



# **Rapid Intervention Crew (RIC) Operations**

SAN FRANCISCO FIRE DEPARTMENT

**blank page**

**Rapid Intervention Crew (RIC) Operations**  
May 2012

San Francisco Fire Department  
698—2<sup>nd</sup> Street  
San Francisco, CA 94107

Chief of Department  
Joanne Hayes-White

Assistant Deputy Chief Jose Velo, Director of Training

Deputy Chief Operations Mark Gonzales, Project Manager  
Assistant Chief, David Franklin  
Lieutenant Dawn DeWitt, Editor

Published by:  
Division of Training  
2310 Folsom Street  
San Francisco, CA  
Phone: (415) 970-2000

REVISED: May 2012  
This manual is the sole property of the San Francisco Fire Department

## FOREWORD

The goal of this manual is to establish standard operating practices as authorized by the Chief of Department and implemented by the Division of Training.

The purpose of this manual is to provide all members with the essential information necessary to fulfill the duties of their positions, and to provide a standard text whereby company officers can:

- Enforce standard drill guidelines authorized as a basis of operation for all companies.
- Align company drills to standards as adopted by the Division of Training.
- Maintain a high degree of proficiency, both personally and among their subordinates.

All manuals shall be kept up to date so that all officers may use the material contained in the various manuals to meet the requirements of their responsibility.

Conditions will develop in fire fighting situations where standard methods of operation will not be applicable. Therefore, nothing contained in these manuals shall be interpreted as an obstacle to the experience, initiative, and ingenuity of officers in overcoming the complexities that exist under actual fire ground conditions.

To maintain the intent of standard guidelines and practices, no correction, modification, expansion, or other revision of this manual shall be made unless authorized by the Chief of Department. Suggestions for correction, modification or expansion of this manual shall be submitted to the Division of Training. Suggestions will be given due consideration, and if adopted, notice of their adoption and copies of the changes made will be made available to all members by the Division of Training.

Joanne Hayes-White  
Chief of Department

**blank page**

## Table of Contents

|   |            |
|---|------------|
| <b>SECTION 1. PURPOSE/BACKGROUND .....</b>                                      | <b>1.1</b> |
| <b>SECTION 2. RAPID INTERVENTION CREWS .....</b>                                | <b>2.1</b> |
| Definition.....   | 2.1        |
| <b>SECTION 3. USE OF RAPID INTERVENTION CREWS.....</b>                          | <b>3.1</b> |
| Initial Duties and Responsibilities .....                                       | 3.1        |
| Tools.....  | 3.1        |
| Responsibilities at The Command Post: .....                                     | 3.1        |
| <b>SECTION 4. RIC ACTIVATION .....</b>  | <b>4.1</b> |
| Procedures .....  | 4.1        |
| Before Entering .....   | 4.1        |
| Entering the Building/Area.....   | 4.1        |
| Search Techniques .....   | 4.1        |
| Progress Reports .....  | 4.1        |
| Commanding the ric operation.....   | 4.2        |
| Personnel accountability reports (p.a.r) .....                                  | 4.3        |
| <b>SECTION 5. RIC COMMUNICATIONS .....</b>                                      | <b>5.1</b> |
| Department of Emergency Communications .....                                    | 5.1        |
| <b>SECTION 6. APPENDIX A FIREFIGHTER SELF-SURVIVAL.....</b>                     | <b>6.1</b> |
| Reasons To Call a Mayday.....   | 6.1        |
| Self-Survival Steps .....   | 6.1        |
| Air Management on the Fire Ground .....   | 6.2        |
| Low-Air Alarm.....  | 6.3        |
| <b>SECTION 7. APPENDIX B—EMERGENCY TRAFFIC; MAYDAY RADIO TRANSMISSIONS.....</b> | <b>7.1</b> |





## SECTION 1. PURPOSE/BACKGROUND

The purpose of this manual is to establish standard procedures for Rapid Intervention Crew (RIC) operations.

