TCM® Tx

[Integrated PASS and HUD Transmitter]

MSA

MSA's new ICM Tx Integrated PASS combines the safety features of the ICM 2000 Plus integrated PASS with the functionality of the Heads-Up-Display (HUD) transmitter in a new integrated PASS device that's fully compliant with the latest requirements of the NFPA 1982-1998 edition PASS standard.

Because it is now a single component on the Air Mask, firefighters benefit from a more compact and lighter weight 1/3 lb less!) design. MSA has also standardized on a single battery type for both the ICM Tx and HUD facepiece-mounted receiver, the commonly available AA alkaline battery, which provides up to twice the life of the previous 9-volt and AAA batteries, which makes for fewer change-outs and easy ownership.
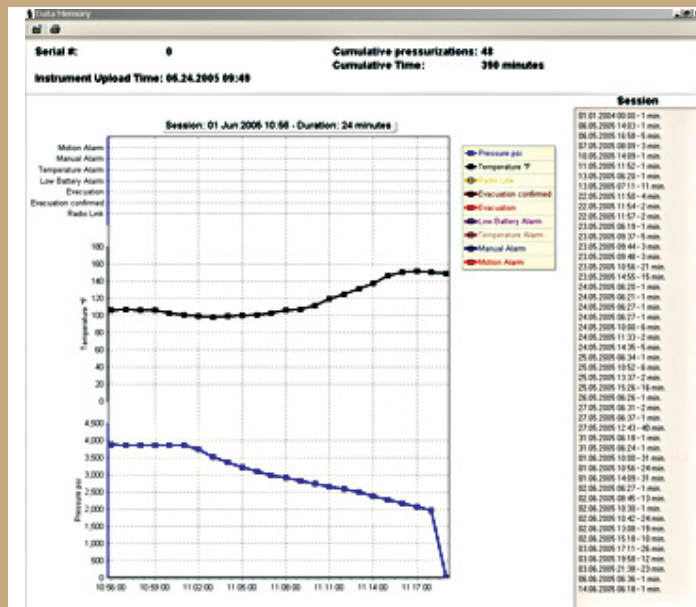
A New Motion Sensor

The ICM Tx has been designed for maximum *reliability and durability* with the use of a new *solid state accelerometer* to detect the motion of a firefighter. Accelerometers, which are resistant to the wear associated with mechanical components, have been used successfully in the automotive industry for years. They consist of a dual-axis electronic sensor which converts changes in momentum, through the flexing of an internal oscillator (pendulum), to changes in voltage, which is interpreted by the microprocessor as motion. The use of this technology provides a device that is sensitive to motion and resistant to false alarms, with a level of durability that meets the rigorous demands of the fire service.

To increase the visibility of firefighters, the ICM Tx incorporates a *"buddy light"*. When the ICM Tx is in the monitor mode, a bright green LED flashes behind the translucent manual PASS alarm button. When the PASS goes into full alarm, the light turns red for quick recognition of a firefighter in distress.

An Integrated Computer Module

Another feature of the ICM Tx is the *data logging* of the most recent 25 hours of use information. Usage data is stored by the ICM Tx unit's *integrated computer*, and special software is available to download, display, and store the data on your PC.

A use session is recorded each time the SCBA is pressurized, which indicates the day, time, cylinder pressure, air consumption rate, and the time of alarms (thermal, PASS, and low-pressure warning). Even if the SCBA is pressurized for a routine inspection, the ICM Tx will log a session. If the data is not downloaded to your PC, the ICM Tx will simply record over the earliest information in storage, retaining the most recent 25 hours of usage information.

Complementary to the data logging feature, the ICM Tx has the ability to **store a firefighter's name** into its memory through the use of a personalized ID Tag. Each tag can store the firefighter's name, jump seat location, station number or other information on a computer chip in the tag. At the beginning of each shift, firefighters simply scan their tags next to the ICM Tx while holding the mode button with the unit turned off, assigning their information to that unit. Their personalized information then becomes part of the record retrieved when downloading the ICM Tx.

An Air Management Tool

The ICM Tx provides the wearer with a digital display of: battery status, cylinder pressure, heat alarm, and service time remaining. During the first three minutes of use, the ICM Tx measures and calculates your **air consumption rate**. After the initial calculation, the service-time-remaining function is updated every 30 seconds. Firefighters can use the ICM Tx as another tool to help manage their air consumption.

A PASS Alarm That Feels The Heat

When the heat is on, the ICM Tx unit's optional heat sensor will make sure you know it. The temperature-sensing unit (thermistor) measures heat on a time-weighted average. This design is based on the guideline that 180°F for 18 minutes is just as hazardous as 600°F for one minute. At either extreme, and for every temperature in between, the device will sound an alarm to alert you that dangerous heat levels are looming.

A Multifunctional HUD Transmitter

The ICM Tx transmits 1/4 increment cylinder pressure status, PASS pre-alarm warnings, and battery status to the HUD Receiver though a close-range digitally encoded radio signal. The green mode button activates the backlight of the display screen, displays the time remaining, "refreshes" the HUD display, and toggles the HUD display between intermittent-mode and continuous-mode operation.

Users can choose the HUD intermittent-mode, which saves power and displays time remaining only as it changes in 1/4 cylinder intervals, or the continuous-mode, which displays the cylinder status at all times on the HUD display. Either way, it's the firefighter's choice.

Easy to Maintain

The ICM Tx is modular and easy to maintain with a single-threaded connection to the SCBA. Any existing MSA MMR Air Mask can be easily upgraded by simply threading on the new ICM Tx.

Part Number	Description
10067164	2216 ICM Tx with Heat Sensor Enabled
10067165	2216 ICM Tx without Heat Sensor Enabled
10067166	3000 ICM Tx with Heat Sensor Enabled
10067169	3000 ICM Tx without Heat Sensor Enabled
10067167	4500 ICM Tx with Heat Sensor Enabled
10067168	4500 ICM Tx without Heat Sensor Enabled
10058539	ICM Tx Reader / ID Tag Writer
10058545	ID Tag
10061542	AA HUD Receiver

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■ *Mode Button*
  • *Activates backlight of display*
  • *Changes display to see time remaining*
  • *"Refreshes" HUD Receiver Display*
  • *Turns HUD Receiver into Continuous Mode of Operation*

■ *Manual PASS Activation Button with Firefighter "Buddy Light"*

■ *Digital Display:*
  • *Cylinder Pressure*
  • *Battery Status*
  • *Heat Alarm*
  • *Cylinder Pressure Icon*
  • *Time Remaining*

■ *Easy to Find PASS Reset Button*

■ *Heat Sensor*

COMING SOON

MECHANICAL GAUGE ACCESSORY

Offices and representatives worldwide
For further information:

MSA