MSA Accountability System, Base Station and Base Station PC Software

OPERATION INSTRUCTIONS

⚠ 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 installed and used according to the instructions. OTHERWISE IT COULD FAIL TO PERFORM AS DESIGNED, AND PERSONS WHO RELY ON THE AIR MASK 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, write or call 1-800-MSA-2222 during regular working hours.

These devices comply 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) these devices must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Note: 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, might 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.

For More Information, call 1-800-MSA-2222 or Visit Our Website at www.MSAnet.com

MSA The Safety Company

MINE SAFETY APPLIANCES COMPANY
PITTSBURGH, PENNSYLVANIA, U.S.A. 15230

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DESCRIPTION AND REQUIREMENTS

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DESCRIPTION OF ACCOUNTABILITY SYSTEM AND BASE STATION INTERFACE

The MSA Accountability System installed on the air mask is designed to communicate with the base station and PC. This system provides the ability to monitor firefighters from a remote location. When an air mask is first pressurized, the Accountability System is automatically activated. It then waits to receive a signal from the base station to begin the log-on process. After all of the initial information has been obtained by the base station from the air mask, the PC software will serve as a communication link to the firefighter.

ID Tags are used in conjunction with the Accountability System to assign names and teams to the air mask. By utilizing ID tags, each firefighter can be identified on the PC software screen by name and team assignment.

PC SYSTEM REQUIREMENTS

Operating System: Windows Vista, Windows XP Service Pack 1 or higher or Windows 2000 Professional Service Pack 3 or higher.

Minimum Hardware Requirements:
1 GHz Pentium III processor or equivalent / 256 MB RAM / USB 1.1 / 16 MB graphic card (resolution 1024x768 pixel, 256 colors) / 200 MB free disk space.

Optimum Hardware Requirements (Preferred):
1.8 GHz Pentium IV processor or greater / 512 MB RAM / 32 MB AGP graphic card (resolution 1024x768 pixel or greater, 16,7 Mio colors, 2 RGB or DVI) / 1.5 GB free disk space.

Remote PC speakers may be required to ensure that the incident commander is able to hear audible warnings from the PC.

⚠ WARNING

Follow the PC or notebook computer manufacturer's recommendations for exposure to environmental conditions to prevent damage to the system. Failure to do so may cause system failure and the loss of monitoring capability on the PC.

INSTALLATION

INSTALLING THE SOFTWARE

1. Insert the MSA Accountability System Software into the CD drive.
2. The program will begin to install automatically upon insertion of the CD. If the program does not launch automatically, Locate the CD drive (Commonly D: Drive) and open the file titled “setup.exe”.
3. Follow the instructions on the screen to complete the software installation process.

Note: The software can only be installed by the PC administrator or by a person that has full read/write access to the PC. Users of the software must be at least a “main user” registered with the PC. “Guest” users will not be able to access the MSA Accountability System Software.

INSTALLING THE HARDWARE

⚠ CAUTION

Installation of this device requires professional installation. Base station antenna attachment should only be performed after proper instruction.

1. Connect power cord to the left side of the base station and plug it into a DC (12-24 V) vehicle power outlet. (An AC power adapter (P/N 10047342) is also available. This adapter is designed to connect to a standard 120V outlet.).
2. Connect the antenna to the base station by threading the TNC fitting on to the jack on the right side of the base station.

Note: The base of the antenna has a magnetic platform. It is recommended that it be placed in an area that is elevated above the base station and is free from obstruction, such as the roof of a vehicle.

⚠ CAUTION

Use only antennas provided by MSA for use with this base station. Failure to do so will be in violation of the FCC approval of this device. Antenna: P/N 10072527; Magnetic Base: P/N 10072528.

3. Connect the USB cable to the port on the left side of the base station and to an empty USB port on the PC.

Note: Windows may prompt for driver installation when the base station is first connected to the USB port on the PC. If this occurs simply follow the steps on the screen. The drivers are located on the MSA Accountability System Software CD. Once the software has been installed, by default, the drivers can be found under C:/Program Files/MSA/Driver.ICMTxR.

Note: If the message below appears while installing the drivers, click “Continue Anyway”. This only indicates that the drivers used in the MSA Accountability System Software are not registered with Microsoft.

Note: It is recommended that the same USB port on the PC be used each time the base station is connected. Switching between USB ports will prompt the installation of drivers.

⚠ CAUTION

Use only USB cables provided by MSA for use with this base station. Failure to do so will be in violation of the FCC approval of this device.

4. The base station has two (2) holes in the housing that can be used to mount the base station to a wall or table top.

⚠ CAUTION

The base station is not waterproof. Do not mount base station to exterior of vehicle.

NOTES

USING THE ACCOUNTABILITY SYSTEM SOFTWARE

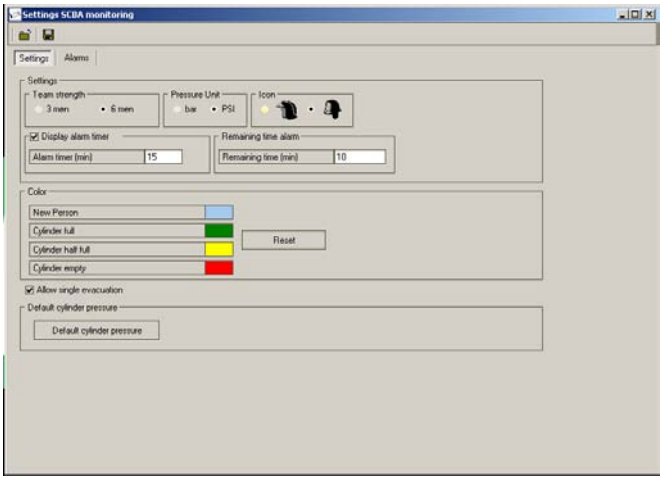
Starting the MSA Accountability System Software

1. Locate the icon on the desktop titled “MSA Accountability System”, and open the software program. The program can also be found under Start / Program Files / MSA / MSA Accountability System.
2. The software will open to the main screen of the Accountability System Software.

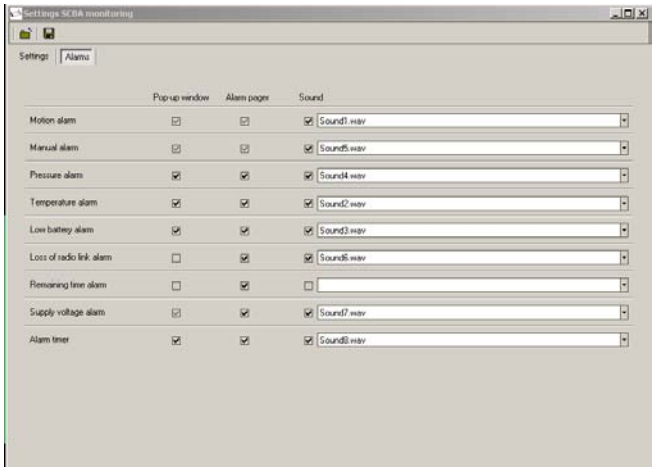
Note: Users of the software must be at least a “main user” registered with the PC. “Guest” users will not be able to access the MSA Accountability System software. If the icon or the program can not be located, contact the PC Administrator.

