

Operating Manual

A2[®]

Accountability Control Software

US



Order No. 10162374/00



WARNING

Read this manual carefully before using the software. The software will perform as designed only if it is used and maintained in accordance with the manufacturer's instructions. Otherwise, it could fail to perform as designed and persons who rely on this software for their safety could sustain serious personal injury or death.

The warranties made by MSA with respect to the product are voided if the product is not installed, used and serviced in accordance with the instructions in this manual. Please protect yourself and your employees by following the instructions.

Please read and observe the WARNINGS and CAUTIONS inside. For any additional information relative to use or repair, call 1-800-MSA-2222 during regular working hours.



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For your local MSA contacts please go to our website www.MSAafety.com

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1 Safety Regulations

1.1 Correct Use

A2 is an accountability system software used for monitoring radio-supported SCBA and additional devices primarily during firefighting operations. Data from SCBA and additional devices is transmitted by radio and shown in real-time outside the dangerous area.

Conventional monitoring without any radio link is also possible.

Additionally the software allows to change the SCBA settings using wireless communication while SCBA is not in use.

It is imperative that this operating manual be read and observed when using the product. In particular, the safety instructions, as well as the information for the use and operation of the product, must be carefully read and observed. Furthermore, the national regulations applicable in the user's country must be taken into account for a safe use.



WARNING

This manual must be carefully read and followed by all persons who have, or will have the responsibility for installing or using this equipment. This equipment will perform as designed only if used and maintained according to the instructions; otherwise it could fail to perform as designed, and persons who rely on the equipment could sustain serious personal injury or death.

Alternative use, or use outside this specification will be considered as non-compliance. This also applies especially to unauthorised alterations to the product and to commissioning work that has not been carried out by MSA or authorised persons.

1.2 Liability Information

MSA accepts no liability in cases where the product has been used inappropriately or not as intended.

The selection and use of this product must be under the direction of a qualified safety professional who has carefully evaluated the specific hazards of the work area and who is completely familiar with the product and its limitations. The selection and use of this product and its incorporation into the safety scheme of the work area is the exclusive responsibility of the Employer.

Product liability claims, warranties also as guarantees made by MSA with respect to the product are voided, if it is not used, serviced or maintained in accordance with the instructions in this manual.

1.3 Product Warranty

Product liability claims, warranties also as guarantees made by MSA with respect to the product are voided, if it is not used, serviced or maintained in accordance with the instructions in this manual.

2 Description

A2 is a real time accountability monitoring application. It supports hardware driven accountability control and manual accountability monitoring.

See section 9 for a list of receiver stations, their compatible PASS (Personal Alert Safety System) devices and identification writer boxes that interface with A2.

The A2 real time display shows:

- persons
- team assignments
- cylinder pressure including time remaining
- low cylinder pressure
- motion alarm
- manual alarm
- battery warnings
- temperature warnings



Complete incident data is also automatically logged and analyzed. Temperature warning is related to the inner housing temperature and does not reflect outside temperature.

3 Software

3.1 System Requirements

Minimal Hardware Requirements

- Intel Atom-Prozessor 1.6 GHz or compatible
- 1 GB RAM
- 16 GB SSD hard drive
- Resolution min. 750 x 750 px
- Wireless (WiFi - 802.11g/802.11n)
- Bluetooth
- USB 2.0 port

Recommended Hardware Requirements

- Intel-Multicore > 1.1 GHz or compatible
- 2 GB RAM
- 32 GB SSD hard drive
- Resolution 1024 x 768 px
- Wireless (WiFi - 802.11g/802.11n)
- Bluetooth
- USB 2.0 port

Operating System

Depending on the selected database system the following operating systems are supported:

Firebird Database Server 2.5	Microsoft MSSQL Server 2012 (Express Edition)
Microsoft Windows XP with current service pack	Microsoft Windows 7 with current service pack
Microsoft Windows 7 with current service pack	Microsoft Windows 8/8.1 Pro with current service pack
Microsoft Windows 8/8.1 Pro with current service pack	Microsoft MSSQL Server 2012 (Express Edition)

3.2 Download

To download G1 SCBA configuration software, go to <http://www.msasafety.com> → Resources → Product Software Downloads.

3.3 Installation

Quick Installation Guide

- (1) Before starting the installation close all running applications.
- (2) Start *Setup_MSA_Software.exe* using Windows Explorer.
- (3) Follow the instructions on the screen.
- (4) Select *Express installation*.
- (5) Follow the instructions on the screen.

3.4 Software Versions

Features Basic/Plus

	G1 Basic Software	A2 Software
Access to TAG writer	X	X
Access to accountability system	-	X
Access to firmware settings	X	X
Access to alphaBASE (Standard/Battery)	-	X

3.5 Licensing

- (1) Go to *Settings* module.
- (2) Change to *Licensing*.
- (3) Enter the license key and tap on *Register*.
 - ▷ Name: MSA G1 OEM
 - ▷ License key: 7CA44-8FF9R-2A57Y-3FBBU-811Z3

License key

Purchase and register a license key and A2 will work as full version. The license key is a combination of the customers name and a unique unlock key. To unlock the software please enter both values below and click the "register" button.

Name

License key

7CA44

-

8FF9R

-

2A57Y

-

3FBBU

-

811Z3

3.6 Updates

Update the software only with published update setups or with customer support provided updates.

4 Settings

4.1 Log In

Log in by typing user name and password.

4.2 Users

Default user after installation:

Administrator

User Name: Admin

Password: admin

The user name of this user cannot be changed. It is recommended to change the password for this user on first login. All passwords are case-sensitive.

Additional users can be created.

4.3 User Management

User management lets the administrator add users or change user settings.

(1) Open *User Management* in *Settings*.

My Account lets the logged in user add or change picture and change the password after tapping the corresponding button.

In *Users* all user settings can be edited, users can be added or deleted. Predefined users cannot be deleted.



Tap to add user



Tap to delete user

-
- (2) Tap on user listed to edit settings for this user.
 - ▷ The possible settings are displayed.
 - (3) Make all desired changes, save changes with *Accept*.
 - (4) Return to module navigator with the *Home* button.

4.4 A2 Settings

The settings in the submenu A2 determine the behavior of the accountability module.

Change Settings for	Details	Limits
Common	General software behavior	
Displayed pressure/ temperature unit.	Displayed time value in monitoring module:	
	<ul style="list-style-type: none"> - Remaining service time since breathing started (Count up) - Timer countdown (Standard) 	
Evacuation	<ul style="list-style-type: none"> - By default the application allows to evacuate all users or users by team. - Depending on local regulations it might be possible to allow single person evacuation as well. 	
Radio behavior	<ul style="list-style-type: none"> - How the application handles calculations of pressure when radio link has been lost. - Values are automatically calculated and updated as soon as radio link is reestablished. 	
Time alarm	<ul style="list-style-type: none"> - Depending on remaining calculated service time the application can display a time alert to make sure withdrawal can be performed 	
Cylinder threshold values	<p>Depending on the selected values the color indication of the central element within the monitoring module changes color:</p> <ul style="list-style-type: none"> - 1. Option Green -> Yellow - 2. Option Yellow -> Red 	
Cylinder pressure defaults	<ul style="list-style-type: none"> - Defines the standard cylinder types for manual fire fighters or users without telemetry module in their PASS device. - Several options can be selected; when a standard is selected all manually created persons use the defined pressure as standard starting value. 	<ul style="list-style-type: none"> - EU - Changes can be made (not recommended) - US - NFPA does not allow changes in predefined values
Gas defaults	<ul style="list-style-type: none"> - Reference gas values for calculating displayed LEL% when optional gas detector is used. 	<ul style="list-style-type: none"> - EU version only
Alarm settings	<ul style="list-style-type: none"> - Allows the definition of individual alarm sounds. The selected sounds will be displayed during accountability monitoring when an alarm occurs. 	<ul style="list-style-type: none"> - Sound level is depending to sound level of monitoring computer.
Altair 5 settings	<ul style="list-style-type: none"> - The optional ALTAIR 5 Settings allow individual alarm definitions for the optional gas detector. 	<ul style="list-style-type: none"> - EU version only

Change Settings for	Details	Limits
Teams	Predefined team names - Allows preparation of drop down entries - Im-/Export from Text file	
People	Predefined user names - Allows preparation of drop down entries - Im-/Export from Text file	
Alarm keywords	Predefined alarm keywords	

To change settings:

- (1) Change the values.
- (2) Accept changes with *Accept*
- (3) Return to module navigation with the arrow.

4.5 System

A2SERVICE

The Service control panel allows restarting the connection between the used base station and the application back end. As the interface is set-up to be a Windows service it runs completely in the background.

To refresh the current status of the service, tap on *Refresh*, the service status will be updated.

CAUTION

When restarting service during monitoring operation all connected PASS devices will be disconnected from radio module. Reconnection is required after restart of the service.

To restart the service:

- (1) Tap on *restart service*.
- (2) Confirm request for extended user rights
 - ▷ Service will be restarted

Licensing

To upgrade from the basic version, a license key for the full version can be entered here.



For licensing, having administrator rights is necessary for both A2 and Windows.

- (1) Go to *Settings* module.
- (2) Change to *Licensing*.
- (3) Enter the license key and tap on *Register*.

5 Use

5.1 Log In

Since not all software functions are available to all users, it is necessary to log in before using the software. For setting user rights, see section 4.3.

5.2 Operation

The software is optimized for use on touch-operated devices, therefore in this manual all necessary interactions are described for touch operation. When using a mouse, a tap can be replaced with a click. To swipe, keep the left mouse button pressed to be able to move an element.

To return to the previous screen or to the module navigator, use the back arrow.



Back Returns to the previous screen



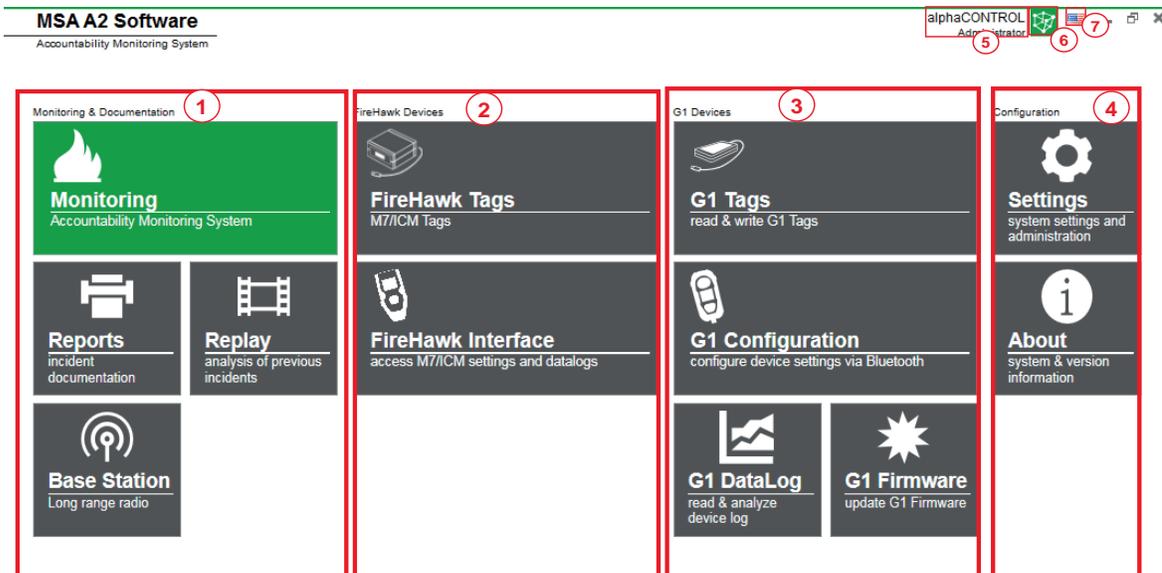
Home Returns to the module navigator

Depending on context, settings can be changed with the following controls:

Text field	tapping on a text field activates the on-screen keyboard	<input type="text" value="10"/>
Selection field	all options are shown after tapping on the arrow	<input type="text" value="Celsius"/>
Slide control	Choose between two options	<input type="checkbox"/>
Radio button	Choose between two options	<input checked="" type="radio"/> <input type="radio"/>
Slider	Choose a value in a predefined range	7 Bar <input type="range"/>

5.3 Module Navigator

After logging in, the module navigator is displayed.