Factors implicated in causing past **fireground** Firefighter injuries and deaths according to NIOSH are:

- Structure Collapse
- Unpredictable explosion
- Hostile fire events (e.g., flashover, back draft)
- Asphyxiation, Out of air

Past history has also taught us that contributing factors leading to Firefighter injuries and deaths are:

- Conditions deteriorated rapidly
- Poor communications on the fire ground
- Improper size-up
- Exterior crews using defensive tactics while interior crews using offensive tactics
- Failure of fire personnel to be cognizant of wind conditions
- Failure to follow basic safe firefighting principles
- Failure to listen carefully to other units on the scene
- Failure of officers and firefighters to proficiently use their SCBAs
- Failure to identify possible problems during preplanning or familiarization visits
- Energy efficient windows
- Failure to detect secondary fires and firefighters going above fires without knowing it
- Failure to have a secondary means of egress on the fire floor or the floor above
- Freelancing
- Deviating from the Incident Commander's orders

All units should realize that they might be called upon to serve as RIC at a moment's notice. The success of the RIC operation depends on many factors. One of the most important factors is training before the team is needed.

The key factor to prevent firefighter Line of Duty Deaths (LODD) and serious injuries is preventing firefighters from getting into catastrophic situations. Situational Awareness, knowledge of building construction, recognition of changing fire and smoke conditions, and good communications are key components in avoiding placing crews in these situations.

SECTION 1. PURPOSE/BACKGROUND

Successful RIC operations require

- Time
- Available crews
- Training

**Quick deployment is essential.**

## SECTION 2. RAPID INTERVENTION CREWS

### DEFINITION

The RIC is generally a company specifically dedicated to locate and assist Firefighters who are in need of immediate assistance and remove them from harm, if possible. The SFFD's RIC policy states that the 4<sup>th</sup> due Engine Company at a structure fire will be the designated RIC. Upon confirmation of a working fire the Department of Emergency Communications shall dispatch the RIC along with a Rescue Captain.

National Fire Protection Association (NFPA) Standard 1500, Standard on Fire Department Occupational Safety and Health Program, Section 6-5 (Appendix 1) addresses Rapid Intervention Teams (RIT). Another common name is Rapid Intervention Crew (RIC). The SFFD uses RIC.

A RIC shall be assigned to all incidents where SFFD personnel are subject to hazards that would be immediately dangerous to life and health (IDLH). Examples of these incidents are:

- Structure Fires
- Hazardous Materials incidents
- Confined Space incidents
- Trench Rescues
- Any other incident that has a high-risk involvement



## **SECTION 3. USE OF RAPID INTERVENTION CREWS**

### **INITIAL DUTIES AND RESPONSIBILITIES**

- Monitor the TAC and Control channels while en route
- When on scene, park rig out of the way of subsequent responding rigs (similar to Rescue Squad or Chief's buggy positioning)
- Acquire RIC tools, RIC bags and Thermal Imaging Camera (TIC)
- Check in at the Command Post and obtain briefing
- Use their normal company identification (i.e. E25 will be RIC E25)

### **TOOLS**

Crews should have pre-assigned roles prior to responding to any incident as RIC. Company Officers need to designate roles in the beginning of their shift for his/her crew in the event of a RIC activation.

Bring the proper tools and equipment to the Command Post. Tools and RIC bags should be placed on the RIC tarp near the Command Post. At a High Rise incident, the RIC should bring tools to and stage at the designated floor below the emergency. (Usually one floor below the fire.)

Tools to be obtained from crew's regular rig:

- |                |                          |
|----------------|--------------------------|
| • Power saw    | • 6' ceiling hook        |
| • Set of Irons | • Door chocks            |
| • Axe          | • Officer box flashlight |
| • Rope Bag     |                          |

Tools to be obtained from Chief's buggies or Trucks:

- RIC Bags—more than one if readily available, so there are multiple spare bottles and masks
- Thermal Imaging Camera, from Chief or Truck Officer.
- Tools specific to the incident—rotary saw (metal blade), rabbit tool, etc.

