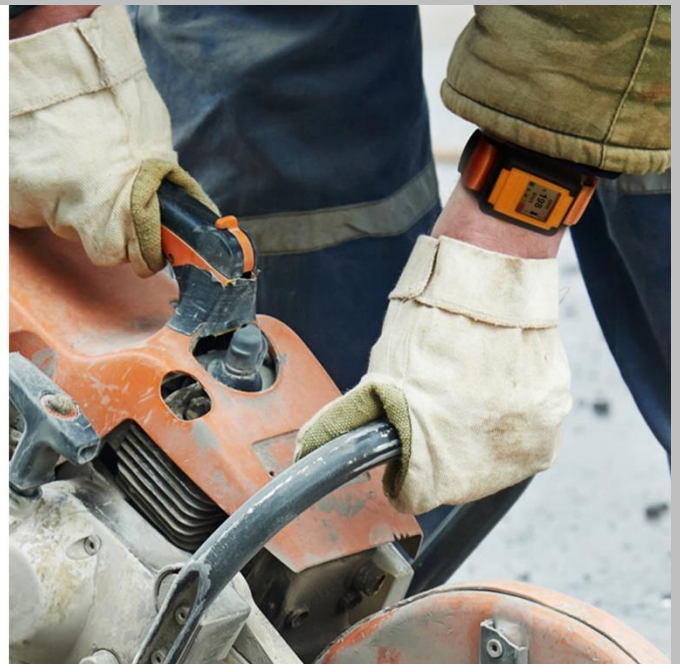


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01 Checklist of items required

Hardware:




Software:

- Internet enabled windows computer
- Reactec Analytics Platform Account
- Card Manager Software
- Tag Manager Software
- RFID Read/Writer Driver

02 Downloads

An online Reactec Analytics account is required to log into www.reactecanalyticsplatform.com

The software and driver downloads can all be accessed via the  button at the top right of the screen within Reactec Analytics. You will need your Analytics username and password to login and access this.

Card Manager Software:

The Operator ID Card Manager Software is essential software to program Operator ID Cards.

Tag Manager Software:

The Tag Manager Software is essential software to program SAFE ZONE Tags.

RFID Read/Writer Driver:

When installing the RFID reader/ Writer, please install the driver from the Reactec Analytics Downloads prior to connecting the device. Once downloaded, then connect the device to your PC/ tablet through a USB. **Please note:** If you connect the device prior to installing this driver, dependant on operating system a driver may be installed automatically, but that driver may not work as expected.

03 Gather Information

List of Administrators: Details of personnel who will require to be set up as administrators to:

- Manage access to reports;
- Program operator ID cards.
- Program Tool Tags

List of line Management: Details of personnel requiring access rights to view reports.

List of Operators: Names with unique ID for all users of the wearable.

Populate Operator ID Template:

- Operator ID number, maximum 16 characters to include any numbers and letters from A-F only. This is a unique number used to identify the user within your organisation.
- First name and last name of the user.

List of Vibratory Tools to be tracked: Tool make/model and asset ID's.

Populate Tool Import Template:

- Tool ID, maximum 16 characters.
- Tool Description, Manufacturer and Model
- Tool Vibration Level

04 Reactec Analytics Platform Set-Up - Users

Types of Reactec Analytics user accounts:

- **Report:** View reports (no ability to add or amend any information within the Analytics).
- **Group Administrator:** Manage Users, Operators and manage data for specified Groups.
- **Administrator:** In addition to the above, manage all User accounts, all Groups, Permissions, Options and Data.

How To:

1. On the top Toolbar, select "Users".
2. Select "Create New".
3. Enter employee's details (The user ID must be unique across the system) and select type of user.
4. In the Modules field, select which reports the employee requires access to.
5. Select on or off to receive alerts if an employee has exceeded their EAV/ELV or both. Specify time when the report is to be sent (for previous days data).
6. If setup as an Administrator specify if the User requires access to System and/or Tools and/or Operators
7. Select Create to add the employee to the list of users.