- 1 Monitoring and Documentation
- 2 FireHawk Devices
- 3 G1 device
- 4 A2 configuration
- 5 Logged in user
- 6 Connection
- 7 Selected language

Module Group	Module	Description	Function
Monitoring and Documentation	Monitoring	Accountability monitoring system	Starts the accountability monitoring module
	Reports	Incident review and documentation	Starts the Reporting module
	Replay	Analysis of previous incidents	Starts the replay module
	Base stations	Hardware status view	Starts the Base station control monitor independent from used Base station Supported base stations can be found in section 2



Module Group	Module	Description	Function
FireHawk Devices	FireHawk Tags	Read and write Identification TAGs	Starts the related hardware interface
	FireHawk Interface	Change PASS device settings	Starts module to make changes in the PASS device itself and read out the internal memory of the device
G1 device	G1 Tags	Read and write Identification TAGs	Starts the related hardware interface
	G1 Configurations	Change G1 settings	<ul style="list-style-type: none"> - Alarm settings - Control module user interface settings - Tag/Accountability settings - Speaker module settings - HUD settings
	G1 DataLog	Read and analyze device log	To receive data from an SCBA out of service
	G1 Firmware	update G1 firmware	
Configuration	Settings	User administration and system settings	Starts the settings module to change system settings and change configurations for users
	About	System and version information	

5.4 Themes

A2 has two different color schemes.

	Icon	Appearance
Light theme		White background for daylight view
Dark theme		Black background for night view

To switch between the color schemes:

- (1) Swipe up on the application window or right-click on the bottom frame.
 - ▷ The icon for changing to the light or dark theme is displayed.
- (2) Tap on the icon.
 - ▷ The theme changes immediately.

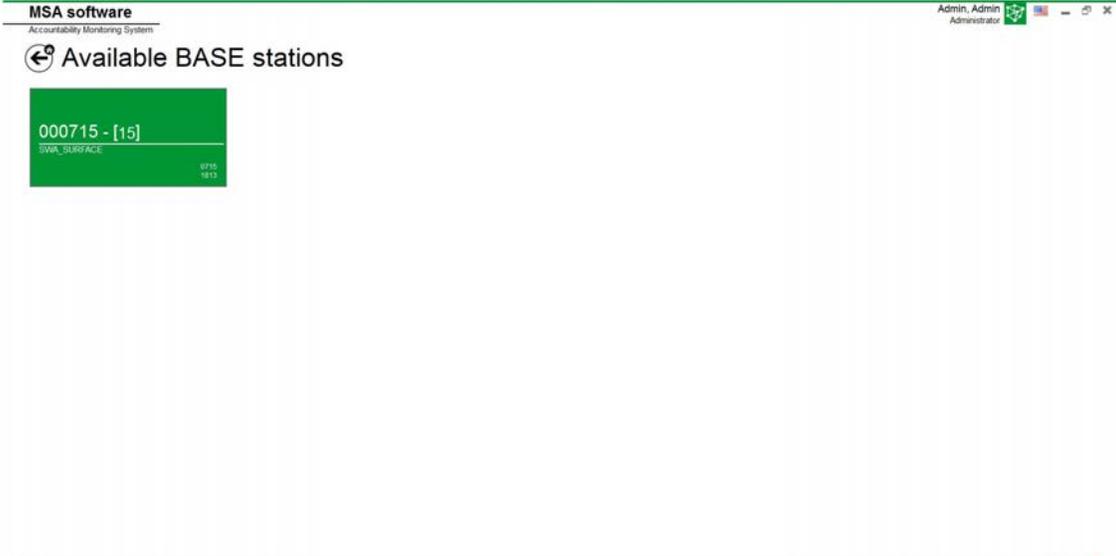
5.5 Language Selection

The language can be changed in the module navigator; tapping on the flag icon lists all language options.

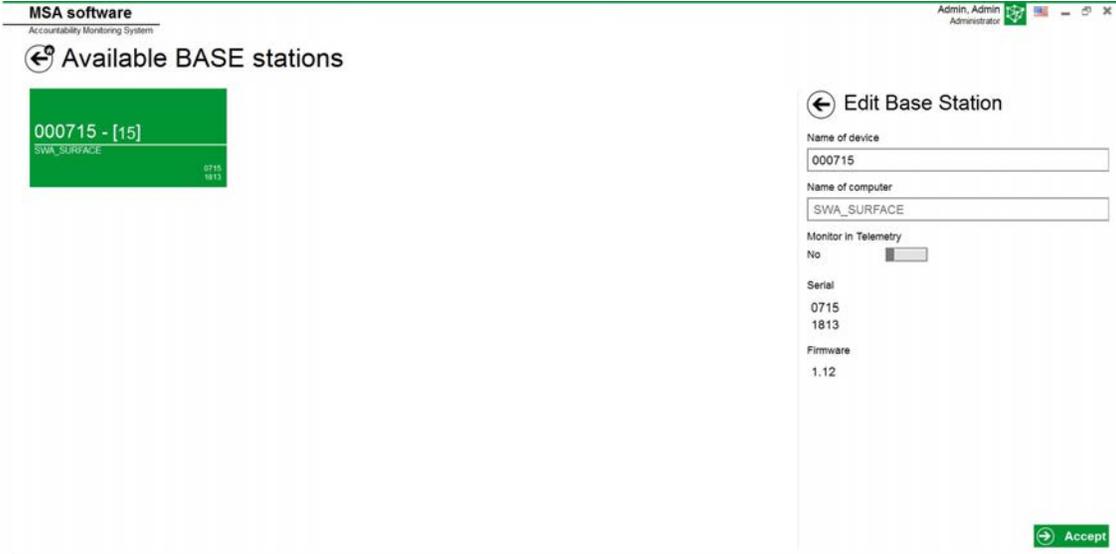
6 Before Operation

6.1 Module: BASE

All Base stations connected to the same network are shown; the local Base station is marked green. The numbers in brackets identify the preferred base station to program with the TAGwriter module.



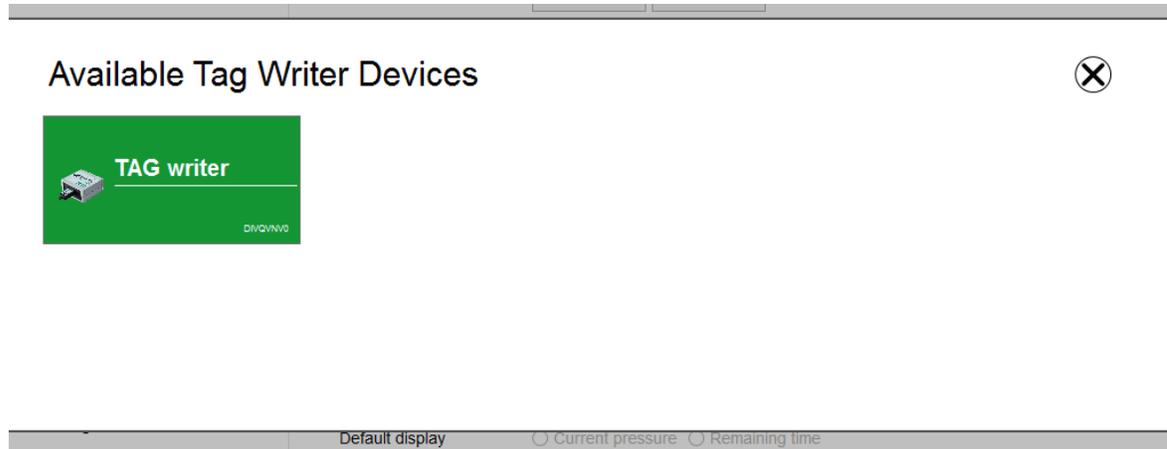
Changes can be made to label the connected Base station. Device information can be edited and the monitoring function for accountability monitoring can be set. Numbers in brackets identify number to program preferred base station. Changes have to be confirmed with *Accept*.



6.2 Module: Tag Writing

This module is used for writing and reading TAG information and for data transfer between PC and SCBA. Legacy Versions of telemetry equipped SCBA can be used with the A2 software but must also use their corresponding ICM, M7, M7XT or G1 Interface boxes to update telemetry tag information. When starting the module, a connected local TAG writer is recognised and selected automatically.

The currently selected device is shown in the lower left corner. When tapping *Select Other Device* a dialogue appears listing all available TAG writers. Local devices are highlighted green.



Depending on context, the following functions are available:

Icon	Function
	Create TAG to reset device settings.
	Read TAG
	Write TAG (this will overwrite the data on the Tag)

The following data can be changed:

- Fire fighter name
- Team name
- Preferred Base station

Entries are made using text fields, tapping on a text field activates the on-screen keyboard.

The software can also be used to copy or erase tags.

Tag Types

Personnel Tag	To provide personal information to display on the G1 Control Module and accountability software along with report and data logs.
Resource Assignment Tag	To permanently assign an SCBA to a specific resource or apparatus (e.g. Vehicle, Task, Seat Number).
G1 Configuration Tag	Allows a Tag to be saved of populated configuration fields and writes them into the SCBA. These changes take effect immediately and are maintained on the device until the configuration is changed.
Asset Tags	<p>These read-only tags are built into the following components of the G1:</p> <ul style="list-style-type: none"> - Facepiece - Regulator with HUD - Control module - Power module - Carrier and Harness assembly - Speaker module <p>To see the information about a piece of equipment, align the RFID reader with the RFID symbol on the equipment and select the <i>Read Tag</i> option.</p> <p>The G1 reader writer interface box can be used to read the RFID Asset tags on the device.</p> <p>The asset tags contain unique identification information which are programmed during manufacturing.</p>
Special Tags	These tags can be used for training purposes. Training Mode takes effect immediately but does NOT continue on following power-ups. Special Configuration tag can also include a reset of configuration before writing of new data.



US

6.3 Module: G1 Configuration

MSA software

Admin, Administrator

Accountability Monitoring System

← G1 Configuration

⌵

Scan for G1 Devices

Select a device to either read its current configuration or write a new configuration or partial configuration to the device. Ensure that your G1 is in data link mode before scanning.

GSCBA-99

Bluetooth Module:
WIN-3H5D077MH0

Select Other Device

A G1 configuration changes how the G1 functions. All of these settings are optional and they will only effect the settings that you change. A blank box means that setting will not be changed when this configuration is set.

To get more information about a setting, click on the setting name on the left column.

Alarm Settings

These settings are for controlling how the alarms will function on the unit.

Low Pressure Sound	Disabled
Medium Pressure Alarm Threshold	50%
Medium Pressure Sound	Disabled
Pressure Drop Alarm	Disabled
UAC RIT Light	Enabled
UAC RIT Light Threshold	At Low Pressure Alarm
Thermal Alarm	Enabled
Thermal Alarm Type	Secondary Alarm

Control Module UI Settings

These settings effect how the screen on the control module appears and what it displays.