Configuring the SCBA Monitoring Settings

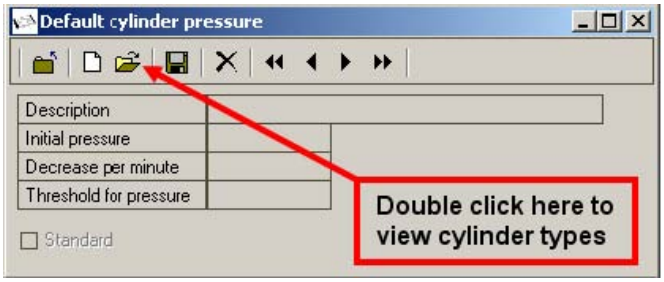
1. In the menus on the main screen, click SYSTEM, SETTINGS, SETTING SCBA MONITORING
2. The settings window will appear.



3. The default settings are shown in the image above.
   a. “Team strength” refers to the number of firefighters allowed in a single team. The default is 6 firefighters per team.
   b. “Pressure Unit” refers to the unit by which cylinder pressure will be displayed. The default is PSI.
   c. “Icon” allows the selection of the helmet icon that will appear to represent each firefighter being monitored. The default is the “traditional helmet”.
   d. The “PAR timer” setting is the time interval in which the PAR (Personnel Accountability Report) reminder will be displayed during an incident. The default is 15 minutes.
   e. “Remaining time alert” determines the set point for the remaining time alert pop up window. The default is 10 minutes.
   f. “Color” refers to the cylinder pressure for each firefighter. By default, the following color scheme has been chosen to remain consistent with that of the heads up display to build consistency within the fire scene.
      i. New Person – BLUE
      ii. Cylinder Pressure above 50% - GREEN
      iii. Cylinder Pressure between 25% and 50% - YELLOW
      iv. Cylinder Pressure below 25% - RED
   g. “Allow single evacuation” permits a single firefighter to be sent an evacuation command.



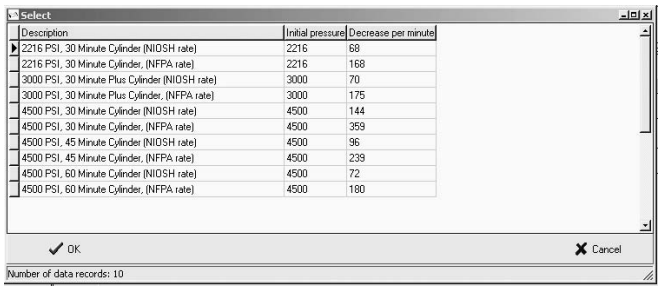
4. Under the “Default cylinder pressure” button, the default cylinder types and estimated service times can be edited. These default cylinder types are for use when firefighter’s without an MSA air mask equipped with telemetry is being accounted for using this PC software. Refer to the Accountability of Firefighters without Telemetry section of this manual for additional information.



   a. To review/edit all of the cylinder types available, double click the open file folder icon in the upper left portion of this window.
   b. To search for a specific type of cylinder, single click the open file folder. The data fields will highlight in yellow. Search criteria can be entered at this time. Click the open file folder icon again after search text has been entered and all cylinder types available that meet the search criteria will be displayed.

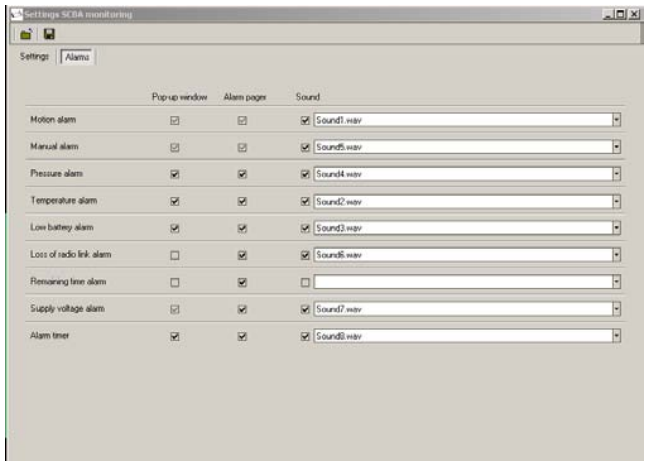
For example: To search for only 4500 psi cylinders:
1. Click the open file folder icon ONCE.
2. Type 4500 in the “Initial Pressure Field”.
3. Click the open file folder icon ONCE more.

4. A list off all 4500 psi cylinders available for selection will be displayed.



Standard cylinder options provided with the software

1. Select a cylinder pressure rating and breathing rate for use in estimating service time remaining for firefighters without an MSA air mask equipped with telemetry.
2. “Initial Pressure” describes the maximum working pressure of the cylinder.
3. “Decrease per minute” describes the rate of pressure decrease per minute that the PC will simulate for a firefighter without an MSA air mask equipped with telemetry. The default rates are based on either the NFPA breathing rate (100 LPM) or the NIOSH breathing rate (40 LPM).
4. “Pressure for 0 minute” describes the pressure that will be considered to be the end of service for a firefighter without an MSA air mask equipped with telemetry.
5. To make a particular cylinder type and breathing rate the default for firefighters without an MSA air mask equipped with telemetry, check the box labeled “standard”.
6. After making settings changes, the SAVE icon in the upper left hand corner must be clicked before exiting the settings window.



7. Under the “Alarms” tab, the alarms that will be displayed during an SCBA monitoring session can be changed. The default settings are shown above.
   a. “Motion Alarm” will alert when the PASS alarm is activated by a firefighter due to lack of motion. The default sound will be that of the air mask’s PASS alarm.
   b. “Temperature alert” refers to the thermal alarm activated by a firefighter’s thermal indicator on the air mask. A pop up warning window can be enabled or disabled by checking the box next to “Temperature alert”. A thermometer icon will be displayed in the SCBA statistics window in the event of a thermal alarm for any firefighter regardless of this box being checked.
   c. “Low battery alert” will alert when a firefighter’s Air Mask has a low battery condition. A pop up warning window can be enabled or disabled by checking the box next to “Low battery alert”. A battery icon will be displayed in the SCBA statistics window in the event of a low battery alarm for any firefighter regardless of this box being checked.
   d. “Pressure alarm” will alert when a firefighter has reached approximately 25% of full cylinder pressure. The default sound is that of the Audi-Larm™ Audible Alarm ringing.
   e. “Manual alarm” will alert when the PASS alarm as been activated manually by a firefighter. The default sound will be that of the air mask’s PASS alarm.
   f. “Loss of radio link” will alert when a firefighter’s air mask has lost radio communication with the base station. This will occur when the device is out of range or in an area of poor radio communication. A pop up warning window can be enabled or disabled by checking the box next to “Loss of radio link”. A red X over an antenna icon will be displayed in the SCBA statistics window and next to the firefighter’s helmet icon if the air mask loses communication with the base station regardless of this box being checked.
   g. “Supply voltage alert” will alert when the power supply to the base station has been disconnected during a monitoring session.
   h. “PAR alert” will alert when the specified PAR time has been reached during a monitoring session.
   i. “Remaining time alert” will alert when a firefighter’s air mask has calculated the remaining time specified in the white textbox of this window. A pop up warning window can be enabled or disabled by checking the box next to “Remaining time alert”. The time remaining calculated by the air mask is always displayed in the SCBA statistics window regardless of this box being checked.