05 HAV Options

Settings which determine how data is displayed on the HAVwear watch and in the Analytics

Enable OFF Button:

An option is available to allow Operators to switch HAVwear OFF. When this mode is enabled, the operator can prevent the HAVwear from detecting TEP HAV risk exposure data at any time. The OFF function is included for customers who are concerned about operators picking up exposure points from non-tool activity such as driving vehicles in rough terrain. The default is set to Disabled, to enable the OFF button:

- On the top tool bar, select **Data/Project Manager**
- On the side menu select **SETUP > HAV Options**
- Tick the **Enabled** box
- Click **Save**

Exposure Assessment Type:

The majority of HAV reports available with the Analytics software can be viewed as either TEP or SEP or a combination. TEP (Tool Exposure Points) is calculated based on the vibration level programmed in the tool tag. SEP (Sensed Exposure Points) is calculated based on the sensed vibration level with the HAVwear worn on the wrist. It is expected that most organisations would use TEP points initially to assess their Operator's risk. In situations where an organisation chooses to select SEP data, the HAVwear watches will display SEP points and the exposure risk data reported will be based on SEP points wherever possible. The default is set to TEP, to switch to SEP:

- On the top tool bar, select **Data/Project Manager**
- On the side menu select **SETUP > HAV Options**.
- Check the **Sensed Exposure Points (SEP)** box
- Click **Save**

Notice *Only an appropriate informed authority within the customer's management should consider choosing to use SEP exposure points as the more meaningful representation of the risk experienced by their operators in their daily operations. Reactec recommend that this is only considered after proper evaluation of the SEP data provided by the HAVwear in the customers working environment when compared to a measurement with an instrument compliant to ISO5349 in the same working environment.*

Operator Sign Out Control:

A control is available to limit the potential for an Operator to sign out more than one HAVwear within a configurable time period. The default for this control is set to OFF, which makes it possible for any Operator ID Card to be used to sign out more than one HAVwear.

An Administrator can set a time period of up to 4 hours during which an Operator ID card cannot be used to sign out a second device.

- On the top tool bar, select **Data/Project Manager**
- On the side menu select **SETUP > HAV Options**
- Choose the required time from the drop down menu in the **Min Time Between Sign Outs** field
- Click **Save**

06

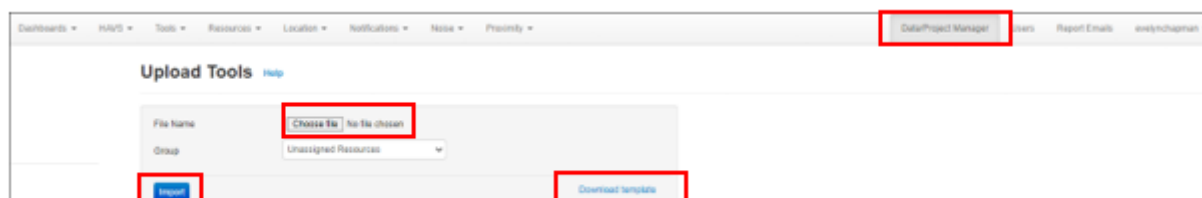
Program Tool Tags

Programming Operator ID Cards can only be carried out by a Group Administrator or companywide Administrator.

Activity – Click [here](#) to watch the video on how to program operator ID cards.

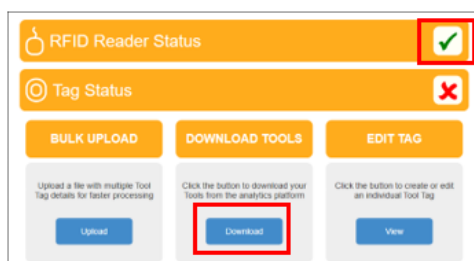
Uploading the Tool Import Template

1. Select **Data/Project Manager** from the top toolbar
2. Select **Tools** from the side menu
3. Select the **Bulk Upload** button
4. Download the template by clicking **Download Template**
5. Populate and save the file
6. Select **Browse**, locate the saved template, then click **Open**
7. Select **Import**
8. Tools will now be visible in the Analytics Software Operator list



Program Tool Tags

1. Open Tool Tag Manager Software.
2. Connect RFID Read/ Writer to the computer. A green tick will be displayed in the **RFID Read/ Writer Status** box.
3. Select **Download Tools**
4. Login using the Analytics Software account credentials.
5. Place a Tool Tag on the RFID Read/Writer. A green tick will appear in the **Tag Status**
6. To write to the Tool Tag, press the **Write** button next to the required tool
7. To program another Tool Tag, simply remove the previously programmed Tool Tag and place new one on the RFID Read/Writer.
8. Select **Close** to exit the Software.