Time Remaining till	Empty Cylinder
Screen Contents (Primary - Secondary)	Pressure - Time Remaining
Backlight Tilt Behavior	Timeout after period
Backlight Timeout (seconds)	5

Tag/Accountability Settings

These settings change how the G1 will handle personnel and resource assignment tags and how it will report these values to the accountability system.

Tag Store Duration	24 Hours
Tag Priority	Resource Assignment over Personnel
Tag Purpose	Resource Assignment
Long Range Radio	Enabled
Perferred Base Station	0

Speaker Module Settings

These settings effect how the speaker module will work

Voice Amplification	Auto On When Talking
Pre alarm in Voice Amp	Disabled

HUD Settings

These settings change how the Heads Up Display (Hud) functions

HUD Display Mode	Intermittant
------------------	--------------

The G1 Configuration module can be used to change how the G1 functions. A G1 SCBA can be configured using saved Configuration Tags or via a Bluetooth connection. All of the settings are optional and only the settings that are changed will be affected. If a setting is left blank it will not change when the configuration is performed.



Configuration via Bluetooth

Ensure that the PC has Bluetooth communication capability or that the Bluetooth dongle is plugged into the computer.



- (1) Set the G1 into Data Link mode:
 - ▷ Press and hold one of the green G1 Control module buttons until the battery logo disappears and the G1 service mode menu options appear.
- (2) Select DATA LINK from the menu.



- (3) Confirm the Bluetooth identification of the device is displayed on the control module screen.



- (4) Scan for the G1 device by selecting scan for G1 Devices.

G1 Configuration

Scan for G1 Devices

Select a device to either read its current configuration or write a new configuration or partial configuration to the device. Ensure that your G1 is in data link mode before scanning.

- (5) Select the desired SCBA and click the + icon to enter the G1 configuration application utility via Bluetooth. Select settings and then write to the device

For more information about each setting, click on the setting name, more information will be displayed. The settings can be adjusted for the following areas:

- Alarm settings
- Control module user interface settings
- Tag/Accountability settings
- Speaker module settings
- HUD settings



G1 Configuration settings can also be saved for future use. The fields *Name* and *Description* are required to save configurations. Saving to the database will allow access to saved configuration for updating devices via Bluetooth. Saved settings can be accessed via the *G1 Tags module*.

Alarm Settings

These settings change how the alarms will function on the SCBA for low pressure sound, medium pressure threshold/sound, pressure drop, RIT light activation and Thermal alarm.

Control Module UI Settings

These settings change how the screen on the control module appears and what it displays. Adjustable are the time remaining, screen contents, backlight behavior and timing.

Tag/Accountability Settings

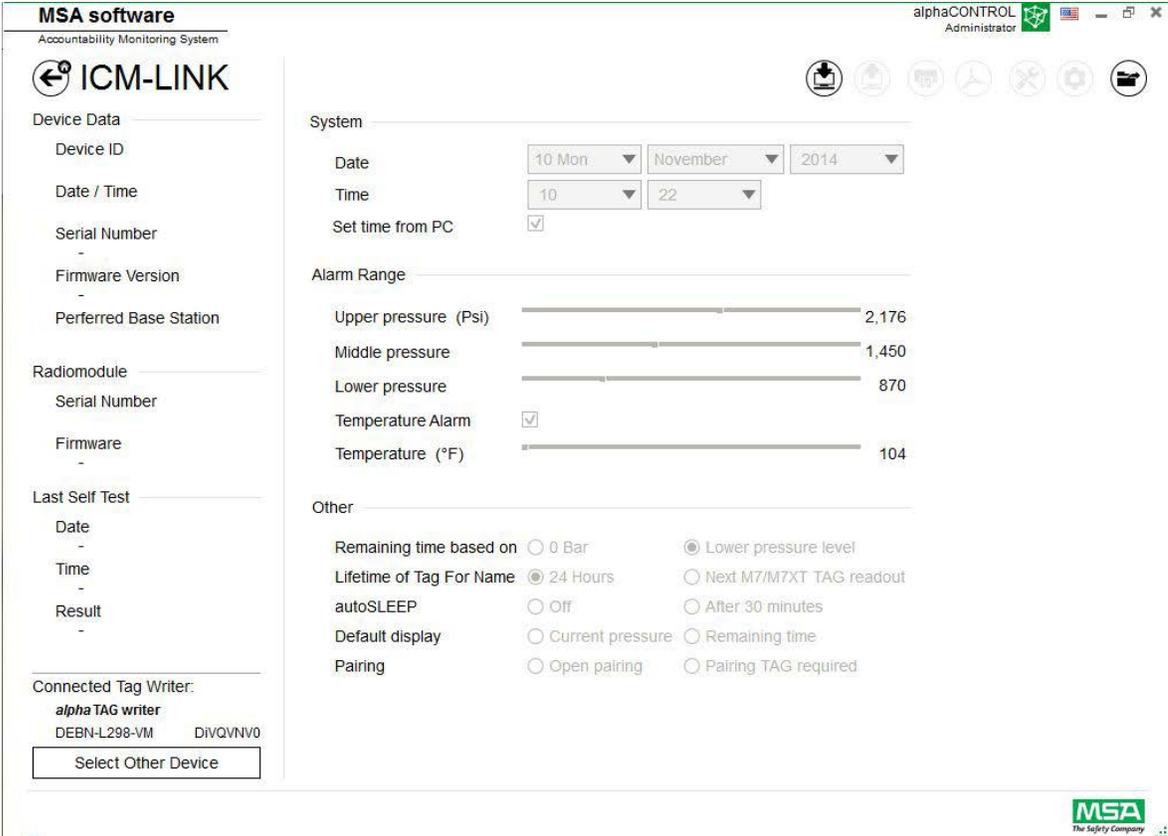
These settings change how the G1 will handle personnel and resource assignment tags and how it will report these values to the accountability system.

Speaker Module and HUD Settings

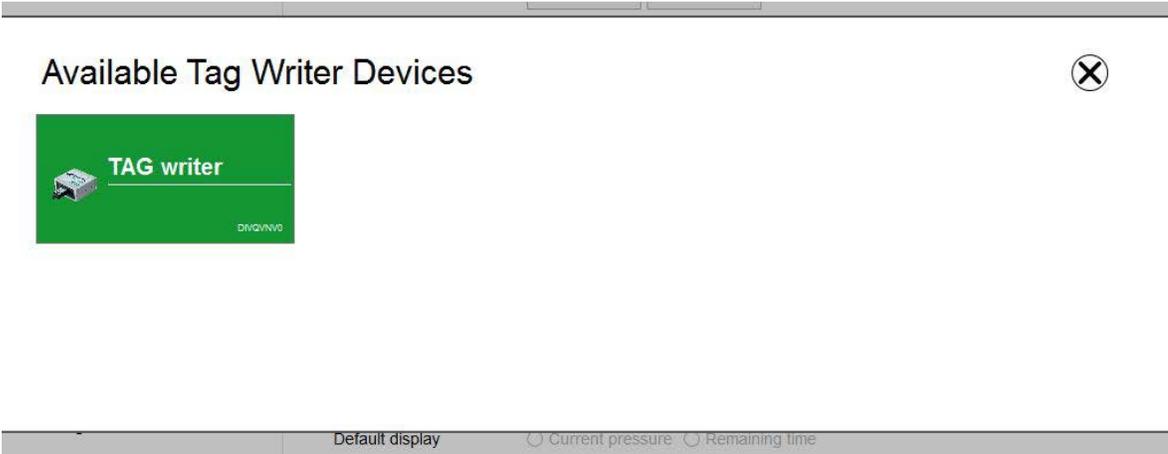
Speaker Module and HUD Settings affect how the Voice Amplification and Heads Up Display function.

6.4 Module: ICM-LINK

When starting the module, a connected local TAG writer is recognised and selected automatically.



The currently selected device is shown in the lower left corner. When tapping *Select Other Device* a dialogue appears listing all available TAG writers. Local devices are highlighted green.



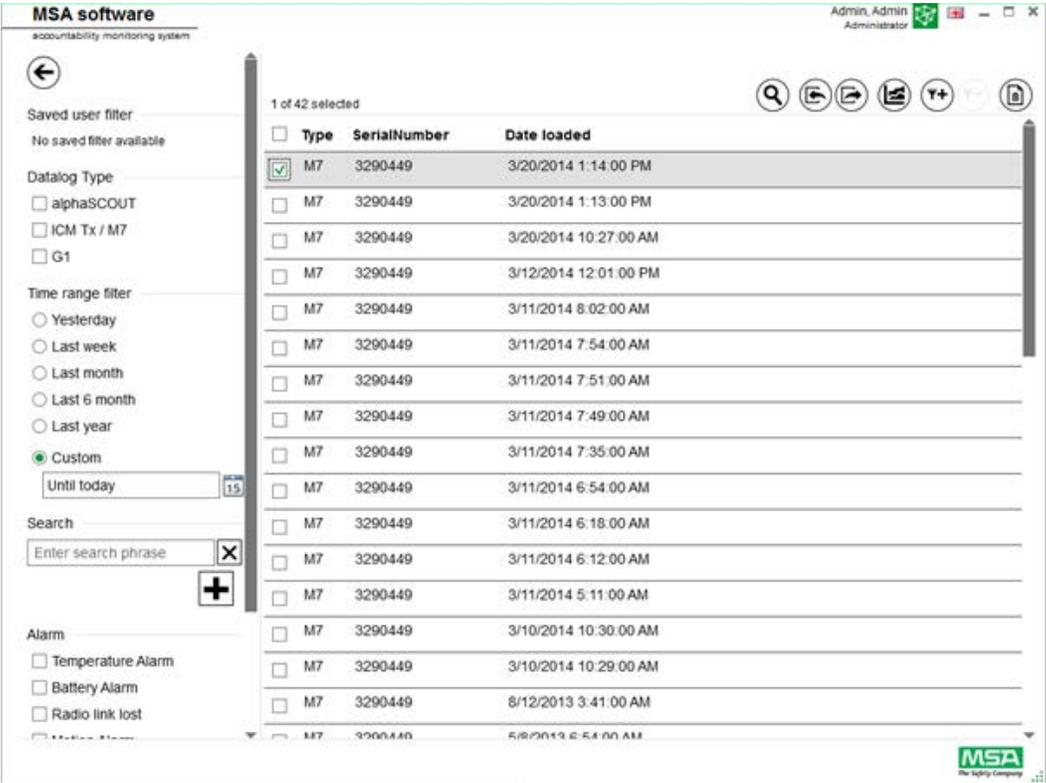
6.5 Data log

The log data downloaded by the device is recorded in the database. The G1 data can be retrieved via Bluetooth, for this the G1 must be in service mode.

