

# Improving RIT Operations

How to improve your department's RIT operations for future and current demands



BEING FAMILIAR WITH THE  
**MEANS OF DELIVERING AIR  
TO A DOWNED FIREFIGHTER**  
IS CRITICAL.

Jim Crawford,  
Assistant Fire Chief  
of Midway Fire Rescue,  
South Carolina  
& FDIC RIT Instructor

*Sponsored by True North Gear*



Firefighter rescue operations have come a long way in the past 20 years. This is mainly due to the introduction of advanced technology into the fire service. Gone are the days of simply rushing into a burning building and attempting a rescue.



Today's Rapid Intervention Teams (RIT) are armed with countless tools to increase the survival chances of a downed firefighter. From dragging devices to lowering systems, tracking devices and more accurate accountability systems, today's RIT teams have an arsenal of firefighter rescue equipment to choose from. **One of the most important components in this arsenal is the Rapid Intervention Team pack.**



# 13 PERCENT OF MAYDAYS INVOLVE FIREFIGHTERS LOW ON AIR

“Project Mayday” research conducted by Don Abbott, President of Command Emergency Response Training (CERT)

## Function and Essential Components

The RIT pack’s main function is to supply an independent air source to a downed firefighter who may be low on air or have a malfunctioning SCBA or facepiece. Connecting a downed firefighter to a RIT pack adds valuable time in making decisions required to save the firefighter’s life. Frequently, a downed firefighter rescue involves the extrication of a firefighter who may be trapped under debris or unconscious and almost out of air. Ensuring that the troubled firefighter has their own independent air source to keep them alive while the RIT determines the necessary steps may be the difference between life and death. According to Don Abbott, President of Command Emergency Response Training (CERT), his “Project Mayday” research discovered that 13 percent of Maydays involve firefighters low on air. This statistic hardens the fact that a RIT must be trained and proficient with all aspects of the RIT pack.

Understanding the components of a RIT pack is best accomplished through repeated training drills. The bag holds all of the elements needed to make the RIT system functional. The main purpose of a RIT pack is to hold the air cylinder

that will supply the system. Some bags will have small pouches or pockets to carry needed items such as wire cutters or webbing. Keeping the RIT pack streamlined and contained is a very important feature so the RIT pack does not get hung up on anything as it is being dragged or carried into a building. RIT packs have two means of delivering the air source, the low-pressure side and the high-pressure side. The low-pressure side contains a hose connection with the ability to attach to a regulator and/or facepiece. This connection method gives the RIT the ability to do a regulator swap, a full facepiece changeover in the event of a malfunctioning or damaged facepiece, or an inaccessible UAC. Some RIT packs also have an emergency breathing hose connection on the low-pressure side for other methods of providing an emergency air supply.

The high-pressure side of the RIT pack is used as the primary means of providing an air source to a downed firefighter, due to its ability to provide the air without breaking the seal of the downed firefighter’s SCBA system. By using the Universal Air Connection (UAC) from the RIT pack and attaching it to the UAC

# ALL RIT MEMBERS

SHOULD BE AS PROFICIENT WITH OPERATING THEIR RIT PACK AS THEY ARE AT PUTTING ON THEIR OWN SCBA.

fitting on the downed firefighter's SCBA, a "clean" connection is made without introducing fire contaminants into the self-contained breathing apparatus. The UAC fitting and connection basically works like a transfill type system, equalizing the pressure between the downed firefighter's SCBA cylinder and the RIT pack cylinder. This universal connection is required on all RIT packs and SCBA according to the NFPA 1981 standard. Being familiar with both of these means of delivering air to a downed firefighter is critical. More often than not if you need to use these connections on a downed firefighter it will be a complicated rescue. These types of rescues usually mean the downed firefighter is buried deep in a building with low visibility, low on air, and more than likely is in serious trouble. Having a RIT pack with the components easily accessible and identifiable will reduce stress when you are faced with this situation. Being very familiar with your RIT pack through training will help speed up the rescue and give all involved a better chance at a successful outcome. All RIT members should be as proficient with operating their RIT pack as they are at putting on their own SCBA. The RIT pack should be able to be operated by

touch alone and with the operator recognizing all of the sounds and not needing to look at the bag.

Some other components of a RIT pack are a shoulder/drag strap; a tough and protected underside of the bag to give it the ability to be dragged without tearing through the bag material; high visibility material for easier identification and locating in an IDLH atmosphere; and different shaped pull knobs to identify different compartments (low and high pressure side components). D-rings should be available to connect the shoulder strap, attach extra carabineers, or to tag off a search line for an anchor to conduct a quick room search. In addition, large grab handles on each end of the RIT pack will aid in lifting or dragging the pack.

