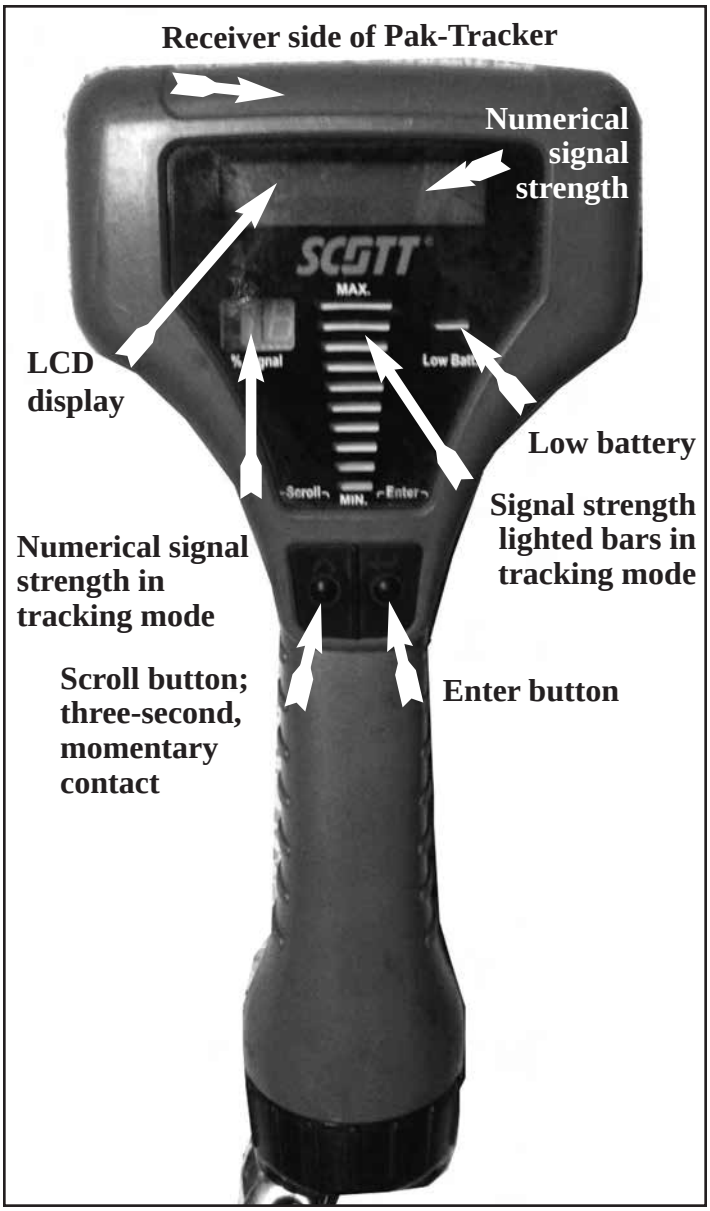

(Below) Close-up view of the operational part of the Pak-Tracker.

The Pak-Tracker, an Electronic Locator System

by Lieutenant Charles Hendry

The Pak-Tracker, one component of FDNY's Fireground Accountability Program, can be used to locate a signal coming from any member's self-contained breathing apparatus (SCBA), whose PASS device is in full alarm mode. The Pak-Tracker then will emit an audible alarm when the signal is received and display the identity (unit and assignment) of the member's SCBA. Currently, this device is carried by all Rescue and Squad Companies and the Rescue and Safety Battalions.

To turn on the Pak-Tracker, press and hold both the *Enter* (right) and *Scroll* (left) buttons simultaneously. The *Signal Strength* indicator will light and the display will show a *Power Up* message. Then, two broken lines will advise that *You're in Monitoring Mode*.

When the Pak-Tracker receives a signal from an activated PASS, it will sound an audible alarm and show the identity of the member's SCBA unit and member assignment and signal strength. The battery life for a fully charged battery is six hours in tracking mode and 12 hours in non-tracking/monitoring mode. The higher the signal strength, the closer the victim is, but there is no direct number correlation due to types of materials that may be between the victim and rescuer with the Pak-Tracker. If two PASS alarms are activated, both SCBA identities will be displayed on the LCD screen.

When multiple PASS alarms are activated, downward pointing arrows will be displayed and the latest alarm received will be on the top line of the LCD display.

The Pak-Tracker can store up to 36 SCBA identities, but the receiver's LCD display screen can display only two identities at a time.

The Pak-Tracker has a two- to three-second response time. If the *Low Batt* indicator light appears, approximately one hour of battery life remains.

Maximum range of the Pak-Tracker is 950 feet, line of sight. The signal will reflect and/or not penetrate the following:

- Metal, including structural framework and large metal objects
- Concrete walls or floors
- Brick or concrete block construction

However, the signal will attempt to pass around these objects. **The Pak-Tracker is not suitable for use in potentially flammable or explosive atmospheres.**

The strength of the SCBA PASS alarm signal detected by the Pak-Tracker will vary, depending on:

- Distance from the SCBA to the Pak-Tracker
- Path the SCBA signal has taken to get to the Pak-Tracker
- Materials between the SCBA and Pak-Tracker, which may have affected the signal from the SCBA
- Orientation of the handheld receiver. Hold the Pak-Tracker horizontally with the screen pointing upward. There is a receiver in the top of the unit.