⚠ CAUTION

By default, the air mask calculates the remaining time based on the time to reach 0 PSI. In the FireHawk M7 Interface Module software, the air mask can be configured to calculate remaining time based on the time to reach the low pressure alarm point. Before monitoring SCBA using this software, be sure of the time remaining calculation that the air mask is using.

Note: The sounds associated with each of these alarms can be changed under this menu. To assign a new sound to any of the alarms shown, select an appropriate .wav file. The .wav file must be renamed to match the alarm file name specified as the default shown above. For example, to replace the alarm sound for the motion alarm, rename the desired .wav file to Sound1.wav before selecting. To replace other sound files, simply rename the desired .wav file so that it matches the default name shown for that alarm.

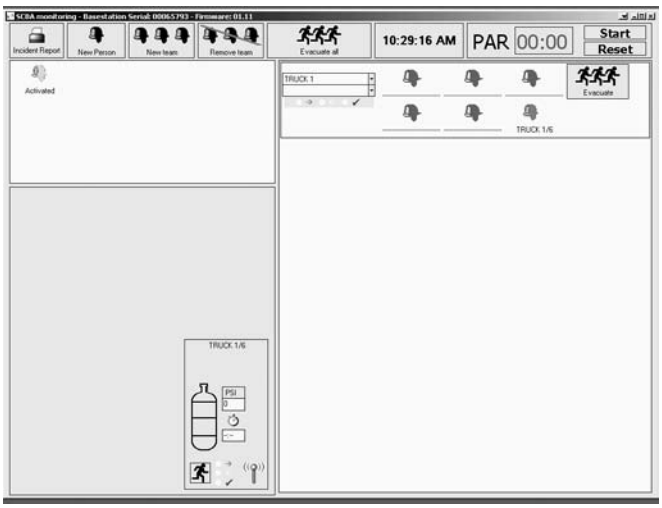
Note: If the save icon is not clicked before closing the settings window, the changes will not take effect.

8. Close the settings window, the program will then return to the main screen.

MONITORING SCBA USING THE BASE STATION

Getting Started

1. To begin monitoring SCBAs using the base station software, click INCIDENT, SCBA MONITORING, SCBA MONITORING in the main screen of the base station software.
2. The SCBA monitoring window will appear.
3. Check the status of the base station.
   a. The LED labeled “PC Link” will should begin to alternate from RED to GREEN for approximately 20 seconds. When the “PC Link” LED stops flashing and remains GREEN, the base station is ready to begin logging firefighters on to the system.
   b. The LED labeled “Power” should be GREEN. If the “PC Link” light is not GREEN, verify that the base station is connected properly.
4. As firefighters pressurize their air mask and the PASS devices are turned on, helmet icons (blue by default) will appear in the “holding bin” frame of the SCBA monitoring window. The “holding bin” is the white area in the upper left portion of the window. When the icon first appears, it displays “Activated” under the helmet icon. When the firefighter is fully logged on to the system, the helmet icon will change to the color corresponding to the current cylinder pressure. By default, the colors indicating cylinder pressure will correspond with the colors displayed in the heads-up display receiver.



Helmet icon in the “holding bin”

5. The full log-on process for a given unit is less than 1 minute.
   a. During the log-on process, the PC acquires data such as name ID, Team assignment, pressure type, and current pressure from the air mask.
   b. During the log-on process the helmet icon may jump from the “holding bin” into a team automatically if a team ID was assigned to the air mask using an ID Tag.
   c. Refer to the ID Tag Writer Function of this manual for additional information on team assignments.
6. When the helmet icon changes from blue to a color corresponding to the cylinder pressure (RED, YELLOW, GREEN by default), the air mask has fully logged on to the base station. The pressure reading is the last piece of information that the base station reads from the air mask before the log on process is complete. To confirm that a particular unit has completely logged on to the base station, verify that the antenna icon in the lower right corner of the SCBA statistics frame is present.

On the FireHawk M7 Control Module, the radio link icon will b e present in the upper left corner of the LCD.

On the ICM TxR Unit, an antenna icon will be present in the upper right corner of the LCD display.

Note: If the air mask is turned off before the full log in process is completed, the corresponding helmet icon

will remain in the "holding bin" until the SCBA monitoring window has been closed. For example, if an air mask's log on process is interrupted by turning the device off, a "ghost" icon will remain in the "holding bin" even though the air mask has been turned off. If that air mask is then turned on again, a new helmet icon will appear and the unit will begin the log on process again. In this case, even if the air mask completes the log in process, a "ghost" helmet icon for that unit may remain in the "holding bin" on the SCBA monitoring window. "Ghost" icons can be removed by right clicking the icon (or double left clicking) and selecting "remove person".

Note: Once an air mask has been fully logged on to a base station, that air mask can not be monitored by another base station until the air mask has been turned off and completely logged off of the current base station.

USING TEAMS

Note: As firefighters appear in the "holding bin" as their air masks are turned on, they can be monitored most effectively by creating teams and dragging the icons into the teams. Firefighters can be monitored individually by clicking on the icon while they are in the "holding bin". The information for each highlighted firefighter will be displayed in the lower left frame of the screen.

Creating Teams

1. Click the NEW TEAM button at the top of the screen.
   - A team window will appear in the column to the right.
   - As many teams as needed can be created.
   - Teams will be named in succession, i.e. Team 1, Team 2, Team 3, etc.
   - Team order can be rearranged by RIGHT clicking and dragging the team to the desired location.

Adding a Firefighter to a Team

Drag the icon from the "holding bin" to the appropriate team.

Note: To drag multiple firefighters into a team at once, click and hold the left mouse button and draw a box around the firefighters to be moved. Release the left mouse button. Select any of the highlighted firefighters with the left mouse button and drag them into the appropriate team.

Monitoring a Team

Click on the team of interest on the right side of the screen.

- All team members' statistics will appear in the lower left portion of the screen.
- To scroll between teams, the "page up" and "page down" keys can be used in addition to clicking the mouse.

Changing the Team Name

1. Click in the white text box in the upper left corner of the team window.
2. Type a new name and press enter.

Note: To retrieve previously entered team names from past sessions, click the drop down menu arrow at the far right side of this text box. All past team names will be displayed for selection.