## **Importance of RIT Operation Improvements**

Improving RIT operations can take many forms. The RIT operational process covers areas such as response, team setup, sizeup/positioning, standby duties, deployment, RIT search operations, assessment/changeovers, extrication, preparing the victim for removal, drags/carries, and the removal process itself

which will pose the greatest challenge to the RIT. Moving an unconscious firefighter in turnout gear and SCBA can weigh on average from 175 to upwards of 300 or more pounds. If the RIT is not prepared to use basic and advanced moving techniques to deal with this weight movement they may fail during the removal process. Training on these removal techniques will improve RIT operations when it is needed most. Dragging the downed firefighter from the rescue room to the removal point will be the most laborious and difficult part of the rescue operation. Additionally, having RIT equipment that is easy to use and designed to assist the RIT will speed up the rescue and aid in this specific removal process.

Another important area that requires proficiency is in the area of downed firefighter extrication. All RIT members must be skilled in the use of specialized equipment in low visibility including hydraulic tools, airbags, reciprocating saws, and other powered tools. To improve your RIT's proficiency with using this equipment for firefighter rescue conduct training in smoke filled environments using simulated collapse situations working with props. This type of training will build confidence with RIT members and allow them to experience the difficulties in using specialized equipment in low visibility situations. This will also give them the ability to know what to expect and allow them to



overcome these difficulties before they are required to perform them in the field. “Knowing how to use all of a RIT’s compliment of rescue equipment during a firefighter entrapment cannot be underestimated,” said Jim Crawford, assistant fire chief of Midway Fire Rescue, South Carolina and FDIC RIT instructor. “Once a mayday is declared on the

fireground, there is a clock that starts that will not stop until the firefighter has been extricated. This mayday clock cares nothing of a RIT’s inability to use their rescue equipment efficiently. The clock will just tick until either the firefighter is removed or the RIT completely fails.”

Another area requiring proficiency is in the use of thermal imaging during a firefighter rescue operation. The ability to not only know how thermal imaging works but to use it to the RIT’s advantage during specialized rescue tool operations within a burning building is key to conducting a successful rescue operation in a smoke filled environment. The use of thermal imaging becomes particularly important during firefighter extrication operations in a smoke filled environment. A thermal imaging camera will allow the RIT officer to see exactly what the RIT members are doing with specialized equipment and then be able to guide them verbally as to what operational changes they need to make to increase the proficiency of the operation.

Continuing to improve upon your department’s RIT operations should be an ongoing training process. Emphasizing the importance of RIT members being proficient in every area of firefighter rescue may mean the difference between life and death of a firefighter in trouble. Of paramount importance is providing and managing an independent air supply to



troubled firefighters to buy the time that the RIT will need to accomplish the skilled operations required to bring them home.

### **Dedicated to Improving RIT Operations**

True North Gear® is a family-owned and operated company that has been dedicated to improving firefighter RIT operations for many years. The company prides themselves on allowing customers to provide input, whether positive or negative, to improve their designs. This allows the True North team to use real-world input to ensure their products are what the customers need. True North has developed a new RIT bag called the L-3 LITE SPEED™ RIT BAG. The L-3 will provide RIT teams the ability to perform their life saving tasks with ease of use when deployed on a downed firefighter rescue operation. Some of the highlights of the new L-3 LITE SPEED RIT BAG include an impact-resistant, 3D molded heat-shield skid plate; a sleek low profile design to reduce snagging; large handles on both ends for pulling and dragging; a protected mask pocket with fast access; a side pocket for only the most essential life-saving tools; a large zip opening for easy installation of the air cylinder; an internal strap on the inside to keep cylinder secure in the bag; separate pockets for low and high pressure lines with touch identifiable handles; multiple shoulder-strap configurations via D-rings on each corner of the bag; and a 4" x 4" loop panel on top of bag for ID or unit patches.

This year marks the 25th anniversary of True North Gear, a company known for providing quality products to fire departments around the globe. The company founder, Alyx Fier, began the company from his garage in 1992 with a used sewing machine. Working nights and weekends, Fier taught himself pack design and prototype sewing. Learning through trial and error, he successfully worked through the frustration and challenges of sewing his first packs.

True North has grown from a one-man operation to an ISO 9001 registered company whose products are distributed worldwide. Now, 25 years later, True North's headquarters is just up the street from the garage where Fier started the company. True North's operations have also grown beyond a single sewing machine. Today the company has a design room with CAD programs, plotters to print and cut pattern pieces and a room full of specialized sewing machines to turn out prototypes. Yet what hasn't changed in the 25 years since Fier first founded the company is the passion to create innovative, highly functional designs and the willingness to work through the often-frustrating process of trial and error. The company has also held on to Fier's vision of asking the customer what their needs are and creating new designs or reworking existing designs to fit the needs of the customer. For more information, visit [www.truenorthgear.com](http://www.truenorthgear.com).



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OF RESCUE EQUIPMENT**  
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