### **RESPONSIBILITIES AT THE COMMAND POST:**

The RIC shall report in to the Incident Commander (IC) at the Command Post and obtain a briefing from the IC, Incident Support Specialist (ISS), or Safety Officer regarding location of crews working in IDLH environments. While staged at the Command Post, the RIC should:

### SECTION 3. USE OF RAPID INTERVENTION CREWS

- Be ready to provide immediate assistance for any Firefighter in distress
- Continue size up of building or buildings involved, including:
  - Companies working at the scene and their locations
  - Location of entrances and exits, fire escapes, access stairs
  - Existence and location of hazards
  - Any other information that may be useful during search and removal or recovery
  
- Remain in close proximity to the Command Post
  
- Listen to the TAC channel for:
  - Changing conditions
  - Critical transmissions acknowledged and/or not acknowledged
  - Assisting the IC at Command Post with communications, if needed
  
- Observe smoke and fire conditions and notify IC if they have changed

If deemed necessary, the RIC may be ordered by the IC to soften the building (i.e., open and secure garage doors or tradesman entrances, place ground ladders to windows, remove bars from windows, etc.). If directed to perform these tasks, the RIC must remain ready for immediate deployment as a RIC and shall return to the Command Post immediately upon completion of any task.

## SECTION 4. RIC ACTIVATION

### PROCEDURES

#### Before Entering

The RIC Officer will also review with the crew the mission of the RIC, providing the following information

- Number of Firefighters missing
- Their unit number
- Last known location
- Entrance used by the Firefighters
- Firefighter(s) path(s) into the fire building
- Problems in the building or area
- Search technique to be used
- Communications plan

#### Entering the Building/Area

- Don SCBAs prior to entering any IDLH atmosphere
- Remain together as a team and maintain visual, vocal, or physical contact
- Locate and identify secondary exits to use in event of a hostile fire event
- Examine the structure for any possible areas where Firefighters may have fallen

#### Search Techniques

The RIC deployed by the IC will attempt to locate the injured/trapped/missing Firefighter(s) in the area of the last-known location. It normally takes the first RIC to locate the missing Firefighter and another crew to retrieve him/her.

The search method used will depend on the size and complexity of the building or area involved.

- For small areas, the general search method of Right In/Right Out, or Left In/Left Out can be used, with one Firefighter always remaining in the door for safety.
- In larger open areas, a guide rope should be used. A pattern of sweeping the floor with an arm, leg or tool as the team moves forward is usually employed. Voice contact must be maintained to provide continuity of the team.

#### Progress Reports

The IC (or RIC group supervisor) shall request regular progress reports from the RIC on the process of locating and/or removing the downed Firefighter. The IC shall

monitor the time the RIC is operating and give the RIC officer updates with time checks. (i.e. Engine 10 RIC, be advised you have been operating for 10 minutes)

As soon as the downed Firefighter is located, the RIC shall transmit the following information (LCAN) to the IC:

- **Location**
- **Conditions** (status of personnel and the surrounding environment)
- **Action Plan** (remove or shelter in place)
- **Needs** (Additional resources and/or equipment needed)

If the RIC is unable to remove the downed Firefighter:

- Immediately communicate this information to the IC
- Request additional resources needed to accomplish this task (additional crews, a medical team, special tools, a charged hoseline, etc.)
- Prepare the additional air supply from the RIC bag for the downed firefighter
- Consider sheltering in place with the victim until extrication is possible

The RIC Officer must notify the IC or RIC group Supervisor when the missing Firefighter(s) are removed and all RIC members are accounted for.

When the injured/trapped/missing Firefighters are removed to safety and the IC is assured that there is no longer a "Mayday" situation present, such information shall be announced to all units at the fire scene as well as to the DEC.