Adding "Comments" to a Team

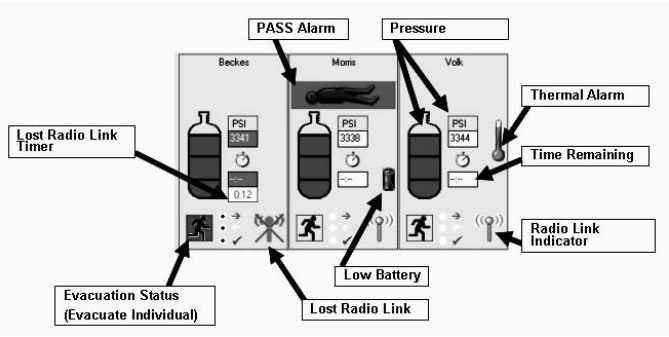
1. Click in text box under the team name text box.
2. Type any additional team comments and press enter.

Note: To retrieve previously entered comments from past sessions, click the drop down menu arrow at the far right side of this text box. All past team comments will be displayed for selection.

USING TEAM ID TAGS

Team ID tags can be used to assign a permanent team/truck assignment to a particular air mask. By scanning a Team ID tag into an M7 Control Module or ICM TxR Unit, teams will be created automatically when a firefighter pressurizes his air mask. In this case, when a firefighter pressurizes his air mask, the helmet icon associated with that firefighter will automatically move from the "holding bin" to the appropriate team and position assignment. For more information on programming and using Team ID tags, refer to the ID Tag Writer Function section of this manual.

SCBA STATISTICS DISPLAY



Examples of data displayed in SCBA statistics windows.

Note: SCBA statistics for each firefighter being monitored appear in the lower left portion of the SCBA monitoring window.

1. Pressure
   - Displayed graphically for each unit via the cylinder icon in each box
   - The actual pressure reading is displayed as trans-

mitted from the air mask

2. Time Remaining
   - The estimated time remaining value is displayed as calculated by the air mask.
3. Radio Link Status
   - The antenna icon at the lower right corner of the SCBA statistics window indicates that the base station/Air Mask connection is established.
   - If the air mask is out of range, the antenna icon will turn gray and a red X will appear until the air mask returns within range of the base station.
   - When an air mask loses communication with the base station longer than 1 minute, a timer with RED text will appear below the time remaining calculation counter. This timer will keep track of the amount of time, in minutes, that a firefighter has been out of range and will disappear when the radio link is re-established.
4. Evacuation status
   - The RED and YELLOW arrows and GREEN check mark display the status of an evacuation signal.
   - When an evacuation signal is sent by the base station, the “evacuate” or “running man” icon will turn RED and a black dot will appear next to the RED arrow.
   - When the air mask has received the signal, the running man icon will turn YELLOW and a black dot will appear next to the YELLOW arrow.
   - When the firefighter manually confirms the evacuation command, the running man icon will turn GREEN and a black dot will appear next to the GREEN check mark.
5. Alarms
   - If an air mask goes into a motion alarm, manual alarm, temperature alarm, 25% pressure alarm, or low battery alarm, a window will pop up displaying this warning.
   - These alarms will also appear in the SCBA statistics window as shown above.
     i. Thermometer icon – indicates thermal alarm
     ii. Battery icon – indicates low battery warning
     iii. Horizontal man down icon – indicates a PASS alarm

THE EVACUATION COMMAND

The Accountability System Software has the ability to send an evacuation command to firefighters that are logged on to the system. This command can only be sent to a firefighter once during a single SCBA monitoring session.

Three Types of Evacuations

1. Evacuate All
   a. To evacuate all firefighters logged on to a base station; click the “Evacuate All” button in the upper portion of the SCBA monitoring window.

   - When the evacuation signal is sent to all air masks, the “Evacuate All” button will turn RED.
   - When each air mask receives the evacuation command, the PASS device will begin to emit an audible evacuation alarm, display a flashing running man icon on the LCD, display alternating RED/ORANGE LEDs in the HUD receiver, and the evacuate icon for that firefighter will turn RED on the PC screen.
   - When an air mask successfully receives the evacuation signal, it automatically returns a signal to the base station to confirm that the signal has been received. If the signal is not received, the base station will continue to send a signal to that unit until the radio transmission is successful.
   - When the base station receives a confirmation signal from an air mask that the evacuation command has been received, the Evacuate icon for each firefighter will turn YELLOW on the PC screen.

   b. The firefighter must then manually press the reset button on the air mask twice in rapid succession in order to acknowledge the evacuation command and silence the evacuation alarm.
   - As each firefighter manually acknowledges the evacuation command, the Evacuate icon for each firefighter will turn GREEN.
   - When all firefighters have manually acknowledged the evacuation command, the “Evacuate all” button will turn GREEN.

2. Evacuate Team
   a. To evacuate a single team of firefighters logged on to a base station; click the “Evacuate” button in the team window.

   - When the evacuation signal is sent to the entire team, the “Evacuate” button in the team window will turn RED.
   - When each air mask receives the evacuation command, the PASS device will begin to emit an audible evacuation alarm, display a flashing running man icon on the LCD, display alternating RED/ORANGE LEDs in the HUD receiver, and the evacuate icon for that firefighter will turn RED on the PC screen.
   - When an air mask successfully receives the evacuation signal, it automatically returns a signal to the base station to confirm that the signal has been received. If the signal is not received, the base station will continue to send a signal to that unit until the radio transmission is successful.
   - When the base station receives a confirmation signal from an air mask that the evacuation command has been received, the Evacuate icon for each firefighter will turn YELLOW on the PC screen.
   - When the base station has received a confirma-

tion signal from all members of the evacuated team, the “Evacuate” button in the team window will turn YELLOW.

b. The firefighter must then manually press the reset button on the ICM TxR or M7 Control Module twice in rapid succession in order to acknowledge the evacuation command and silence the evacuation alarm.
   - As each firefighter manually acknowledges the evacuation command, the Evacuate icon for each firefighter will turn GREEN.
   - When all firefighters in the evacuated team have manually acknowledged the evacuation command, the “Evacuate” button in the team window will turn GREEN.

3. Evacuate Individual

Note: This function is available by default, but may be turned off in the settings menu in order to prohibit the evacuation of a single firefighter.

a. To evacuate a single firefighter logged on to a base station; click the Evacuate icon  located in the firefighter’s SCBA statistics display window.
   - When the evacuation signal is sent to a firefighter, the Evacuate icon in the firefighter’s SCBA statistics display window will turn RED.
   - When the air mask receives the evacuation command, the PASS device will begin to emit an audible evacuation alarm, display a flashing running man icon on the LCD, and display alternating RED/ORANGE LEDs on the HUD.
   - When an air mask successfully receives the evacuation signal, it will automatically return a signal to the base station to confirm that the signal has been received. If the signal is not received, the base station will continue to send a signal to that unit until the radio transmission is successful.
   - When the base station receives a confirmation signal from the evacuated air mask, the Evacuate icon for that firefighter will turn YELLOW.

b. The firefighter must then manually press the reset button on the FireHawk M7 Control Module or ICM TxR twice in rapid succession in order to acknowledge the evacuation command and silence the evacuation alarm.
   - Once the firefighter manually acknowledges the evacuation command, the Evacuate icon will turn GREEN.