[Back](#)

[Load File](#)

[Download](#)

Reactec Trials

Reactec Internal Demo

Tag Status

Tool ID	Description	Manufacturer	Model	Vibration Level ms ²	Weight g	Noise dBA	Action
12345	DRILL	IN6	TE 72	25	0	0	Write
OFF	OFF	Unallocated	OFF	0	0	0	Write
11824	BLOWER	SHI	B08A	50	0	0	Write
11891	CHAINSAW	Husqvarna	TS40 XP	5	0	0	Write
11893	POLE PRUNER	SHI	HT131	50	0	0	Write

07

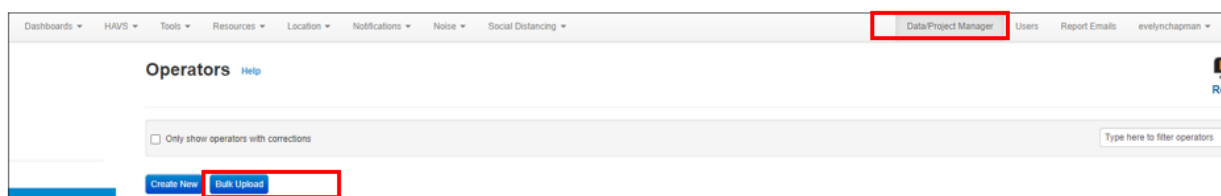
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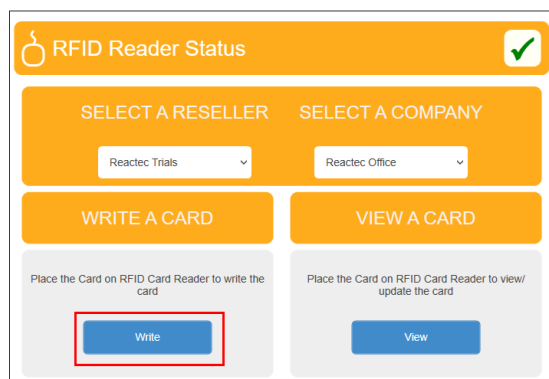
Uploading the Operator ID Card Template

9. Select **Data/Project Manager** from the top toolbar
10. Select **operators** from the side menu
11. Select the **Bulk Upload** button
12. Select **Browse**, locate the saved template, then click **Open**
13. Select **Import**
14. Operators will now be visible in the Analytics Software Operator list



Program Operator ID Cards

9. Open Operator ID Card Manager Software.
10. Login using the Analytics Software account credentials.
11. Connect RFID Read/ Writer to the computer. A green tick will be displayed in the RFID Read/ Writer Status box.
12. Click **Write a Card**
13. Place an Operator ID Card on the RFID card Read/ Writer.
14. A green tick will be displayed in the Card Status.
15. To upload the data to the card, press the appropriate **Write** button.
16. To program another Card, simply remove the previously programmed Card and place new one on the RFID Read/Writer.
17. Select **Close** to exit the Software.



RFID Card Status					
Forename	Surname	CSCS ID	Operator ID	EAU	ELV
Ann	Walker		520202	100	400
Barbara	Bell		520203	100	400
Buzz	Roy		520211	100	400
Claire	Burns		520218	100	400

08 Hardware Verification

Power up and sign out HAVwear to verify the Docking Station is operational.