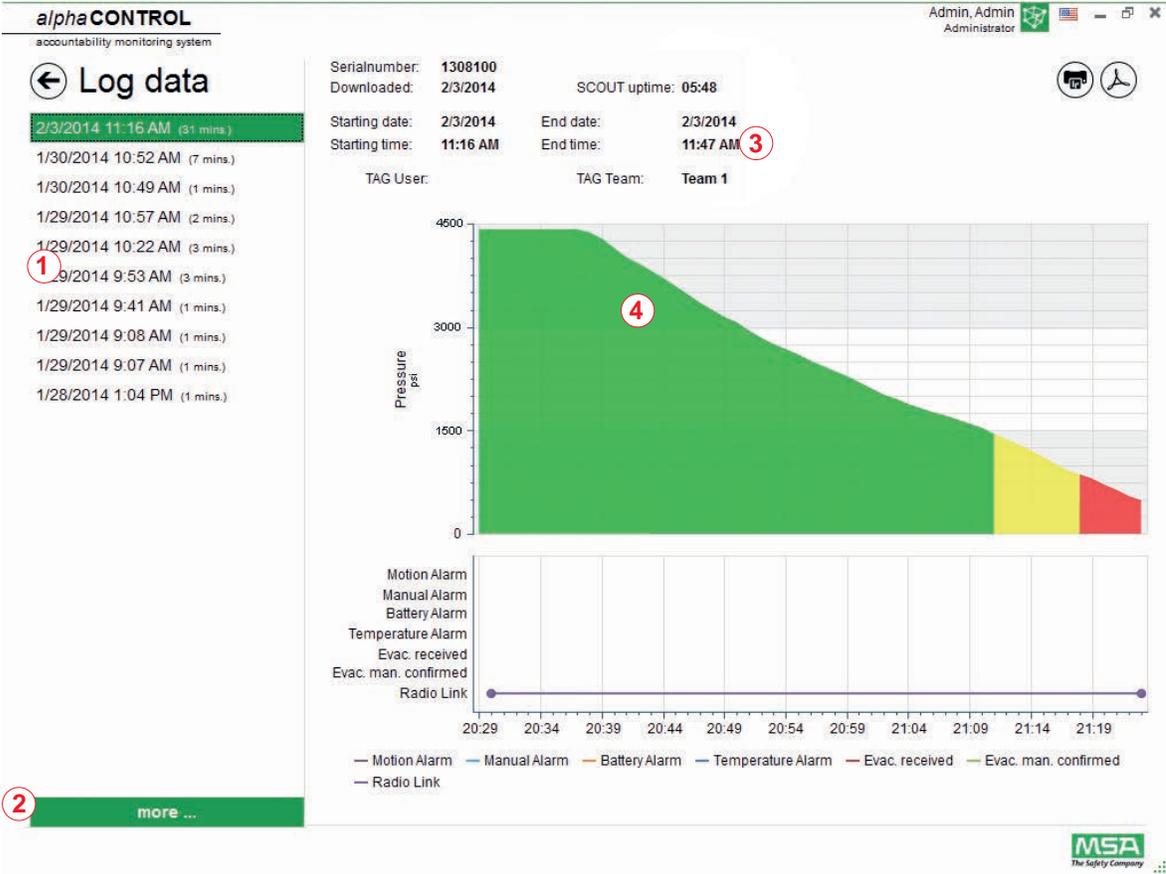
To find the relevant missions, several filters are available; it is possible to save user defined filters. The data log can show pressure over time via a graph and a log of alarm events seen on SCBA. Depending on context, the following functions are available.

Icon	Name	
	Search	
	Import incidents	Im- and Export use internal format to transfer incidents between computers.
	Export incidents	
	Evaluate	Shows the air pressure in 15 second increments over time.
	Save filter	<p>The application allows to save user defined filters:</p> <ol style="list-style-type: none"> (1) Add filter criteria. (2) Save filter. <ul style="list-style-type: none"> ▷ Add individual name & description for filter ▷ Accept to save ▷ Filter is displayed on left side under Saved user filter
	Delete filter	
	Delete	Only possible if user is administrator or allowed to delete

Tapping on *Search* refreshes the list of results.



Details of marked log data are shown as a graph after tapping on *Evaluate*.



- 1 Incident log (last 10 incidents)
- 2 Open complete incident list

- 3 Device data
- 4 Memory information from selected incident

 **Print** prints the current view

 **Export** exports current view as PDF

Straight export to PDF:

- (1) Tap on Export symbol
- (2) Select storage location
 - ▷ A PDF is created.
 - ▷ The PDF can be opened after creation from within application.



Depending on context, the following functions are available:

Icon	Function
	Open downloaded memory file from alphaSCOUT
	Read firmware settings (depending on the installed firmware, some features might not be displayed)
	Transfer changes from computer to alphaSCOUT
	Print
	Export (to PDF file)
	Additional PASS device functions
	Save/Load changed values as default to/from hard drive.



US

After tapping on *Read firmware settings*, the settings turn active and can be adjusted.

The screenshot shows the MSA software interface for the ICM-LINK device. The top bar includes the MSA logo and the text 'alphaCONTROL Administrator'. The main interface is divided into several sections:

- Device Data:**
 - Device ID: F4
 - Date / Time: 11/10/2014 11:18 AM
 - Serial Number: 2308340
 - Firmware Version: 1.45
 - Perferred Base Station: 00
- Radiomodule:**
 - Serial Number: 107905
 - Firmware: 1.12
- Last Self Test:**
 - Date: -
 - Time: -
 - Result: -
- Connected Tag Writer:**
 - alpha TAG writer
 - DEBN-L298-VM DIVQVNV0
 - Select Other Device
- System:**
 - Date: 10 Mon, November, 2014
 - Time: 10, 22
 - Set time from PC:
- Alarm Range:**
 - Upper pressure (Psi): 2,176
 - Middle pressure: 1,450
 - Lower pressure: 870
 - Temperature Alarm:
 - Temperature (°F): 160
- Other:**
 - Remaining time based on: 0 Bar, Lower pressure level
 - Lifetime of Tag For Name: 24 Hours, Next M7/M7XT TAG readout
 - autoSLEEP: Off, After 30 minutes
 - Default display: Current pressure, Remaining time
 - Pairing: Open pairing, Pairing TAG required

WARNING

Ensure that the alarm ranges are safe. It is the responsibility of the user to check all data entered via the software.

The software checks that alarm ranges descend from upper pressure to lower pressure. By default the alarm ranges are set according to NFPA requirements.



6.6 Firmware PASS device

When no device is connected, all settings are inactive.

The screenshot shows the MSA software interface with the following sections:

- MSA software** (Accountability Monitoring System) - alphaCONTROL Administrator
- ICM-LINK** (Device Data):
 - Device ID: F4
 - Date / Time: 11/10/2014 11:18 AM
 - Serial Number: 2308340
 - Firmware Version: 1.45
 - Perferred Base Station: 00
- Radiomodule**:
 - Serial Number: 107905
 - Firmware: 1.12
- Last Self Test**:
 - Date: -
 - Time: -
 - Result: -
- Connected Tag Writer**:
 - alpha TAG writer
 - DEBN-L298-VM DIVQVNV0
 - Select Other Device
- System**:
 - Date: 10 Mon, November, 2014
 - Time: 10, 22
 - Set time from PC:
- Alarm Range**:
 - Upper pressure (Psi): 2,176
 - Middle pressure: 1,450
 - Lower pressure: 870
 - Temperature Alarm:
 - Temperature (°F): 160
- Other**:
 - Remaining time based on: 0 Bar, Lower pressure level
 - Lifetime of Tag For Name: 24 Hours, Next M7/M7XT TAG readout
 - autoSLEEP: Off, After 30 minutes
 - Default display: Current pressure, Remaining time
 - Pairing: Open pairing, Pairing TAG required

- | | | | |
|---|--|---|---|
| 1 | Device information | 3 | Last performed self test |
| 2 | Radio module information (Only filled when PASS device has long range radio) | 4 | Current settings (may differ depending to PASS device firmware version) |

6.7 Available Firmware settings

PC time	Transfers current PC time to PASS device memory and as starting point for internal real time clock	
Alarm range	Depending to defined pressure unit (Bar/PSI/Mpa), Warning and alarm thresholds can be set up within the device	Upper Medium Lower

Levels are connected to each other but allow individual configuration.

Additional settings

Remaining time based on	defines if remaining service time is calculated from 0 bar or lower pressure level
Lifetime of TAG for name	defines how long a read in TAG with name information is kept in the memory
autoSLEEP	Allows alphaSCOUT to go to deep stand by and turns of auto start when cylinder is opened without reading in an TAG before
Default display	defines the standard information on screen of the user pressure or remaining service time
Pairing	Defines if alphaSCOUT is allowed to start pairing mode manually or only after reading in an prepared TAG with pairing function

Additional PASS device functions

Download and show log data	Transfers memory from PASS device, saves it on computer and displays the information (compare Incident log.docx)
Clear Log	Deletes all incidents from PASS device memory
Self test	Cuts connection to PASS device and initiates the start-up procedure incl. self test
Perform self test	<ol style="list-style-type: none"> (1) Connect device. (2) Tap on self test. (3) Answer questions. <ul style="list-style-type: none"> ▷ Last self test information is updated in device information incl. result
Reset to factory settings	all made changes within the firmware are changed back to default

Save/Load changed values as default to/from hard drive

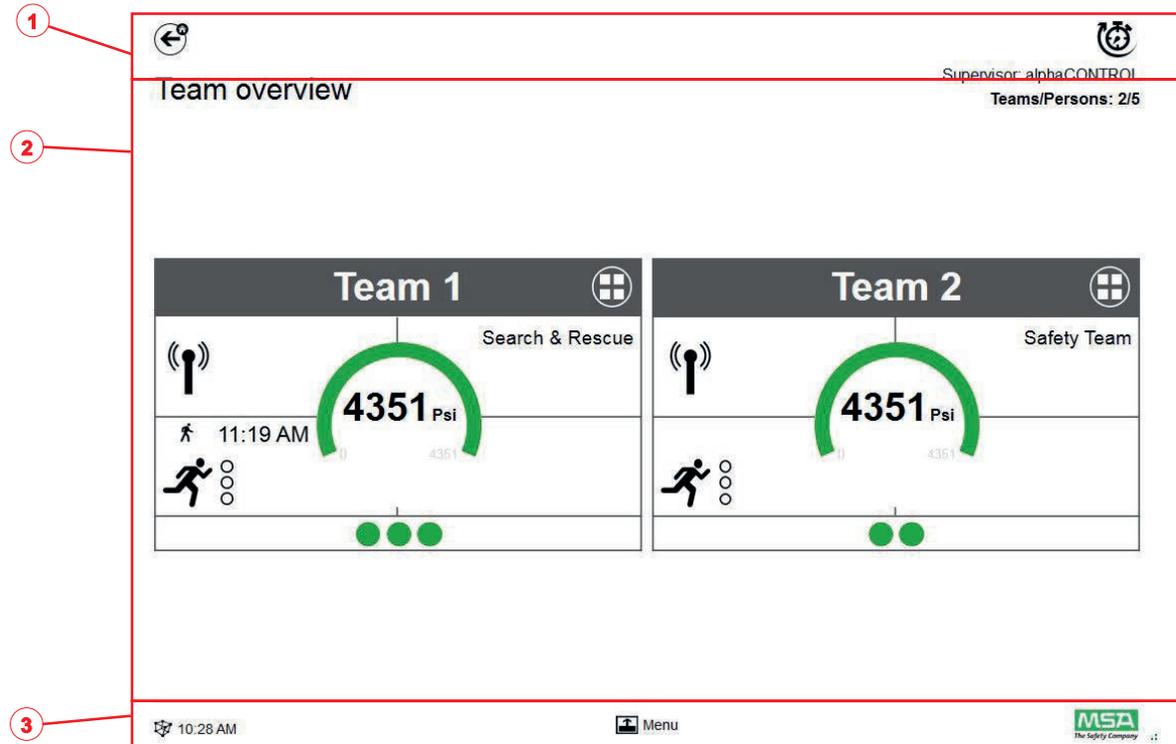
Load previously saved settings from hard drive	
Save current settings as default values to local hardware	
Reset device	Resets locally stored/changed default settings to factory settings



7 During Operation: Accountability Control

A2 - Accountability Control is the operational control module that monitors the data from all operational units. During operation, A2 is in continuous contact with all logged in PASS devices and receives their data.