PAR TIMER

The MSA Accountability System Software provides a PAR (Personnel Accountability Report) Timer to serve as a reminder when the specified PAR time interval has been reached during an incident. By default, the PAR time increment is 15 minutes. This setting can be changed in the settings menu. Refer to the Configuring the SCBA Monitoring Settings section of this manual.

Using the PAR Timer

1. Click the “Start” button in the upper right portion of the SCBA monitoring window.
2. The PAR timer will then begin counting up from time zero.
3. When the specified PAR time interval has been reached (every 15 minutes by default), a pop-up alarm window will be displayed and the PC will emit an audible tone.
4. The PAR timer will continue and another PAR alarm will appear and sound when the next PAR time interval has been reached. For example, default the PAR alarm will occur at 15, 30, 45…..minutes.

LOSS OF RADIO COMMUNICATION

If a firefighter travels out of the range of radio transmission, the PC software will display several indications that the radio link has been lost. These indications are described below. When a firefighter is out of range, any signals sent from the air mask to the base station, or from the base station to the air mask, cannot be realized until the radio link has been re-established. Both the air mask and the base station will repeatedly send a signal until the link has been regained.

Note: A loss of radio communication may occur when a firefighter is in an area of a structure that is not conducive to proper radio transmission. Structures that are underground or constructed of thick concrete and metal are not conducive to good radio signal transmission. Areas where traditional two way radio communication is difficult may induce a temporary loss of radio contact between the air mask and the base station.

Indications that a firefighter has lost radio communication with the base station

- The antenna icon in the firefighter’s SCBA statistics window will turn gray and a RED X will appear over the icon. 
- A gray antenna icon with a RED X over it will appear next to the helmet icon for any firefighter that has lost radio communication. 
- In the SCBA statistics display window, directly below the service time remaining display, a red text counter will appear when a firefighter is out of range of radio contact. This counter will continue to count the number of minutes that a firefighter has been out of radio contact with the base station. The counter will disap-

pear when the radio link has been re-established.
- When the air mask has lost communication with the base station, the radio link indicator in the upper left portion of the LCD of the FireHawk M7 Control Module (upper right for ICM TxR) will flash until the link has been reestablished.

USING MULTIPLE BASE STATIONS

Two Base Stations on a Single PC
A single base station can monitor up to 50 firefighters at one time. If there is a need to monitor more than 50 firefighters at one time, an additional base station may be attached to the same PC to allow up to 100 firefighters to be monitored.

⚠ CAUTION

As the number of firefighters approaches 50 on a given base station, MSA recommends that the PC at least meet the optimum PC system requirements recommended in this manual. Failure to do so may cause the PC to loose its ability to effectively monitor all of the firefighters at the incident. It is up to the user to determine whether or not the PC being used is capable of handling the appropriate number of firefighters at one time.

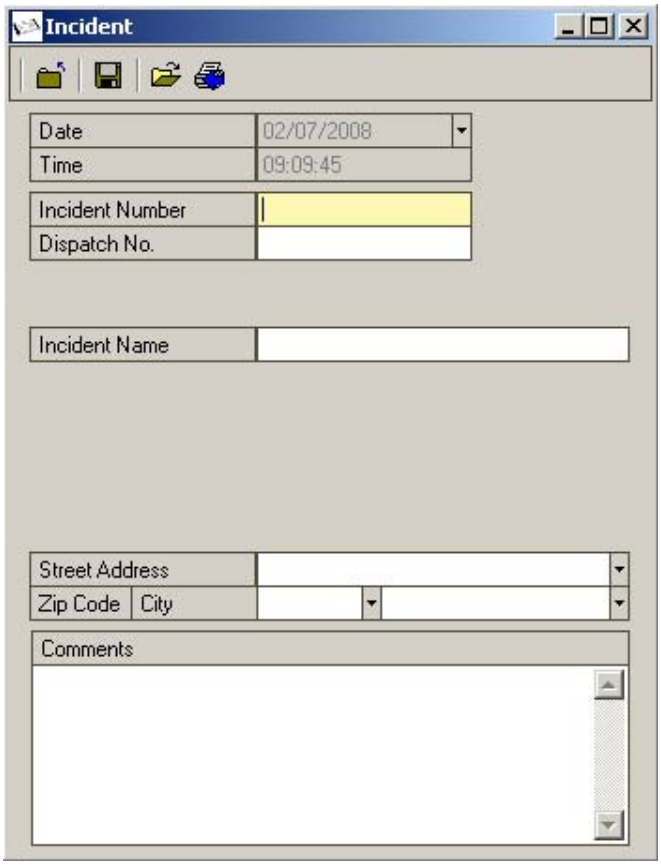
Two Base Stations and Two PCs in Use at the Same Incident
When two PCs are monitoring firefighters at the same incident, base station ID Tags must be used to assign an air mask to a specific base station. For instructions on programming base station ID tags, refer to the Using the ID Tag Writer Function section of this manual. Base station IDs should be assigned to the air masks prior to the incident.

Note: The user must determine if multiple PCs will be used to monitor firefighters within the range of the base station. If base station IDs are not assigned using base station ID Tags, there is no way to control which base station the air mask will log on to. Air masks will log on to the first base station found unless base station IDs are used. By using base station ID Tags to assign a base station ID to an air mask, the air mask will search for the preferred base station for the first 20 seconds after the SCBA has been pressurized. If the air mask does not find the preferred base station within the first 20 seconds, it will then search for the first available base station and log on to that system. Once an air mask has been logged on to a base station, it can not be monitored by another base station until the air mask has been turned off and on again. It is not possible for two separate PCs to monitor the same firefighter or team.

INCIDENT REPORT GENERATION

The MSA Accountability System Software automatically creates an incident report log for each SCBA monitoring session. Incident reports may be accessed in the main screen of the MSA Accountability System Software by selecting INCIDENT, SCBA MONITORING, INCIDENT REPORTS. To access incident reports while the SCBA monitoring window is open, click the “Incident Report” button at the top of the SCBA monitoring window.

The Incident Window (during SCBA monitoring)



Before an SCBA monitoring session has ended, details of the incident may be entered to improve search ability of report files at a later date. DETAILS OF AN INCIDENT MUST BE ENTERED BEFORE CLOSING THE SCBA MONITORING WINDOW. If details are not entered at this time, reports can still be searched and viewed at a later date, but information such as Incident number, Dispatch number, Incident name, Address, and Comments will not be available.

