Fire & Safety

Bid Specification

3M™ Scott™ Pak-Tracker
Firefighter locator System

General Specifications

The Pak-Tracker Firefighter Locator System shall consist of two components; one that is a personal transmitter and the other that is a hand-held receiver.

Personal Transmitter

Operation/activation of the personal transmitter shall be initiated either by removal of a magnetic tether key or by manually pressing the power button. The activation method shall be configurable via a smartphone application. An aural indication of activation shall consist of an audible tone. A visual indication of activation shall consist of a flashing LED.

The personal transmitter shall weigh approximately 220 grams.

The personal transmitter shall incorporate visual and audible indicators, which shall be activated in full transmit mode when the personal unit remains motionless for approximately 45 seconds or by manually pressing a push button. Visual signals shall consist of dual flashing LED when the system is in normal operation, alternating flashing LED to indicate full transmit mode, a flashing green LED when battery in good condition and a flashing yellow LED when in low battery condition.

A push button on the personal transmitter shall permit system reset.

The personal transmitter shall contain a secondary function that will transmit a signal when the unit is in “firefighter-down” alarm and this signal shall be capable of being detected by the hand-held receiver.

The personal transmitter shall include a motion sensor and shall be powered by two “AA” alkaline batteries with a battery life of approximately 500 hours of normal operational use.

The “firefighter-down” audible signal shall be in a frequency range of 1 kHz to 4kHz. Sound pressure level shall be at least 95 dB at a distance of 3 meters.

Hand-Held Receiver

The hand-held device shall contain a receiver and be designed for firefighting applications such as search and rescue of a downed or trapped firefighter.

The housing shall be red in color and constructed of a polymer material, suitable for use in high-heat environments and fire ground applications. The housing shall consist of a compartment enclosing the receiver.

The head of the housing shall be integrated into an approximately 6-inch long ergonomically designed handle, designed to house a battery pack. The handle shall be designed for gloved-hand operation with an anti-slip grip. The base of the handle shall consist of a threaded and gasketed cover to permit user access to the battery compartment for the purpose of inserting or removing the battery pack. The base of the cover shall include a molded connection point for attachment of a neck/shoulder strap or similar device. The device shall have means to recharge the battery (NiMH) while installed in the hand-held receiver.

The complete weight of the hand-held receiver, with battery pack installed, shall be less than 1 kilogram. The overall dimensions of the hand-held device shall be 12.7 × 12.7 × 28.57 cm.

Display

The hand-held receiver shall include a large 6.04 cm, 2-line x 16-digit LCD and a 2-digit LED display. The display shall have an exterior protective cover that is hard coated and designed to reduce glare.

Controls and Icons

The hand-held receiver shall contain two gloved-hand accessible push-type control buttons to operate all functions. These functions shall include on/off, scrolling, and searching. All buttons shall be designed to prevent accidental shut-off. The hand-held receiver shall include an LCD to display transmitters that are transmitting, and which specific transmitter is being tracked, and an LED indications signal strength of the transmitter being tracked. High-intensity graphical bars incrementally illuminate when signal strength is greater than 50. Additional LED shall include a “Low Bat” alert, which shall alert the user to a low battery condition when approximately 20% of battery life remains.

Power Source and Battery Pack

The hand-held receiver shall be powered by a single rechargeable nickel-metal hydride battery pack. Use of nickel-metal hydride batteries shall provide approximately six hours of continuous operation.

Desktop Charger

The hand-held receiver shall be available with a desktop charger designed for recharging the nickel-metal hydride pack. The design of the charger is such that a battery can only be inserted one way. The charger shall be capable of recharging fully depleted batteries in approximately two hours. The charger shall be capable of being connected to a 110 V AC or 12 V DC power supply.

Truck Charging System

The hand-held receiver shall be available with a truck charging system (TCS) suitable for mounting in a vertical position inside an apparatus or on a wall. The TCS shall be designed to securely retain the hand-held receiver when not in use and to recharge the battery inside the hand-held device handle.

The TCS shall be supplied with connections for either a 110 V AC or 12 VDC power supply and shall be capable of recharging a depleted battery pack in approximately two hours.

The TCS shall be designed in such a way that a user with gloved hands may mount or dismount a hand-held receiver into the fixture.

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