The signal from the SCBA to the Pak-Tracker usually will pass through:

- Openings, such as gaps, holes, stairways, windows or elevator shafts

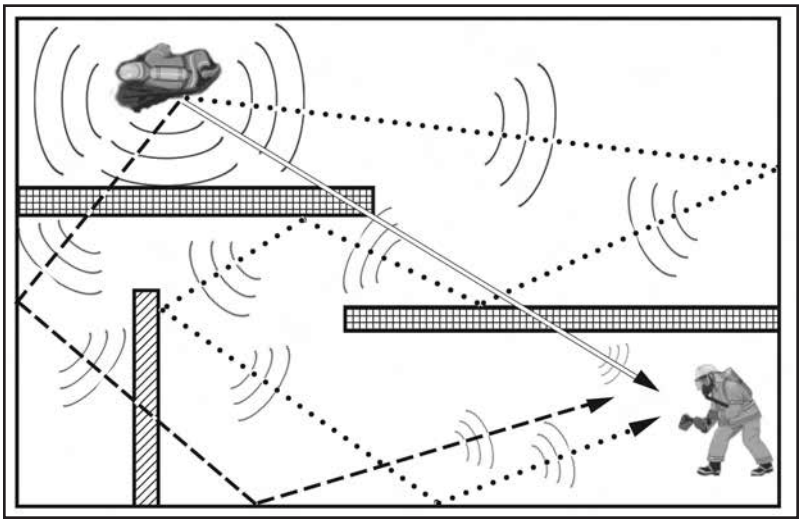

Diagram from the *Scott Pak-Tracker Locator System User Instructions* shows that multiple signal paths are possible with this equipment.

- Glass
- Wood
- Light building materials

Operations

On arrival of the Rescue or Squad Company at the scene of a fire or emergency, the Rescue/Squad shall bring the Pak-Tracker to the Incident Command Post, turn it on and notify the Incident Commander (IC). When the Pak-Tracker receives a signal from a PASS, the member monitoring it shall immediately notify the IC with the identity of the member's unit and assignment.

Members are urged to review the following references:
- *Training Bulletin*, SCBA, Addendum 8, May 18, 2011.
- "Safety First, FDNY's Fireground Accountability Program," by Deputy Assistant Chief Stephen Raynis, Chief of Safety, in the 2nd/2012 issue of *WNYF*.
- Scott Pak-Tracker Locator System User Instructions, copyright 2008.

Once an emergency condition has been confirmed, the proper radio transmissions shall be broadcast and units shall operate per Department policy. When the IC decides to use the tracking capability of the Pak-Tracker, only members trained in this procedure shall perform this task.

The Pak-Tracker is another important tool that the FAST Unit can employ on the fireground. If a member is unconscious or unable to give a *mayday*, when the member's vibra-lert activates, the Pak-Tracker will be able to identify this member. Based on the member's position, the FAST Unit is provided with a general area in which to start their search.

About the Author...

Lieutenant Charles Hendry has served the FDNY since 1999. He is assigned to the Rescue Battalion. Previous assignments include Engine 222 and Squad 288 as a Firefighter and Battalion 26 and the Technical Rescue School as a Lieutenant. He is a nationally certified Fire Instructor, Level II, and holds a Bachelors degree from Adelphi University. This is his first article for WNYF.

*(**Leeb**, continued from page 19)*

Post Radio (Post Radio with more capability). This equipment will augment the Department's ability to maintain effective communications at the scene of a major alarm and will be the subject of future articles in *WNYF*.

Communications units will be assigned on the transmission of the following alarms:
- third alarms or greater
- 10-77 second alarms, residential high-rise
- 10-76 commercial high-rise
- 10-60 major emergency
- 10-66 missing, lost or trapped member(s) requiring extrication
- 10-80 codes 2, 3 or 4 haz-mat incident requiring decon
- 10-75 in the subway fire or emergency
- When requested by the IC

At an incident, the Communications Unit has the following responsibilities:
- Demonstrate operational expertise in the abilities and limitations of the available communications equipment
- Evaluate the communications plan in effect on arrival
- Anticipate future communications requirements
- Determine the need for redundancy of communications links
- Assist the IC with preparation of the communications plan
- Assist in implementing the communications plan
- Monitor the effectiveness of communications as the incident progresses and recommend adjustments, when appropriate

Safety of the operating units is always a top priority. The goal of this program is to enhance overall safety by enhancing communications at escalating incidents. Communications-related issues within the fire service have a significant history. In fact, it is common to see such issues listed in the recommendations section of many fatal fire investigation reports.

Members are urged to review the following *WNYF* articles:
- "Rapid Response Vehicle Task Forces," by Deputy Assistant Chief Robert Maynes, in the 2nd/2011 issue.
- "Sound-Powered Telephones," by Deputy Chief Peter J. Hart (retired), in the 2nd/2009 issue.
- "UHF Radios in the Division and Battalion Vehicle Consoles," by Deputy Chiefs Peter J. Hart and John Mooney, in the 1st/2008 issue.
- "FDNY Vehicle Repeater Systems," by Deputy Chiefs Peter J. Hart and John Mooney, in the 4th/2007 issue.
- "Using the FDNY Post Radios," by then-Battalion Chief Peter J. Hart, in the 1st/2007 issue.

Even at smaller incidents, maintaining effective communications can present challenges to the IC. These Communications Units provide another valuable resource for the IC and will facilitate more robust communications for FDNY units in the field.

Author's Note: *The author acknowledges and thanks Deputy Chief Paul Cresci, Battalion Chief Gerard Koziak, Lieutenant Kevin Pfundstein and Firefighter Frank Bifone, who assisted with the development of this article and have spent countless hours developing and implementing the Communications Unit training program.*

About the Author...

Battalion Chief Frank Leeb is a 20-year veteran of the FDNY. He is covering in Division 14. Prior assignments include Engine 323 and Squad 270 as a Firefighter; Engine 324 as a Lieutenant; and Captain of Engine 76. He holds a BS degree in Fire Service Administration from Empire State College. This is his second article for WNYF.