- Connect 12V DC power supply to a mains power outlet then connect the power supply output connector to the Docking Station.
- Dock the HAVwear Modules into the charging bays of the Docking Station, ensure that the green LED on the charging bays illuminates to indicate that communication between the module and the Docking Station is successful. Failure to communicate will result initially in a flashing red LED followed by a continuous red LED being illuminated on the charging bay.
- Docked modules should be charged for an hour initially before sign out
- Connect the Ethernet RJ45 connector of the Docking Station to a Local Area Network which has a DHCP server running using a Category 5 or higher ethernet cable (not supplied). Ports 21, 8021, 37729, 37730 and 7000-7099 are used by the Docking Station, network firewalls must be configured appropriately for successful communication between the Reactec Cloud Server and the Docking Station.
- When the Docking Station has communicated with the Reactec Cloud Server the date and time shall be configured and displayed on the Docking Station.



09 Management Training

Note: HAVwear is a rechargeable product with the following battery life/charge requirements:

Time to recharge after a typical days use is 33mins

Max battery life is 36 hours when Bluetooth is enabled.

HAVwear should be recharged fully before being put into storage when not docked in a powered up Docking Station

For more information on batter care, please refer to the HAVwear System Overview

Manager Awareness training resources;

- Click [here](#) to watch the manager Awareness Part A video – **Why HAV is important and How Reactec can help** and [here](#) to download the PowerPoint presentation
- Click [here](#) to watch the manager Awareness Part B video – an Overview of the System and how the System Works and [here](#) to download the PowerPoint presentation

Analytics Reports training resources;

- Click [here](#) to watch the How to use the Key Analytics Reports for Best Practice video
- Click [here](#) to watch How to Schedule Reports video

10 Operator Training

Note:

The wrist strap is personal and should always be subject to appropriate occupational hygiene procedures regarding cleaning and replacement

Ensure operators can demonstrate;

- Signing out a HAVwear.
- Fitting the HAVwear into the wrist strap and onto the wrist.
- Successfully connect HAVwear to a Tool Tag
- Switch HAVwear OFF (if required)
- An understanding of the HAVwear screen display and alerts.

Click to view available training resources;

- Click [here](#) to watch the Operator Toolbox Talk video
- Click [here](#) to download the Operator Toolbox Talk PowerPoint presentation
- Click [here](#) to download the 4 Bay Docking Station User Poster
- Click [here](#) to download the 15 Bay Docking Station User Poster

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Daily EAV/ELV Breach Email Alert

A daily HAV breach email alert will be sent to all users that have the alert enabled. This email will contain counts of EAV and /or ELV breach alerts and a link to view the data for the given day on via the Operator Daily Exposure Report.

To enable Users to receive daily alerts, log into the Analytics;

- On the top tool bar, select **Users**
- Click **Edit** on the specific User
- Select **on or off** next to **Daily Alerts**
- Choose EAV and/or ELV to receive alerts if employees exceed their EAV/ELV limits.
- Specify the time the report is to be sent (for the previous days data)
- Click **Save**

The content of the email will be as follows:

Reactec Analytics Platform - Operator Exposure Alert

Alert Summary:

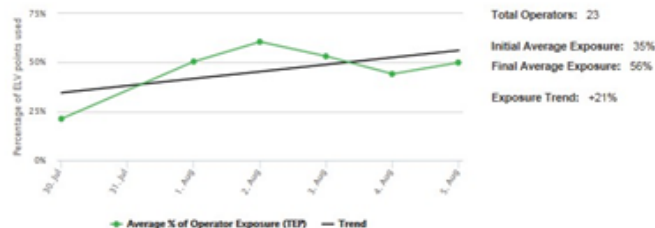
Report Date	02/03/2021
Report Time	00:00
Operators that exceeded EAV	1
Operators that exceeded ELV	1

[View the details here](#)

12 Key Reports Summary

The Reports modules are accessible from the toolbar in the Reactec Analytics and are used to view information about operator HAV exposure and tool usage. This allows analysis, monitoring of policies and planning and where required, recording of any actions that need to be taken.

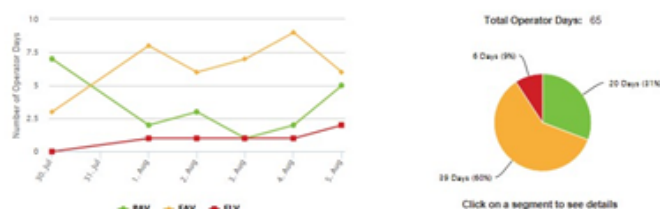
Workforce Average Exposure



Review trend of overall HAV exposure and the impact of either exposure reduction activity and/or levels of workload in relation to average.