The screen is divided into three areas:



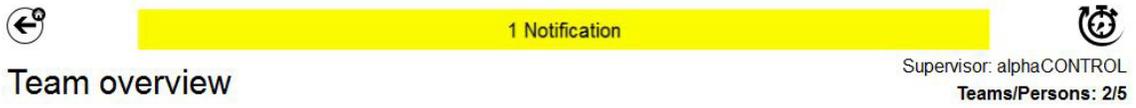
- 1 Functions and Warnings
- 2 Monitoring area
- 3 Action menu

7.1 Functions and Warnings

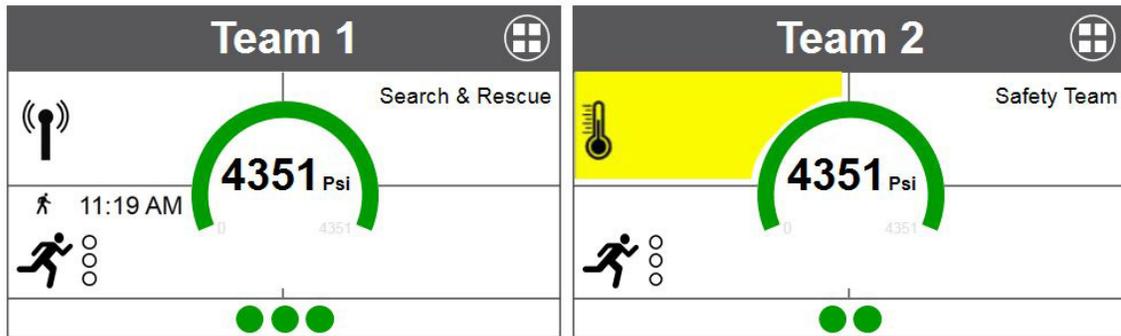
Icon	Name	Function
	Back	Returns to the previous screen
	Home	Returns to the module navigator and closes incident
	Timer	Opens the integrated global PAR (Personal Alarm Reminder) timer
	Pending devices	Visible if at least one alphaSCOUT device is currently in the log in process. The number of devices is shown under the icon. Tapping on the icon shows device details.
	Battery status	Indicates the battery charge level of a locally connected alphaBase device

Warnings

If a warning event occurs, a warning button appears.

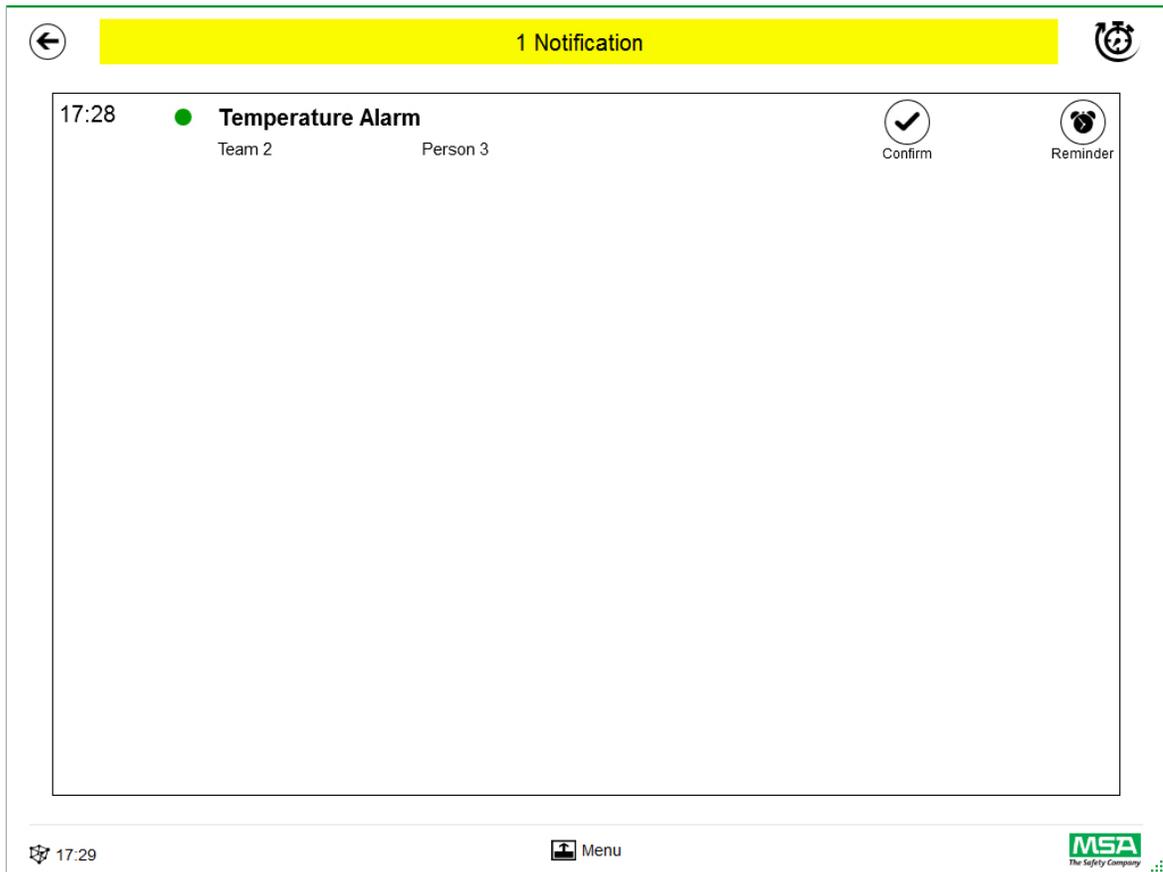


Team overview



The warning log is displayed after tapping the warning button.





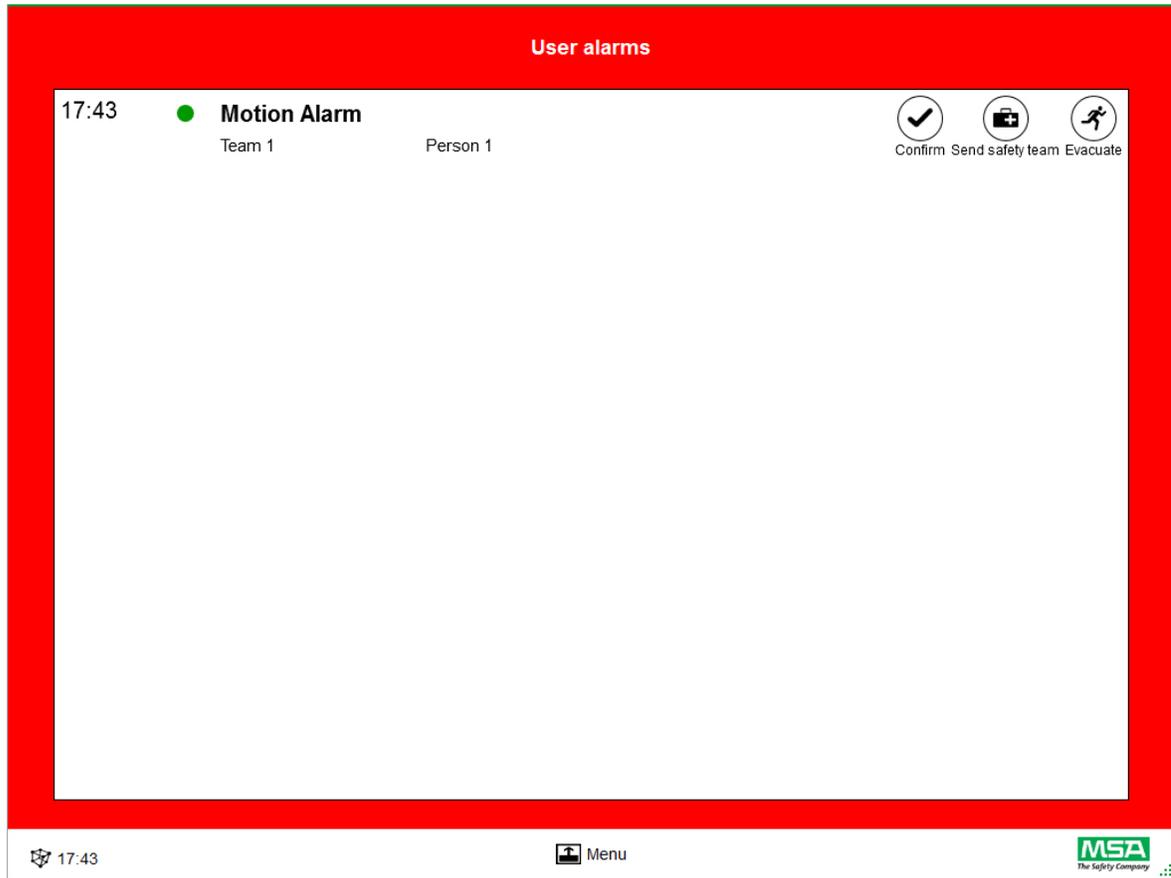
Acknowledged warnings are documented.

Alarms

Alarm will be displayed on the complete screen. Every alarm must be acknowledged for the alarm screen to disappear. Alarms are also signaled with an audio signal.

Listed for each alarm are

- Time the alarm was triggered
- Pressure indication (dot)
Color represents team pressure status
- Alarm type
- Team name
- Name of the affected person
- Further details if available (e. g. sector, order)



Icon	Function
	Confirm the alarm Confirmed alarms are documented.
	Send safety team Sends dedicated rescue team. Opens team selection and displays current order - When a safety team is selected this is documented and the alarm is automatically confirmed.
	Evacuate Send evacuation signal

US

Multiple alarms are listed and have to be confirmed separately.

The screenshot displays a 'User alarms' interface with a red header. It lists three alarm events, each with a timestamp of 17:43 and a green status indicator. The first alarm is a 'Motion Alarm' for Team 2, Person 3. The second is a 'Manual Alarm' for Team 1, Person 2. The third is a 'Motion Alarm' for Team 1, Person 1. Each entry has three icons for actions: a checkmark for 'Confirm', a first aid kit for 'Send safety team', and a running person for 'Evacuate'. The interface also includes a status bar at the bottom with a shield icon, the time 17:43, a 'Menu' button, and the MSA logo.

Time	Alarm Type	Team	Person	Confirm	Send safety team	Evacuate
17:43	Motion Alarm	Team 2	Person 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17:43	Manual Alarm	Team 1	Person 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17:43	Motion Alarm	Team 1	Person 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7.2 Monitoring Area

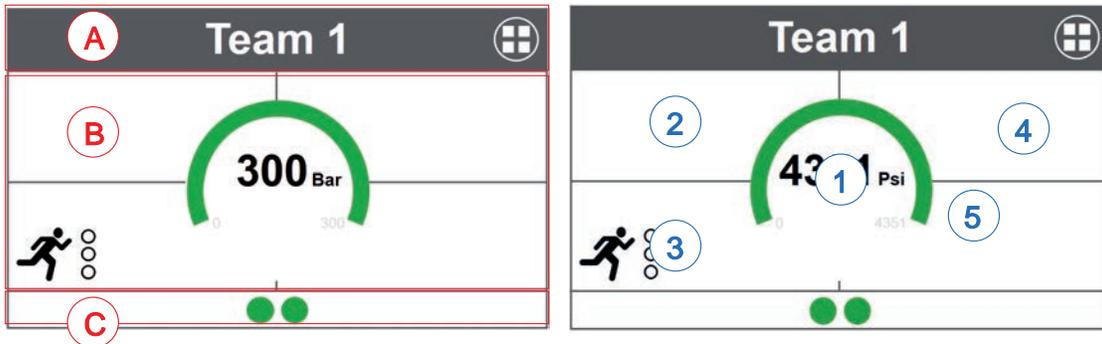
The monitoring area shows the status of the teams and persons currently monitored.

Every team is shown in a separate tile. Predefined device information regarding to team and user name is displayed automatically after successful login using long range radio. Persons and teams can be added manually. It is not possible to save persons and teams.