## **COMMANDING THE RIC OPERATION**

The IC can activate a RIC operation:

- After a "Mayday" transmission is sent from a crew at the incident
- If radio contact is severed with any member or Company on scene
- At any time the IC deems appropriate

The IC may assign additional companies as needed to assist the RIC. However, the IC should be aware that Firefighters often become focused on assisting their fellow members and will abandon their original fire-suppression assignments. To prevent injury to additional personnel, the IC should make every attempt to continue firefighting activities while at the same time assisting the injured/trapped/missing Firefighters. This is not to say that if a firefighter goes down or becomes trapped, a suppression crew should not make a rescue. On the contrary, if a Firefighter in a crew's immediate vicinity is in danger, that crew should assist them in any way they can, including



transmitting an LCAN to the IC and calling for a replacement crew to take over the task abandoned in lieu of that rescue.

The Safety Officer should be advised when the RIC team is in place. If RIC operations are underway, **a Battalion Chief (or other Chief Officer) should be assigned as the RIC Group Supervisor**. If no Battalion Chief is available, the IC may assign the Safety Officer as the RIC Group Supervisor and then special call another Battalion Chief. The IC assumes Safety until that Battalion Chief arrives.

Once the IC puts the RIC to work, **it is the IC's responsibility to replace the RIC**. The IC may select the replacement RIC from:

- A unit on scene
- A unit enroute to the incident
- A unit special called

It is important that the IC assign the task of keeping a time check on RIC Firefighters operating in the search area. Limitations of SCBAs and stress on the Firefighters should be considered and provisions made for personnel rotation and rest periods. The IC must remain in control of the fire ground when an event warrants putting a RIC into action.

The RIC may be released when the IC feels there is no risk to the members working at the scene of the incident.

## **PERSONNEL ACCOUNTABILITY REPORTS (P.A.R)**

The IC, if necessary, may utilize a Personnel Accountability Report (PAR) or roll call with all committed Divisions, Groups and Single resources.

After the following events on the fireground, a PAR is recommended to be requested by the IC:

- Catastrophic Fire event
- Structure Collapse
- Change in operational mode, from offensive to defensive
- After a Mayday transmission
- Any time the Incident Commander feels it is necessary

PAR within Divisions or Groups should be done face to face if possible from the Companies to the Division/Group Supervisor. This will minimize radio traffic at a critical point. Divisions, Groups and single resources (if operating as such) should wait for the IC to initiate the PAR.

Divisions, Groups and Single resources will be prompted by the IC for a PAR response. The order of the report will be determined by the Incident Commander at his/her discretion.

SECTION 4. RIC ACTIVATION

*Example:*

*“All units on the Fireground, This is Command, Standby for a PAR”*

*“Bravo Division this is Command, do you have PAR?”*

*“Command, this is Bravo Division. We have PAR with Engine 5, Engine 10 and Truck 10.”*

*“Bravo Division, this is Command. Copy your PAR with Engine 5, Engine 10 and Truck 10.”*

*“Rescue 1, this is Command, do you have a PAR?”*

*“Command, Rescue 1, PAR”*

## SECTION 5. RIC COMMUNICATIONS

RIC operations will be handled on the original tactical channel. In high-rise buildings, BART, MUNI, and other difficult locations, a relay communication system may have to be established (using direct channels C-14 or C-15).

As soon as the RIC is dispatched, all RIC members should have their portable radios turned to the TAC channel. Monitor incident transmissions to help paint a picture of what is occurring at the incident, and where companies are operating.

The term used to indicate that a Firefighter(s) is in trouble is "Mayday." When the IC becomes aware of a firefighter in distress or missing, the IC will obtain radio silence on the tactical channel by stating "Emergency traffic" and then announce that a "Mayday" has been called. (See Appendix B—Emergency Traffic, Mayday Radio Transmissions)

Upon the transmission of the "Mayday" signal, the IC shall make every effort to locate the injured/missing/trapped Firefighters.

If the IC uses A1 as the Tactical Channel for on-scene companies not involved in the RIC operation, he/she should announce over the original Tactical Channel (now the RIC Channel), "ALL COMPANIES NOT INVOLVED IN THE RESCUE OPERATION, YOUR TACTICAL CHANNEL IS NOW A1. SWITCH TO A1." The IC shall advise the DEC whether or not to make the announcement on the RIC Channel.