ASSIGNING DETAILS TO AN INCIDENT REPORT (DURING SCBA MONITORING)

1. **Incident number:** The incident number allows incident reports to be sorted by incident number. Only numbers can be entered (10 character maximum). Choose a number that provides some detail about the event. For example, for the 1st incident to occur on October 24, 2006, perhaps choose 102406001. Here, 10 represents the month, 24 represents the day, 06 represents the year, and 001 represents the first incident to occur on that day. It is up to the incident commander to determine what protocol works best for each department.
2. All of the remaining fields allow for additional data entry. A maximum of 50 characters may be entered for Incident Name, Street, and City. A maximum of 10 characters may be entered for zip code. The comments field allows for an unlimited number of characters to be entered.
3. When all data has been entered, click the SAVE icon assign the details.

Reviewing details of the current incident report (during SCBA monitoring)

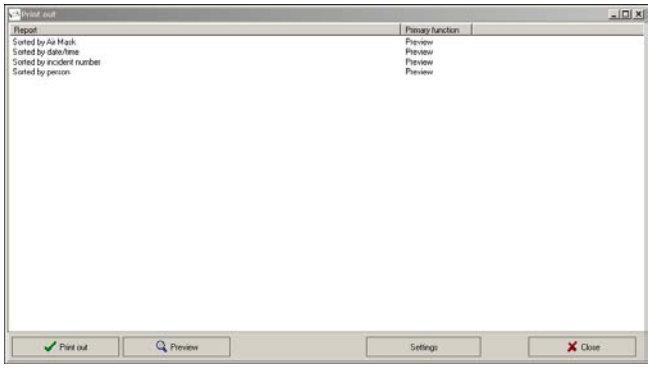
Note: To view and export report files using the MSA Accountability System Software, a printer must be installed on the PC. The printer does not have to be connected to view reports but at least one (1) must be installed in the PC's registry.

1. Click the "incident report" button while in the SCBA monitoring window.
2. Click the printer icon.
3. The "print out" window will appear.
4. Select one (1) of the four (4) options to determine how the report will be sorted.

Retrieving Incident reports (after an incident has ended)

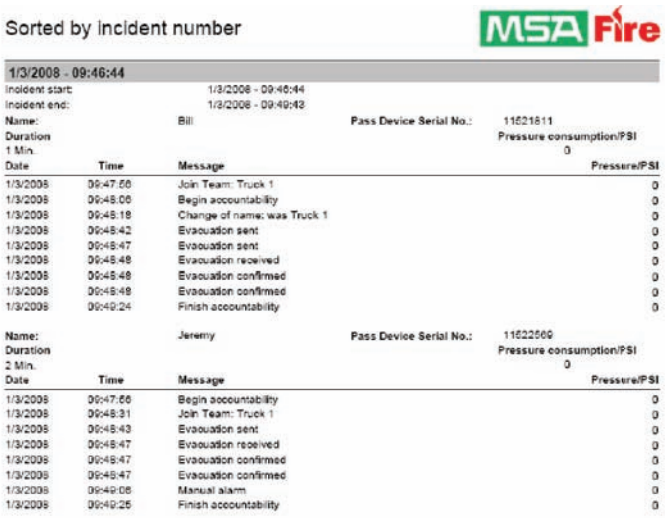
1. Select Incident, SCBA monitoring, Incident reports in the main screen of the MSA Accountability System Software.
2. The incident window will appear.
3. To view all reports available, DOUBLE click the open icon, to bring up the "print out" window.
   a. To search or sort all of the available reports, click the open icon , ONCE.
   b. All fields in the incident will highlight, accepting text entry.
   c. Enter search criteria in the field in which the reports should be sorted by. For example, to search for a specific incident number, enter that number in the "Incident number" field.
   d. Once the search text has been entered, Click the open icon, ONCE more to bring up the "print out" window.

Note: If no reports can be found that meet the search criteria, all reports will be blank. If this occurs, return to the incident window and enter new search criteria or simply view all available reports by DOUBLE clicking the open icon .



The Print Out Window

4. Select one (1) of the four (4) options to determine how the report will be sorted by either double clicking the type of report or by single clicking the type of report and then clicking Preview. The options are as follows:
   a. **Sorted by name:** Displays all reports meeting the search criteria, sorted by each firefighter's name in alphabetical order. Under each Firefighter's name is a list of all incidents participated in.
   b. **Sorted by air mask:** Displays all reports meeting the search criteria, sorted by the FireHawk M7 Control Module or ICM TxR Unit serial number in ascending order. Details for firefighters without telemetry can not be viewed under this report option.
   c. **Sorted by incident number:** Displays all reports meeting the search criteria, sorted by the incident number in decreasing order. All reports with an incident number are displayed first, then any incident reports that do not have an incident number assigned are displayed based on date/time with most recent being first.
   d. **Sorted by date/time:** Displays all reports meeting the search criteria, sorted by date/time with most recent being first.
5. Other options of the print out window include:
   a. **Settings:** Controls printing options. Select Settings before printing any of the reports to specify printer destination, number of copies, and other printing properties.
   b. **Preview:** To preview a report before printing, click the report option ONCE and then select "Preview". The report can also be viewed by simply DOUBLE clicking the report option.
   c. **Print out:** Each report can be printed directly from the print out window without viewing the report by clicking the report option ONCE and then selecting "Print out".



Sorted by incident number

MSA Fire

1/3/2008 - 09:46:44

Incident start: 1/3/2008 - 09:46:44
Incident end: 1/3/2008 - 09:49:43

Name: Bill | Pass Device Serial No.: 11521811
Duration: 1 Min. | Pressure consumption/PSI: 0

Date	Time	Message	Pressure/PSI
1/3/2008	09:47:56	Join Team: Truck 1	0
1/3/2008	09:48:06	Begin accountability	0
1/3/2008	09:48:18	Change of name: was Truck 1	0
1/3/2008	09:48:42	Evacuation sent	0
1/3/2008	09:48:47	Evacuation sent	0
1/3/2008	09:48:48	Evacuation received	0
1/3/2008	09:48:48	Evacuation confirmed	0
1/3/2008	09:48:48	Evacuation confirmed	0
1/3/2008	09:49:24	Finish accountability	0

Name: Jeremy | Pass Device Serial No.: 11522569
Duration: 2 Min. | Pressure consumption/PSI: 0

Date	Time	Message	Pressure/PSI
1/3/2008	09:47:56	Begin accountability	0
1/3/2008	09:48:31	Join Team: Truck 1	0
1/3/2008	09:48:43	Evacuation sent	0
1/3/2008	09:48:47	Evacuation received	0
1/3/2008	09:48:47	Evacuation confirmed	0
1/3/2008	09:48:47	Evacuation confirmed	0
1/3/2008	09:49:05	Manual alarm	0
1/3/2008	09:49:25	Finish accountability	0

Example incident report, sorted by incident number

6. To print the report, click the print icon the top of the incident report window.
7. To save the report in an alternate format, click the export icon
   a. The “Export” window will appear. Select the file format to save the report in by selecting one of the options under the field labeled “Format”. Formats available for export are .pdf, .rpt, .html, .xls, .rtf, .odbc, .rec, .txt, .csv, .ttx, and .xml. Click OK when finished.
   b. The “Export Options” window will appear. Select the pages of the report to be exported and click OK.
   c. The “Choose export file” window will appear. Select the name and directory to which the report should be saved.