WARNING

Observe the maximum number of teams that can be monitored regarding to local legislation, the software does not limit this number.

A tile is divided into the following areas.



- | | |
|---|---|
| <p>A Person/Team name</p> <p>B Details</p> <p>C Team members (dot color represents pressure status)</p> | <p>1 Pressure</p> <p>2 Device status alarms</p> <p>3 Evacuation status/Incident status</p> <p>4 Task, location, sector, order</p> <p>5 Additional devices (e. g. ALTAIR 5X)</p> |
|---|---|

Team Members

There is no limit of persons per team. More than 6 persons per team will be indicated by a numeric value. The dot changes color depending on pressure status. Color thresholds can be set by the user in the Settings module, under Common settings. A value shown for the complete team is always the determining value or status present in the team.



Number of team members

If at least one person is not assigned to a team, a special tile (holding bin/unassigned) contains these unassigned persons.

Pressure Gauge

The pressure gauge changes color depending on pressure status, additional information is shown under the pressure status. Color thresholds can be set by the user in the *Settings* module, under *Common settings*.



Remaining service time
Timer since started
breathing (Count up)

Timer countdown
(Standard)

One of the following time values can be displayed in the central area:

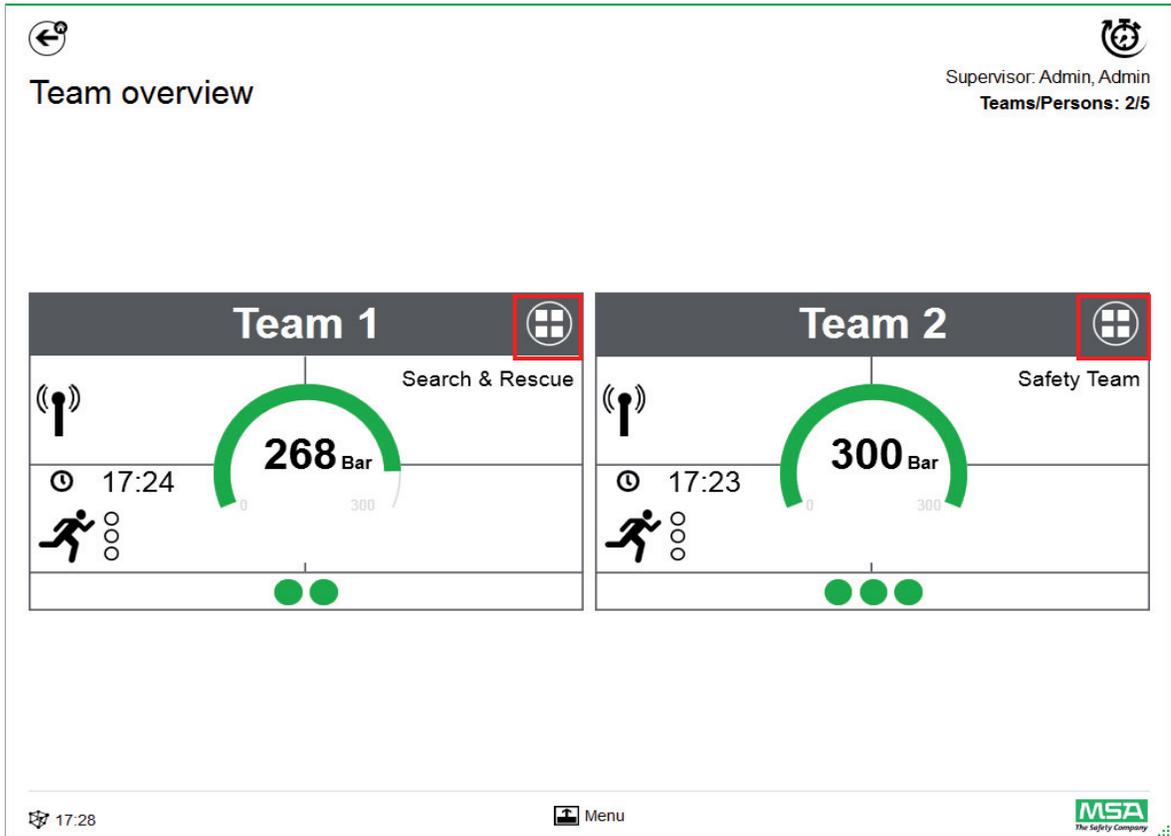
- Remaining service time
- Count up from first calculated breathing time
- Count down from selected value (standard setting)

Possible Device status alarms:

- Battery warning
- Temperature warning
- Connection state
- Man down alarm
- Manual alarm
- Pressure alarm
- Remaining service time

Team Overview

A value shown for the complete team is always the determining value or status present in the team. Tapping on the tile opens a specific context menu with several options to perform changes on team properties. Tapping on *Show details* opens team details and allows a view on the individuals.



Team Details



Team details - Team 1

Search & Rescue

🕒 15:50 min



Supervisor: alphaCONTROL

Teams/Persons: 1/3

Person 1	Person 2

🕒 3:38 PM

☰ Menu



Swiping across the detail area of a tile opens the status detail information page.

US

If applicable, the times of the following actions are displayed.

Icon	Action
	Activated
	Breathing started
	Location
	Retreat

The evacuation status is also displayed.

				
No evacuation	Evacuation command sent	Evacuation received by PASS device	Evacuation confirmed by user	

Tapping on the tile opens a tile specific context menu with several options.

←

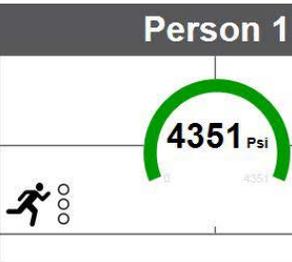


Supervisor: alphaCONTROL
Teams/Persons: 1/3

Team details - Team 1

Search & Rescue 🕒 12:17 min

Person 1



Person 2





Person 3



🕒 3:41 PM
☰ Menu

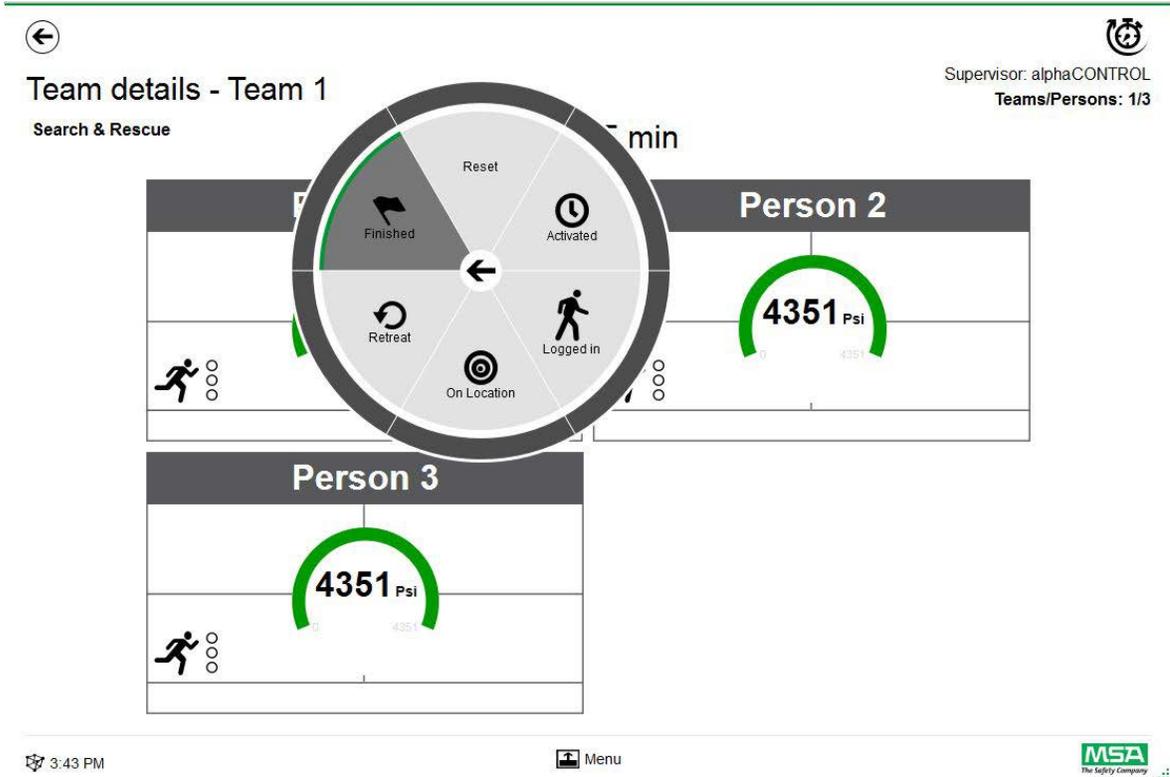



Depending on context, the following functions are available:

Icon	Name	Function
	Show details	Opens the detailed view, same function as tapping on the grey bar
	Evacuate team	<p>Depending on current status:</p> <ul style="list-style-type: none"> - Sends team evacuation - When evacuation has been done completely - Monitoring personal can confirm manual evacuation for fire-fighters without telemetry - When all team members have confirmed evacuation can be reset on devices
	Change incident status	<p>Status possibilities:</p> <ul style="list-style-type: none"> - Logged in - On location - Retreat - Finished - Reset - Activated
	Timer	<p>Only visible when team count down is selected as standard time to be displayed.</p> <ul style="list-style-type: none"> - Sets timer for person team
	Edit	Opens detail window
	Start manual (only for manually created persons)	Starts manual calculation of pressure. For the team members affected this icon is shown in the tile together with the starting time of the manual calculation. Calculation is based on predefined values in <i>Settings- Cylinder pressure defaults</i> .
	Remove team	<i>Remove team</i> removes the team, the persons remain, these persons are moved to tile <i>No team-Holding bin</i> .
	Remove person	<p><i>Remove person</i> only removes a person if that person was created manually or if the connection was lost.</p> <p>Removing the last person in a team will automatically also remove this team.</p>

A white arrow in the outer circle indicates a submenu or a necessary confirmation after tapping an icon.



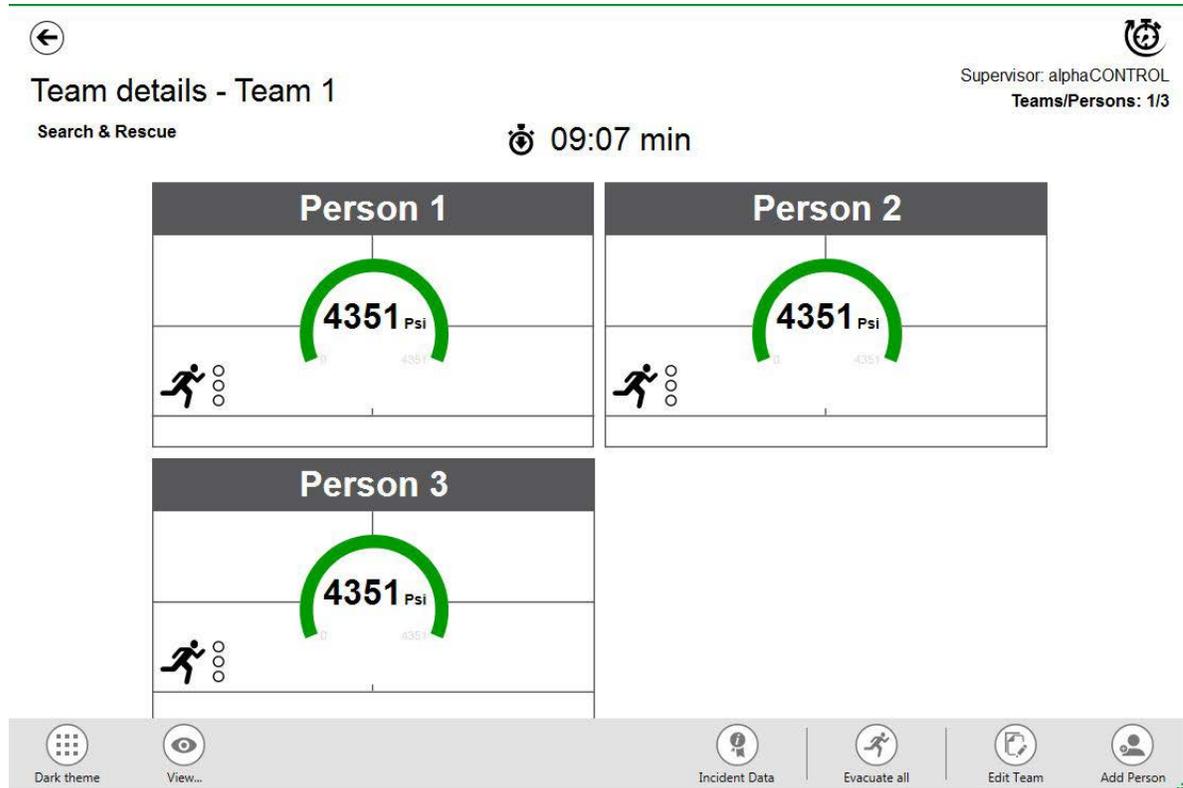


To return to the submenu, tap on the arrow in the center; to dismiss, tap outside the circle.