The IC will determine who will be in charge of the RIC operation. Whoever is assigned this task will do so over the original Tactical Channel (now the RIC Channel).

### DEPARTMENT OF EMERGENCY COMMUNICATIONS

Once the Department of Emergency Communications (DEC) has been alerted that a RIC Operation is in effect, they must:

- Strike the next level of alarm
- Special call an additional rescue squad, if available
- Clear A1 for use as a separate tactical channel
- Once A1 is cleared, the DEC will contact the Command Post over the Control or Command channel advising that A1 is available to be used as the non-RIC Tactical Channel, if needed
- The IC may special call another AC to assist
- Send a Command Page Staff page out, stating that a RIC operation is in effect

The DEC shall monitor all Tactical Channels in use at any incident, and it is vitally important during a RIC operation. Transmissions often go unacknowledged on the

SECTION 5. RIC COMMUNICATIONS

Fire Ground. If the DEC hears a critical transmission not acknowledged by an IC at any incident, **they shall notify the IC via the Control or Command Channel in use.**

The DEC shall notify the Incident Command Post every ten minutes from the time they were notified of the RIC operation and request an update on the RIC operation.

*“Mission Street Command, A6. Be advised you are at the 10 minute mark of the RIC Operation. Do you have an update?”*

*“Mission Street Command, A6, Be advised you are at the 20 minute mark of the RIC Operation. Do you have an update?”*

## SECTION 6. APPENDIX A FIREFIGHTER SELF-SURVIVAL

One of the common recommendations that NIOSH presents at Line of Duty Death reports is that Fire departments should train Firefighters on actions to take while waiting to be rescued if they become trapped or disoriented inside a burning structure. Fire departments should also train firefighters on sending a Mayday transmission and manually activating their PASS alarm when they become lost, disoriented, or trapped.

### REASONS TO CALL A MAYDAY

- Separated from Crew/ "Lost"
  - Not in contact with hose line, lifeline or partner
  - Unable to locate exit
- Experiencing an SCBA Malfunction in an IDLH
  - Mask seal compromised, unable to correct
  - No air or limited air
  - Leaking hoses
  - Low air alarm with not enough air to exit IDLH
- Injured or disabled
  - Immobilized due to injury, unable to make it to an exit
  - Physical condition i.e. (Chest pain, Short of breath, dizziness) that makes it difficult to find an exit
- Trapped, Pinned and/or Entangled in debris
  - Structural collapse, or inoperable/ blocked doors/ exits
- Exposure to Emergent conditions and/or event that may lead to serious injury.
  - Hostile Fire Event, Explosion, Structural Collapse

### SELF-SURVIVAL STEPS

- Check air gauge to identify quantity of air remaining.
- Communicate emergency
  - Nature of the problem: Out of air / trapped / lost etc.
  - Company identification of member needing help
  - Number of members needing help
  - Location of member(s) (specific as possible)
  - Describe conditions: Fire / Smoke / Heat / Collapse
  - Current and/or planned actions.
- Activate PASS alarm
  - Silence only to transmit on radio
- If your SCBA Mask has a voice amplifier, use it to communicate to other personnel in your company or area of operation. You could also use this device to assist personnel looking for you.
- Control Breathing to maximize air supply

- Stay Low
  - Search for cooler air, better visibility
- Use flashlight to alert rescuers
  - Position at 45 degree angle
- Use tool to make noise
  - Use tool to breach walls for self extrication
- Look for any possible exit, doors or windows (stay on wall)
  - Orientate as you enter the building
  - Know location of hose lines, use hose line to exit. Move in direction of female coupling
  - If a window is found and you are in desperate need of a rescue, toss your helmet or flashlight out to get someone's attention on the ground
- If air runs out, protect airway with hood

**If your portable is not transmitting, it may be your remote microphone. Use transmit button on side of radio.**

**If neither is working, make sure to activate emergency button on portable.**

## **AIR MANAGEMENT ON THE FIRE GROUND**

The Rule of Air Management says “Know how much air you have in your SCBA, and manage that air so that you leave the hazardous environment before your low-air warning alarm activates”. This Rule has been used by the Dive industry for decades. NFPA 1404, Standard for Fire Service Respiratory Protection Training covers specific training policies that relate to the SCBA. Included are mask fitting, the use of SCBA in IDLH, but also talks about the determination of the point of no return. The Point of No Return is that point at which you or your crew stops becoming part of the solution and starts to become part of the problem.