NOTES

ACCOUNTABILITY OF FIREFIGHTERS WITHOUT TELEMETRY

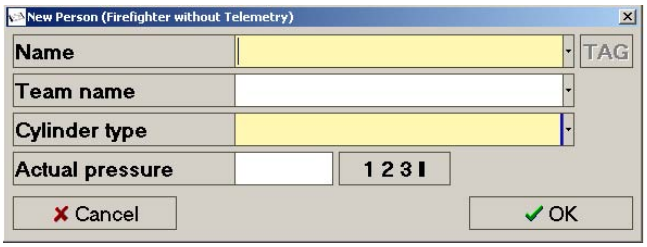
ACCOUNTABILITY OF FIREFIGHTERS WITHOUT TELEMETRY

The MSA Accountability System Software allows for accountability of firefighters or other personnel that do not have the Telemetry module installed on their air mask. The software allows for helmet icons to be created representing these firefighters or personnel. These helmet icons can then be moved into teams just like firefighters with the
telemetry module installed.

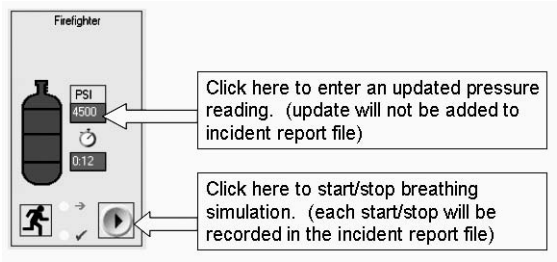
There cannot be any radio communication between the base station and firefighters without the telemetry module installed on their air mask, but this allows for such personnel to be accounted for. The software can simulate the breathing rate for a variety of cylinder types to help the user of the accountability system software keep track of these firefighters' estimated time remaining.

Accountability of Firefighters without Telemetry

1. Click the "New Person" button on the SCBA monitoring window.



2. A window will appear.
3. Enter the name to be associated with this person in the "Name" field.
4. Select the cylinder type and rate of simulated pressure decay for this person.
   a. Click the arrow at the far right side of the "Cylinder Type" field.
   b. A new window will appear with a list of default cylinder pressures and pressure decay rates.
   c. Refer to the Configuring SCBA Monitoring Settings section of this manual for additional information on cylinder types and pressure decay rates.
5. Enter the starting pressure for the SCBA in the "Actual Pressure" field. The "1 2 3 …" button allows PCs with touch screen capability to enter a pressure value without using a keyboard.
6. Clicking OK will create a helmet icon for this firefighter. Notice that the helmet icon has a black box on it. This indicates that the simulated breathing for this firefighter has not been started.



7. To START to simulate breathing for this firefighter, click the GREEN "PLAY" icon in the firefighter's SCBA statistics window. Notice that the black box on the helmet icon becomes a black triangle. When the GREEN arrow has been activated, the starting pressure value will be written to the incident report.
8. The pressure value can be updated or changed manually by double clicking the text field titled "PSI" (These pressure changes will not be recorded in the incident report file).
9. To STOP simulated breathing for a firefighter without telemetry, click the BLUE "PAUSE" icon in the firefighter's SCBA statistics window. When the "pause" icon has be clicked, the current simulated PSI value will be written to the incident report.
10. When the firefighter's simulated cylinder pressure reaches the low pressure alarm point, a pop-up alarm window will appear.

⚠ WARNING

The simulation is an estimate and not actual time or pressure. Failure to follow this warning can result in serious personal injury or death.

Removing firefighters or other personnel from the SCBA monitoring software

1. To remove a manually created firefighter from the SCBA monitoring window, double left click or right click the appropriate helmet icon.
2. A menu will appear. Select "remove person". This will remove the icon from the SCBA monitoring window.

Note: The remove person feature can only be used to remove icons corresponding to firefighters without telemetry. This feature will not remove firefighters with the telemetry module installed unless the air mask has lost radio contact with the base station.

NOTES

ID TAG WRITER FUNCTION

ID TAG WRITER FUNCTION

The MSA Accountability System Software can also be used to program ID Tags for each air mask.

Three types of data that can be stored on an ID Tag: Name, Team and Special (base station ID).

Note: Only one data type per ID tag can be stored.

The name ID is used to assign a firefighter name to an air mask. The name ID tag must be scanned into the air mask at the start of each shift (every 24 hours by default). The ICM Link program can be used to change this default to allow a name ID to be permanently assigned to the air mask until a new name ID tag has been scanned. If a team ID tag has been scanned into the air mask but a name ID tag has not been scanned, the team ID will be displayed on the SCBA monitoring software to provide accountability even if the firefighter forgot to scan the name ID tag. If a team ID has not been assigned to the air mask, the air mask's PASS device serial number will be displayed on the firefighter's ID when logged on to the base station.

The team ID is used to assign a permanent team name and seat position to an air mask. When a team name has been assigned to an air mask, it will automatically create this team on the PC software and move that firefighter into the specified team and team position. Once a team ID tag has been scanned into an air mask, this team ID will remain with the air mask until another team ID tag has been scanned.

The Special ID is used to assign a specific base station ID to an air mask. When more than 1 base station is present and actively monitoring at an incident, an air mask with an assigned base station will search for the preferred base station first to log on to, and if it does not find the assigned base station within 20 seconds, it will search for the first available base station and log on to it. Once a base station ID tag has been scanned into and air mask, this base station ID will remain with the air mask until another base station ID tag has been scanned (a base station of 00000000, eight (8) zeros can be scanned into the ICM to remove the base station preference).

⚠ CAUTION

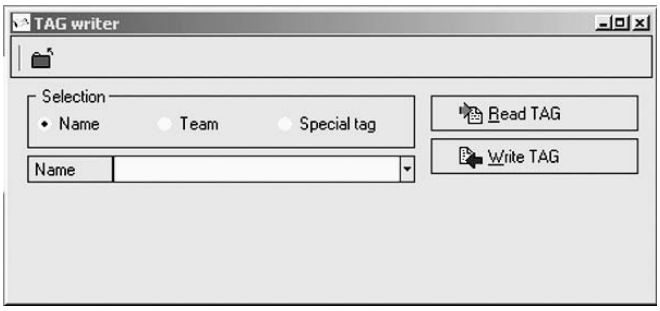
The SCBA monitoring window must be closed before the tag writer portion of the software can be used. Failure to close this window may cause the ID Tag Writer to not respond and may prevent the use of the Tag Writer feature until the SCBA monitoring window has been closed.

⚠ CAUTION

The ICM Tx / TxR Unit Data Program software or the FireHawk M7 Interface Module Software must not be running while the base station software is running on the same PC. If both programs are open, the PC may not properly communicate with the base station or interface module.