US

7.3 Menu

Tapping on the menu bar opens the menu bar on the bottom of the screen.



Depending on context, the following functions are available. (All icons are available for light and dark view.)

Icon	Name									
	Dark theme	For information about themes, see section 5.4.								
	View	<table border="0"> <tr> <td>Grouping</td> <td>Filters</td> </tr> <tr> <td>- No grouping</td> <td>- View Sectors</td> </tr> <tr> <td>- Group by incident state</td> <td>- View Network</td> </tr> <tr> <td>- Group by Pressure</td> <td></td> </tr> </table>	Grouping	Filters	- No grouping	- View Sectors	- Group by incident state	- View Network	- Group by Pressure	
Grouping	Filters									
- No grouping	- View Sectors									
- Group by incident state	- View Network									
- Group by Pressure										
	Incident data									
	Evacuate all									
	Task for all									
	Add...	<ul style="list-style-type: none"> - Add Team - Add Person - Add Sector 								

View

The application provides several views that can be easily changed by the user if required. It is possible to group by incident state or pressure, or to filter which teams and persons are shown. With *View* it is also possible to see other sectors or the complete network.

Teams grouped by incident status:

Sorting is based on the defined state within context menu for team or based on the status from alphaSCOUT.

Teams grouped by status:



Sector overview

Sector view is based on team information regarding sectors.

The screenshot displays the 'Team overview' section on the left and a 'New Sector' form on the right. The 'Team overview' section shows two team cards: 'Team 1' and 'Team 2'. Team 1 is assigned to 'Fire Fighting 1 st floor' and shows a pressure gauge at 3302 Psi, a start time of 3:45 PM, and a duration of 14:46 min. Team 2 is assigned to 'Fire Fighting Roof' and shows a pressure gauge at 3298 Psi, a start time of 3:45 PM, and a duration of 14:35 min. The 'New Sector' form has a text input field containing 'Sector 1'. At the bottom of the interface, there are buttons for 'Add Teams' and 'Accept', along with a status bar showing '3:53 PM', a 'Menu' icon, and the 'MSA The Safety Company' logo.

Incident Data

Use *Incident Data* to enter incident information or additional information.

Evacuate all

Evacuate all evacuates all monitored persons, independent of their accountability status. For the display sequence see page 33.

Task for All

Task for all defines a task for all visible elements (persons, teams or sectors).

The screenshot displays the alphaCONTROL interface. On the left, the 'Team overview' section shows two team cards:

- Team 1:** Search & Rescue, 1 st floor. Pressure gauge shows 3937 Psi. Time: 3:45 PM. Duration: 05:05 min. Status: 3/3 members.
- Team 2:** Safety Team, Roof. Pressure gauge shows 3974 Psi. Time: 3:45 PM. Status: 2/2 members.

On the right, the 'Task For All' configuration panel is shown:

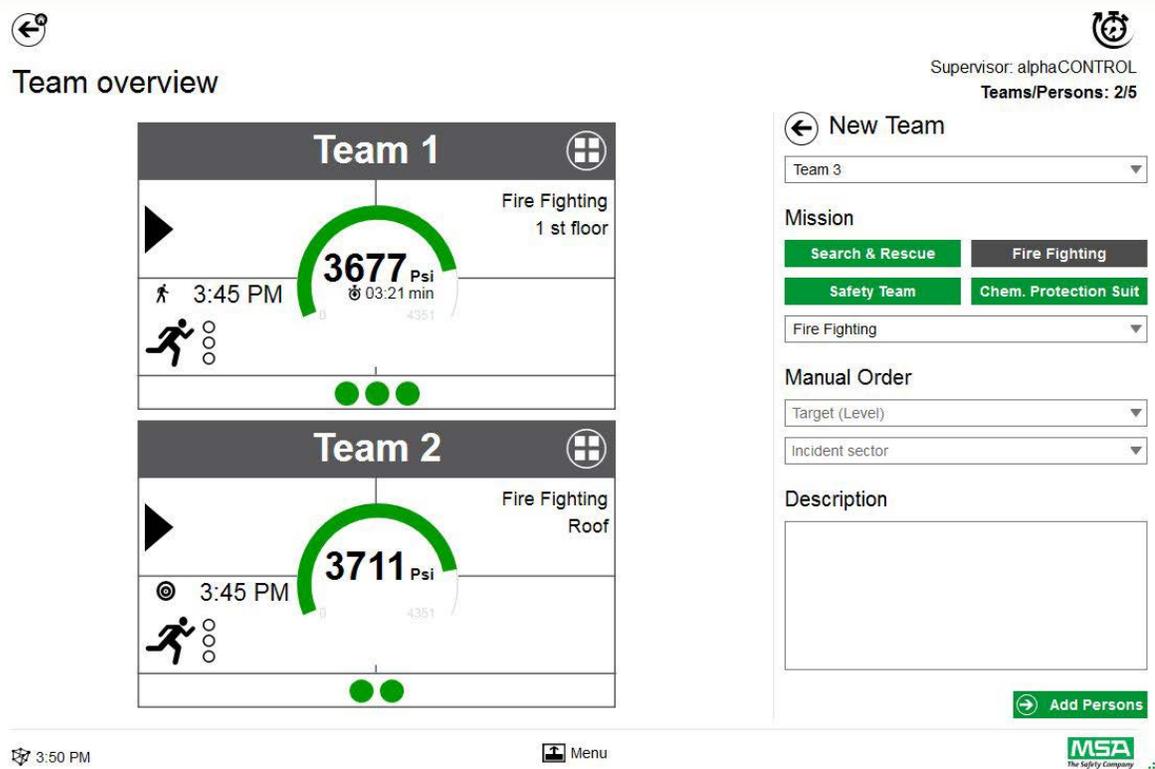
- Supervisor: alphaCONTROL
- Teams/Persons: 2/5
- Mission: Search & Rescue, Fire Fighting, Safety Team, Chem. Protection Suit
- Additional Order: (Dropdown menu)
- Manual Order: Target (Level), Incident sector (Dropdown menu)
- Description: (Text area)
- Accept: (Green button)

At the bottom of the interface, there is a timestamp '3:48 PM', a 'Menu' icon, and the MSA logo.

Add Team

Manual teams can be created with *Add - Team* in the main menu.

- (1) Tap on menu area.
- (2) Tap on *Add*.
- (3) Tap on *New team*.
- (4) Enter team information in the right panel.
- (5) Select team order with the buttons.
 - ▷ Order will be filled automatically.
 - ▷ If an order is necessary that is not provided, it can be added manually.
- (6) Choose or add Target/Level.
 - ▷ For target information and/or level.
- (7) If required, add Incident sector and an additional description.



- (8) Add persons by following the wizard.
- (9) Mark existing persons (PASS devices are shown in the list with serial number or tagged identification) or create new persons manually.
 - ▷ Persons in holding bin are displayed here as well.
- (10) Accept the selection of persons to create the team.





Team overview



Supervisor: alphaCONTROL
Teams/Persons: 2/5

Team 1

Fire Fighting
1 st floor

3:45 PM 3602 Psi 02:48 min

3:45 PM 3636 Psi

Team 2

Fire Fighting
Roof

3:45 PM 3636 Psi

Team 3

New Person

- Team 1
 - Person 1
 - Person 2
 - Person 3
- Team 2
 - Person 4
 - Person 5

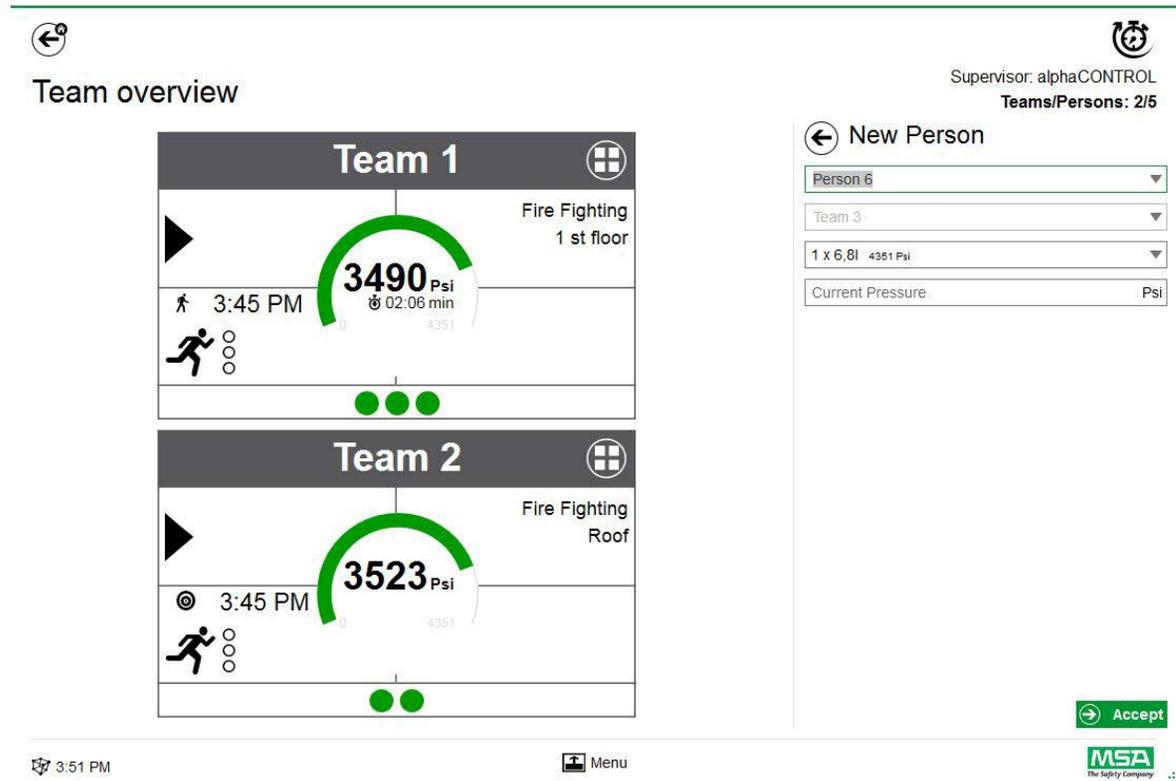
Accept

3:51 PM

Menu



After tapping on *Add Persons*, existing persons can be moved between teams or new persons can be created with *New Person*.