There are many factors that affect the point of no return:

- Entry point
  - Size, blocked (hose lines, etc.), second means of egress, etc.
- Firefighter physical condition
  - Crews ability will depend on least physically conditioned member
- Firefighter size
- Type of work being performed

Firefighters need to know what their air supply is on entry and at reasonable intervals as they proceed into the IDLH. Officers must do an ongoing evaluation of their crew based on air supply, physical exertion and fireground conditions. Physical

layout of the structure will affect air supply. By staying oriented at all times, firefighters will operate more effectively and under less stress, thus using less air.

Crews must understand how far they have gone into the structure or hazardous environment and the time it has taken them to get there.

### **Low-Air Alarm**

Firefighters often give little thought to their level of air supply until activation of their low-air alarm or vibra-alert. Often, they do not even realize their own bell is ringing. The bell soon becomes just another noise, viewed as a nuisance rather than an indication to take action. The low-air alarm is **NOT** an indication that you have time left to work. It is the signal that you have reached your *emergency reserve* of air, and it is meant just for that: emergencies.

**It is important to know that the low-air alarm signals that you have used 75% of your air.** In other words, **you have only one to seven minutes before the bottle is completely empty**, depending on your rate of air use at the time the alarm activates. When that air unexpectedly stops flowing, your mask will suck onto your face and you will be forced to rip it off, breathing in smoke and heated gases—an experience few ever forget. Running out of air in a smoke-filled structure where fresh air may be difficult to find or is far away, foolishly and unnecessarily risks your health, life, and the safety of your crew.

Monitor your remote pressure gauge at frequent intervals. If your low-air alarm rings, immediately alert your crew and exit the building with them.

**Any alarm activation in an IDLH environment requires immediate-action!**





## SECTION 7. APPENDIX B—EMERGENCY TRAFFIC; MAYDAY RADIO TRANSMISSIONS

### SAN FRANCISCO FIRE DEPARTMENT GENERAL ORDER

File Code 09 A-59  
September 11, 2009

From: Chief of Department  
To: Distribution List "A"  
Subject: Emergency Traffic, Mayday Radio Transmissions  
Reference: Rules & Regulations, Section 402  
Enclosure: None

Officer Endorsement:  
Sec. 1108 – R &  
R \_\_\_\_\_

1. "EMERGENCY TRAFFIC" is a generic term used to clear all radio traffic. When a transmission of "Emergency Traffic" is called, all radio transmissions shall cease. This radio silence will allow for the transmission of the emergency message. The emergency message shall be identified in clear language to explain the nature of the situation: i.e. safety hazard, important information, etc. Radio silence shall remain in effect until cleared by the Incident Commander.
2. The term "MAYDAY" shall be used when a member of the Department feels their life or that of another member is in danger.
3. All "MAYDAY" transmissions shall be acknowledged by the Incident Commander. If any member hears a non-acknowledged emergency transmission they shall report this immediately to the Incident Commander.
4. A "MAYDAY" call will alert the Incident Commander to activate Rapid Intervention Crews (RIC) operations.
5. It is not necessary to announce "EMERGENCY TRAFFIC" before transmitting a "MAYDAY" alert.
6. The following information should be included in the "MAYDAY" message when practical:
  - Nature of the problem: Out of air / trapped / lost etc.
  - Company identification of member needing help
  - Number of members needing help
  - Location of member(s) (specific as possible)
  - Describe conditions: Fire / Smoke / Heat / Collapse
  - Current and/or planned actions.
7. Remove General Order 02 A-07.

Joanne Hayes-White  
Chief of Department