Programming and Reading ID Tags

1. Connect the interface module to an open USB port on the PC.
2. Click INCIDENT, SCBA MONITORING, TAG WRITER in the main screen of the base station software to launch the Tag Writer interface window. The following window will appear:



Programming Name ID Tags:

1. Click the circle next to "Name".
2. Enter the name or ID in the white text field. The name ID can be up to 18 characters in length.
3. Hold the ID tag parallel to the interface module or insert an ID tag into the open slot on the front of the ICM Tag Writer if the air mask uses an ICM TxR.
4. Click the "Write" button.
5. A small dialog box will appear to confirm that the data was programmed successfully.

Note: By default, the name ID will remain in the air mask for 24 hours before expiring. This setting can be changed to allow the name ID to remain until a new name ID has been entered. To change this setting, the FireHawk M7 Interface Module Software or ICM Tx Unit Data Program software must be used. Refer to the appropriate manual for additional instructions.

FireHawk M7 Interface Module Software Instructions:
P/N 10088977
ICM Tx Unit Data Program software instructions:
P/N 10067066

Programming Team/Seat Position ID Tags

1. Click the circle next to "Team".
2. Enter the Team/Position ID in the white text field. To assign a seat position in addition to the team ID, type the team ID first, then type "/" and type a position number (1 through 6). The Team ID can be a maximum of 10 characters if a seat position is not specified. The Team ID can be a maximum of eight characters if a

seat position is specified as the "/#" takes up the additional two characters.

For example, to enter a team ID of "Truck 1, Seat 2", type "Truck1/2". This will display as "Truck1/2" as the firefighters team ID during SCBA monitoring. Since only 8 characters will be displayed during SCBA monitoring, an entry of "Truck_1_/2" (where _ represents a space) will display as "Truck 1" and the position number will be hidden.

3. Hold the ID tag parallel to the interface module or insert an ID tag into the open slot on the front of the ICM Tag Writer if the air mask uses an ICM TxR.
4. Click the "Write" button.
5. A small dialog box will appear to confirm that the data was programmed successfully.

Note: The Team/Position ID will remain in the air mask until a new Team/Position ID is entered.

Programming Base Station ID Tags

1. Click the circle next to "Special"
2. Click the circle next to "Base station"
3. Locate the serial number for the base station to be associated with this ID Tag. The serial number is the 8 digit number located on the bottom of the base station. The base station serial number is also displayed at the top of the SCBA monitoring window of the MSA Accountability System Software.
4. Type the base station serial number in the white text entry box.
5. Hold the ID tag parallel to the interface module or insert an ID tag into the open slot on the front of the ICM Tag Writer if the air mask uses an ICM TxR.
6. Click the "Write" button.
7. A small dialog box should appear to confirm that the data was programmed successfully.

Note: The base station ID will remain in the air mask until a new base station ID has been entered.

Note: To remove a base station preference from an air mask, a base station ID Tag containing "00000000" (8 zeros) must be created and scanned into the air mask.

MAINTENANCE

CARING FOR THE BASE STATION:

Cleaning:
The base station may be cleaned by wiping surfaces with a damp cloth with mild soap and water. MSA Confidence Plus® Cleaning Solution may be used for cleaning the base station but is not necessary.

⚠ CAUTION

The base station is not water proof. Do not submerge in water.

Storage:
The base station should be stored in a dry place, preferably inside of a vehicle.

⚠ CAUTION

The base station is not water proof. Do not mount base station to exterior of vehicle.

When the base station is not monitoring SCBA, close the SCBA Monitoring window of the MSA Accountability System Software. The MSA Accountability System Software program may remain open while in storage but MSA recommends closing the SCBA monitoring portion of the program while in storage. Doing so will stop the base station from monitoring and will reduce the current consumption and eliminate unnecessary drain on the vehicle's battery. The PC-Link light on the base station will be RED when the SCBA monitoring window has been closed.

To decrease the start up time for the MSA Accountability System Software when arriving at an incident, store the PC and base station in a vehicle with power supply, antenna, and USB connections in place. Once the MSA Accountability System Software has been started, this program can remain open while in storage so that when arriving on the scene of an incident, only the SCBA monitoring window needs to be opened to begin monitoring SCBA.

⚠ CAUTION

Failure to close to SCBA monitoring window when the MSA Accountability System Software is not in use could cause unnecessary battery drain on the vehicle.

Service:
The base station must not be opened. There are no customer serviceable parts inside. DO NOT open the large black plugs on located on both sides of the base station.

The base station does not contain batteries.

In the event that the label displaying the base station serial number becomes illegible, this serial number can be found by connecting the base station to the PC and opening the SCBA monitoring window. The base station ID will be displayed in the upper left portion of the SCBA monitoring window. This serial number is needed to assign a preferred base station to an air mask. Refer to the ID Tag Writer Function section of this manual for instructions on using base station ID Tags.

NOTES

WARRANTY

WARRANTY INFORMATION:
The Firehawk M7 Control Module, ICM TxR Unit, and Base Station are warranted to be free from mechanical defects or faulty workmanship for two (2) years from first use or eighteen (18) months from the date code, whichever occurs first, provided it is maintained and used in accordance with MSA's instructions and/or recommendations.

Refer to the Firehawk M7 Air Mask operation and instructions manual (P/N 10082858) or MMR Air Mask with Firehawk operation and instructions manual (P/N 10023638) for additional warranty information. For a copy of the complete warranty or for information on submitting a warranty claim, write to MSA, Customer Service Department, P.O. Box 426, Pittsburgh, PA 15230-0426 or call 1-800-MSA-2222.

For further information or training instructions contact your MSA representative or distributor.

NOTES

QUICK REFERENCE FOR THE ACCOUNTABILITY SYSTEM

For the Incident Commander:
The MSA Accountability System software serves 2 primary functions:

1. Monitoring SCBA:

DOUBLE CLICK the MSA Accountability System icon on the desktop to begin.

- In main screen of MSA Accountability System, select INCIDENT, SCBA MONITORING, SCBA MONITORING.

Radio Link indication, shown in SCBA Statistics portion of SCBA monitoring window.

Evacuation Command (Sends an Evacuation command to all, to a team, to an individual)

To assign incident number and details to incident report file during SCBA monitoring.

2. Programming ID Tags:

- In main screen of MSA Accountability System, select INCIDENT, SCBA MONITORING, TAG WRITER.

Name ID Tags

- Used to assign a name to the air mask. (18 Character Maximum)

Team ID Tags

- Used to assign a permanent team to the air mask. (10 Character Max, 8 displayed) (attached /# at end to assign a jump seat position 1 through 6)

Base Station ID Tags

- Used to assign a base station assignment to the air mask. (Required when 2 incidents may occur within a close geographic proximity). This prevents an air mask from logging on to a neighboring incident command's MSA Accountability system.

MINE SAFETY APPLIANCES COMPANY
PITTSBURGH, PENNSYLVANIA, U.S.A. 15230