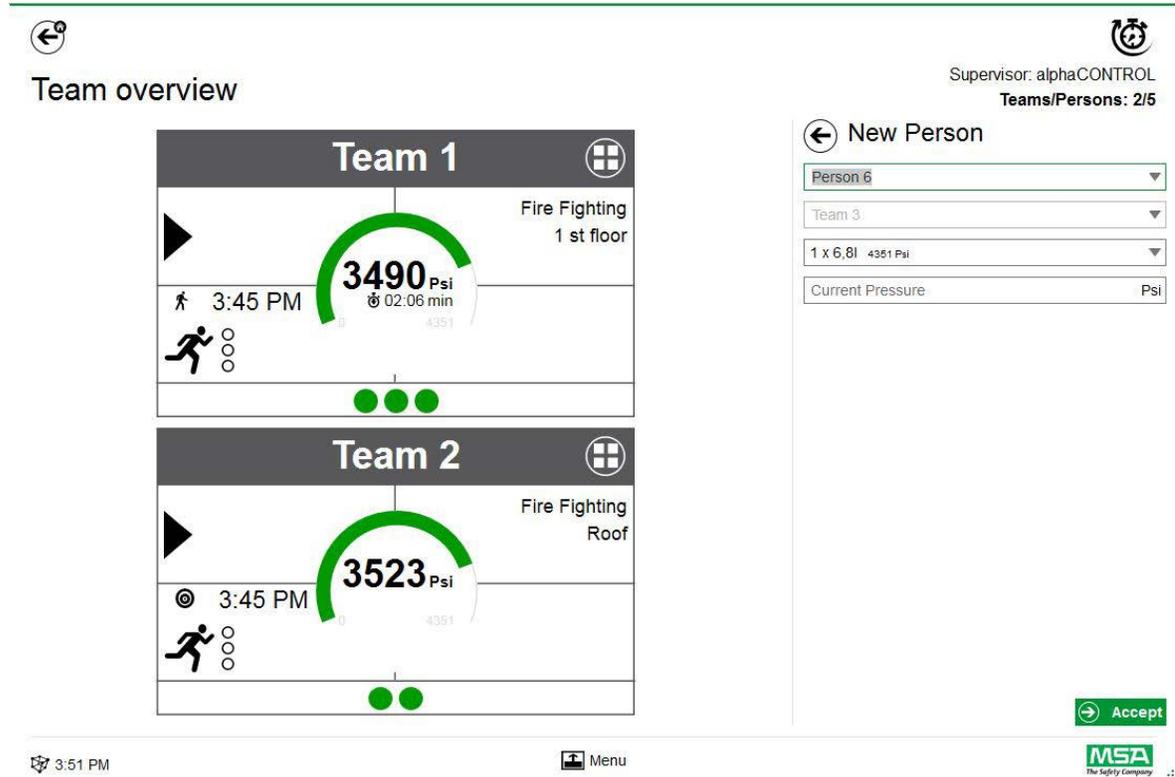


Every input has to be confirmed with *Accept*.

Teams and persons can be edited using the context menu in detailed view.

Add Person

Use *Add Person* to create new persons. (Persons will be added automatically to a team if *Add Person* is tapped on in team detail view for this team.)



Every input has to be confirmed with *Accept*.

Add Sector

Use *Add Sector* to move teams or persons to a location. Sectors created/used while creating teams are automatically added to the selection list when teams are created/edited. The sector is then shown in the tile.

The screenshot displays the alphaCONTROL interface. On the left, under the heading "Team overview", there are two team tiles. The top tile is for "Team 1", assigned to "Fire Fighting 1 st floor". It shows a pressure gauge at 3302 Psi, a start time of 3:45 PM, and a duration of 14:46 min. The bottom tile is for "Team 2", assigned to "Fire Fighting Roof", showing a pressure gauge at 3298 Psi and a start time of 3:45 PM. On the right, a "New Sector" dialog is open, with a text input field containing "Sector 1". At the bottom of the dialog are "Add Teams" and "Accept" buttons. The top right of the interface shows "Supervisor: alphaCONTROL" and "Teams/Persons: 2/5". The bottom left shows a clock at 3:53 PM and a "Menu" icon. The MSA logo is in the bottom right corner.

Every input has to be confirmed with *Accept*.



8 After Operation

8.1 Reports

All user interactions and hardware based changes are recorded in the database. Information about past missions can be printed and exported here. To find the relevant missions, several filters are available; it is possible to save user defined filters.

The screenshot shows the 'Reports' section of the MSA software. The interface includes a sidebar with filters and a main table of incident records. The sidebar filters include 'Saved user filter' (None), 'Search' (text input), 'Time range filter' (radio buttons for Yesterday, Last week, Last month, Last 6 month, Last year, and Custom), and 'Alarm' (checkboxes for Temperature alarm, Battery Alarm, Radio link lost, Motion alarm, Manual alarm, Pressure alarm, and Remaining Time Alarm). The main table displays 19 selected incidents with columns for Incident start date, Incident end date, Location, Duration, and Keyword. Each row has a checkbox for selection.

<input checked="" type="checkbox"/>	Incident start date	Incident end date	Location	Duration	Keyword
<input checked="" type="checkbox"/>	12/18/2013 11:42 AM	12/18/2013 11:42 AM	-	00:00	
<input checked="" type="checkbox"/>	12/18/2013 9:12 AM	12/18/2013 11:45 AM	-	02:32	
<input checked="" type="checkbox"/>	12/17/2013 11:04 AM	12/17/2013 4:26 PM	-	05:22	
<input checked="" type="checkbox"/>	12/17/2013 8:52 AM	12/17/2013 11:02 AM	-	02:10	
<input checked="" type="checkbox"/>	12/16/2013 3:04 PM	12/16/2013 4:45 PM	-	01:40	
<input checked="" type="checkbox"/>	12/16/2013 2:04 PM	12/16/2013 2:53 PM	-	00:49	
<input checked="" type="checkbox"/>	12/16/2013 1:33 PM	12/16/2013 2:03 PM	-	00:29	
<input checked="" type="checkbox"/>	12/16/2013 1:28 PM	12/16/2013 1:33 PM	-	00:05	
<input checked="" type="checkbox"/>	12/16/2013 11:06 AM	12/16/2013 1:23 PM	-	02:16	
<input checked="" type="checkbox"/>	12/13/2013 10:04 AM	12/13/2013 10:04 AM	-	00:00	
<input checked="" type="checkbox"/>	12/13/2013 10:04 AM	12/13/2013 10:04 AM	-	00:00	
<input checked="" type="checkbox"/>	12/13/2013 9:50 AM	12/13/2013 9:51 AM	-	00:00	
<input checked="" type="checkbox"/>	12/13/2013 8:06 AM	12/13/2013 9:43 AM	-	01:36	
<input checked="" type="checkbox"/>	12/12/2013 11:40 AM	12/12/2013 12:39 PM	PI	00:58	
<input checked="" type="checkbox"/>	12/11/2013 12:04 PM	12/11/2013 4:25 PM	-	04:20	
<input checked="" type="checkbox"/>	12/10/2013 11:58 AM	12/10/2013 2:59 PM	-	03:00	

Depending on context, the following functions are available.

Icon	Name	
	Search	
	Save filter	<p>The application allows to save user defined filters:</p> <ol style="list-style-type: none"> (1) Add filter criteria. (2) Save filter. <ul style="list-style-type: none"> ▷ Add individual name & description for filter ▷ Accept to save ▷ Filter is displayed on left side under Saved user filter
	Delete filter	
	Delete	Only possible if user is administrator or allowed to delete
	Print	
	Export PDF	Exports a PDF file.
	Import incidents	Im- and Export use internal format to transfer incidents between computers.
	Export incidents	

8.2 Module: Replay

All user interactions and hardware based changes are recorded in the database. These recordings are reviewable in real time. Each interaction is marked in a time line. To find the relevant missions, several filters are available. It is possible to save user defined filters.

MSA software

Admin, Admin Administrator

accountability monitoring system

Replay

🔍 ▶ ⏮ ⏭

Saved user filter

Nur 2

Search

Time range filter

Yesterday

Last week

Last month

Last 6 month

Last year

Custom

Until today 15

Alarm

Temperature alarm

Battery Alarm

Radio link lost

Motion alarm

Manual alarm

Pressure alarm

Remaining Time Alarm

Incident start date	Incident end date	Location	Duration	Keyword
12/18/2013 11:42 AM	12/18/2013 1:37 PM	-	01:54	
12/18/2013 9:12 AM	12/18/2013 11:45 AM	-	02:32	
12/17/2013 11:04 AM	12/17/2013 4:26 PM	-	05:22	
12/17/2013 8:52 AM	12/17/2013 11:02 AM	-	02:10	
12/16/2013 3:04 PM	12/16/2013 4:45 PM	-	01:40	
12/16/2013 2:04 PM	12/16/2013 2:53 PM	-	00:49	
12/16/2013 1:33 PM	12/16/2013 2:03 PM	-	00:29	
12/16/2013 1:28 PM	12/16/2013 1:33 PM	-	00:05	
12/16/2013 11:06 AM	12/16/2013 1:23 PM	-	02:16	
12/13/2013 10:04 AM	12/13/2013 10:04 AM	-	00:00	
12/13/2013 10:04 AM	12/13/2013 10:04 AM	-	00:00	
12/13/2013 9:50 AM	12/13/2013 9:51 AM	-	00:00	
12/13/2013 8:06 AM	12/13/2013 9:43 AM	-	01:36	
12/12/2013 11:40 AM	12/12/2013 12:39 PM	-	00:58	
12/11/2013 12:04 PM	12/11/2013 4:25 PM	-	04:20	
12/10/2013 11:58 AM	12/10/2013 2:59 PM	-	03:00	
12/10/2013 10:28 AM	12/10/2013 10:48 AM	-	00:19	
12/10/2013 9:47 AM	12/10/2013 9:48 AM		00:00	auto b
12/10/2013 9:45 AM	12/10/2013 9:45 AM		00:00	auto h



Depending on context, the following functions are available.

Icon	Name
	Search
	Play
	Save filter
	Delete filter

When a mission is replayed, a control bar is displayed.

Symbols for movie player control bar	
	Jump to next event in the replay
	Jump to previous event in the replay
	Start replay
	Pause replay
	Stop replay and return to movie overview

9 Ordering Information

Description	Part No.
Wall-mount power cable	10047342
8-24 volt, power cable	10049410
USB cable	10063880
Accountability Base Station Kit (includes software, magnetic antenna kit, USB cable, wall mount cable and 8-24 volt power cable)	10072240
Antenna kit with magnetic base	10075756
ID Tag (personnel tag)	10083875
Antenna kit with fixed base	10098766
Accountability Base Station Kit (includes software, fixed antenna kit, USB cable, wall mount cable and 8-24 volt power cable)	10098767
A2 - Software	10153880
G1 RFID Kit (software included)	10158407
Bluetooth Dongle	10161282-SP
G1 Bluetooth Base Station KIT	10161995 (Includes PN 10072240 and Dongle PN 10161282)
G1 ID Tags	PN 10161979



US

10 Appendix

This software uses the following copyrighted software:

- 32feet-NET
(Apache 2.0 License)
- CaliBurn.Micro
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- Protobuf-NET
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- WPF Animated Gif
(Apache 2.0 License)
- WPF Localize Extension
(MS-PL)

For local MSA contacts, please visit us at [MSAafety.com](https://www.MSAafety.com)

Because every life has a **purpose...**