3M | SCOTT Fire & Safety

3M™ Scott™ SEMS II

Personnel Accountability System



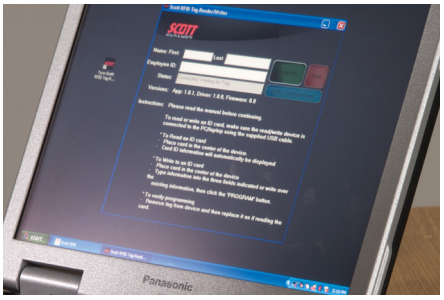


It's about accountability in action.

On scene personnel accountability is one of the most important safety elements of any fire emergency operation. Fire ground accountability, fire scene management, and personal safety for firefighters are always key for any emergency standard operating procedure.

3M Scott's SEMS II is a remarkable accountability system that puts the incident commander at every firefighter's side, displaying information vital to personal safety in volatile and dangerous situations, while providing a continuous link of communications to the command station. And with the integrated personnel locator, it provides the peace of mind that a downed or trapped firefighter can be quickly found.

SEMS II is a highly functional, programmable ID accountability system with three distinct, yet interconnected functions. These functions provide the highest level of personal safety to the firefighter and an advanced system of personnel accountability to the incident command center.



Pak-Alert Personal Alert Safety System (PASS) Device.

A personal alarm system for a downed or trapped firefighter.

Search And Rescue.

Because it is integrated with 3M Scott's revolutionary Pak Tracker Firefighter Locator technology, SEMS II is a vital element in the ability to search and rescue downed or trapped firefighters.

Personnel Accountability System.

Operates as a two-way, visual audible method of communications and monitors the assignment and status of over 100 firefighters on scene. Two levels of accountability:

1. Equipment - Identify personnel by SCBA/ seat position or
2. Personal - Identify personnel individually with RFID Cards

Pak-Alert PASS Device A Generation Ahead.

Each SEMS II System includes a wireless transceiver, built into the PASS device, that transmits critical information between the firefighter and base command when the PASS unit is automatically or manually activated. The incident commander receives transmissions from each activated SEMS II unit regarding the SCBAs cylinder pressure level, firefighter immobility, evacuation, and link status from firefighters on scene.

Firefighters wearing an active SEMS II System have audible and visual indicators including "down firefighter signal" confirmation and range status. Firefighters also have the ability to reset their own PASS device.



Accountability Tag

Multiple Sensors.

- Built-in real-time monitor
- Radio Range
- Air Pressure Gauge
- Motion detector with lack of motion alarm

The Sight and Sound of Safety.

- Audible and visual alarms
- True redundancy averts failure
- Minimum 2-hour transmission of man down signal
- Emergency manual override

Sensor Module.

The Pak-Alert SEMS sensor module offers SCBA users the added safety of dual audible and visual alarms. In the event one piezo is blocked, the other continues to emit sound. Flashing LEDs provide visual warnings. Alarms sound and continue to signal and transmit the presence of an incapacitated firefighter for a minimum of two hours.

User Friendly Console.

The display on the "glove-friendly" shoulder console utilizes easy-to-read icons to identify condition of the SCBA, receive direction from the command center, or provide warnings to the firefighter. Activation and reset buttons are easily operated even with gloved hands and feature a mechanical gauge. The manual alarm system can also be activated when a firefighter is simply disoriented or in need of emergency assistance.

PASS Alarm.

Identifies a PASS signal that has been sent to the command base either manually or automatically. Also identifies that the distress signal has been acknowledged by the command center and assistance is on its way.



Evacuation Icon.

Identifies when an evacuation call from the command center has been sent or when a self-evacuation has been initiated.



Range.

Shows that the firefighter is in or out of range to be recognized by the command station or that the command center is not operational.



ID.

Indicates that the unit is in programming mode and has accepted the identification information from the firefighter's ID tag card.



Integrated Personal Alert System With Transceiver and Locator Technology

- Transceiver sends and receives information from the command center computer
- Simultaneously displays 100+ firefighters on scene
- Provides superior firefighter safety
- Non-verbal communication affords swift accountability of single or multiple firefighters
- Pak Tracker Firefighter Locator technology built-in for search and rescue operations

Mesh Networking

SEMS II System utilizes patented mesh networking—the technology that allows continuous communication by hopping between "nodes" until a destination is reached.More simply, all activated SEMS II units communicate to the incident command computer both directly and through other operating units. This forms a communications "mesh network" to the base station, extending the range for the furthest SCBA.

Accountability Advantages

- Air-Pak SCBA in "on" condition signals base station
- Automatic tag login
- Uses 2.4 GHz radio frequency allowing for strategic plans of attack
- Continuous monitoring

3M™ Scott™ SEMS II

Personnel Accountability System.

Using the department's own personal laptop computer (PC compatible) and proprietary SEMS II software, information from each active firefighter is received and monitored through an easy-to-read, easy-to-use interface that serves as the base station for SCBA users on scene, allowing the incident commander to:

- Continuously monitor air pressure, time on scene, PASS alarm status
- Send evacuation signals to assigned groups, individuals or all firefighters on scene
- Acknowledge PASS signals
- Establish or change assignments
- Automatically record incident data. Easy-to-use software interface is compatible with tablet (*touchscreen*) PCs

The moment the base station is activated, and the SEMS II is active on the SCBA, the identification and status information of each firefighter is automatically transmitted. Once accepted (singularly or in groups) to the incident, the firefighter system status can be continuously monitored. Operating on 2.4 GHz frequency with 3M Scott's patented mobile mesh network technology gives extended monitoring range for firefighters. The base station operator can signal evacuation of a single firefighter, a particular assignment, or by pressing a single EVAC button, evacuate all firefighters. Continual monitoring of each firefighter allows commanders to strategically plan the use of personnel.

RFID/Personalized Tagging.

The system can be personally customized and programmable using RFID identification cards to link a firefighter to a specific Air-Pak SCBA. To enter their personal information, each firefighter simply swipes their pre-programmed ID card on the back of the SEMS II console. This information is transmitted to the base command computer while SEMS II is activated. Each card has three programmable fields for firefighter identification that are programmed via an RFID tag writer and proprietary software.

Download Incident Information.

SEMS II Accountability System records and stores incident information such as event date and time, department name, programmed tag information, actual event (log-on, pass alarm, etc.), cylinder pressure at time of event, and total time of SCBA usage for analysis of operating procedures. With the ability to record and store scene data, the SEMS II System becomes a valuable tool in post-incident training and preparing reports.

3M Scott is ready to assist your department in the implemention of a SEMS II System that will provide your firefighting personnel with peace-of-mind protection. Anyone who has ever faced the dangers of a fire scene knows the importance of personnel accountability. Often, it can be the difference between life and death.

Ordering Information

SEMS II and Accessories

Part Number	Description
200772-01	PCMCIA Base Station with Software
200773-01	RFID Card Programmer with Software
200774-01	RFID Card (pkg of 10)
200673-01	PAK Link Programmer
201051-01	SEMS II Repeater
201088-01	SEMS II Mesh Gateway USB Base Station
Upgrades	Contact your 3M Scott distributor or reference your 3M Scott Air-Pak SCBA Upgrade Kit Configurator for a PN
W/SCBA	Contact your 3M Scott distributor or reference your 3M Scott Air-Pak SCBA Configurator for a PN

Note: Personal laptop PC not included in the SEMS II Accountability System. Must be purchased separately.

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