Frequency - Quarterly / Annually

Exposure Levels Reached



To address any breach of exposure. Monthly/Quarterly as part of the management review, total exposure level breaches and exposure level breaches over time.

Frequency - Weekly / Monthly / Quarterly

Operator Average Exposure

Operator	Group	Operator ID	Name	Days Worked	Avg Daily Exposure	Current Levels	Exposure Thresholds	Individual Exposure Total	Tool Usage
Operator Group	1000000	1000000	John Smith	1	10.7	10.7	10.7	10.7	10.7
Operator Group	1000000	1000000	John Smith	2	10.7	10.7	10.7	10.7	10.7
Operator Group	1000000	1000000	John Smith	3	10.7	10.7	10.7	10.7	10.7
Operator Group	1000000	1000000	John Smith	4	10.7	10.7	10.7	10.7	10.7
Operator Group	1000000	1000000	John Smith	5	10.7	10.7	10.7	10.7	10.7
Operator Group	1000000	1000000	John Smith	6	10.7	10.7	10.7	10.7	10.7
Operator Group	1000000	1000000	John Smith	7	10.7	10.7	10.7	10.7	10.7
Operator Group	1000000	1000000	John Smith	8	10.7	10.7	10.7	10.7	10.7
Operator Group	1000000	1000000	John Smith	9	10.7	10.7	10.7	10.7	10.7
Operator Group	1000000	1000000	John Smith	10	10.7	10.7	10.7	10.7	10.7

Review operators most exposed overall and their exposure trends. Further view of tools used overall to understand main source of exposure as well as specific daily tool use and tool sharing. This information better supports exposure reduction planning.

Frequency - Weekly / Monthly / Quarterly
Annually in support of Occupational Health Surveys

Top Tool Exposure

Operator	Tool ID	Tool Name	Model	Version	Total Exposure	Tool Exposure Points	Tool Exposure Points	Tool Exposure Points	Tool Exposure Points
Operator Group	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
Operator Group	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
Operator Group	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
Operator Group	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
Operator Group	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
Operator Group	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
Operator Group	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
Operator Group	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
Operator Group	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
Operator Group	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000

Review which tools are most exposing operators to HAV overall and the trend of exposure. This can help in understanding actions that will provide the greatest benefit in reducing exposure to workers by identifying tool replacements or changes in working practices.

Frequency - Monthly / Quarterly / Annually

Scheduling a Report:

Any report can be scheduled to be received by e-mail on a regular basis such as daily, weekly or monthly. Scheduled reports are PDF copies of the Reports sent to one or more user email addresses on a predefined schedule. These are useful to ensure key stakeholders are kept informed.

1. On the toolbar, navigate to the report that you want to schedule
2. Using the **filter** options, filter the report data as required then click **Email PDF**
3. Enter an email address for each person you want to receive a PDF copy of the report
4. Select **Periodically** to schedule the report to be sent as required

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FCC Regulatory Information

The following information is related to HAVwear Module device with **FCC ID 2YAGFHVW001** and 15 Bay Docking Station (No GPRS) with **FCC ID 2AYGFHVWDST001**

Warning: Any changes or modifications made to the device not expressly approved by the party responsible for compliance may void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Specifications

HAVwear

Operating Temperature	-10C to +35C / +14F to +95F
Power	Rechargeable Lithium Ion (not user serviceable)
Bluetooth	BLE 4.2
RFID Reader	13.56MHz, Near Field
Dimensions	37mm(1.46 inches) x 38mm(1.50 inches) x 15mm(0.60 inches)

15 Bay Docking Station (No GPRS)

Operating Temperature	0C to +40C / +32F to +104F
Power	12V DC, 2.5A
RFID Reader	13.56MHz, Near Field
Ethernet	10 Base T / 100 Base Tx
Dimensions	338mm (13.3 inches) x 180mm (7.1 inches) x 50mm (2 inches)