

SOUTH PORTLAND FIRE DEPARTMENT

STANDARD OPERATING GUIDELINES

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Title:	Radio Use & Communications	# of pages:	7
Category:	General Operations	Classification:	Yellow

1. **PURPOSE:** To standardize the use of and communications with portable and mobile radios in the South Portland Fire-Rescue Department.

2. **PROCEDURES:**

Definitions:

- **800 MHz Mobile Radio** - Apparatus mounted radio used for field communications, as a stand-alone unit or with a VRS, for units within the SPFD and PFD.
- **800 MHz Portable Radio** - Hand held radio used for in-field communications.
- **Operations (OPS) Channel** - Talk group assigned by a dispatcher to a unit or group of units responding to an emergency or operating at an event.
- **Vehicle Repeater System (VRS)** – Mobile device fixed to designated Fire and Police apparatus that can be used to repeat an 800 MHz or VHF signal from units in the field.
- **VHF Mobile Radio** - Apparatus mounted radio used for field communications, as a stand-alone unit or in conjunction with a VRS, primarily with mutual aid communities.
- **Talk Group** - A group of frequencies utilized by the computerized radio system to allow inter-unit communication in the field.
- **Zone** - Bank of talk groups that allow different types of communication access to the radio system.

Background: In 2011, the South Portland Fire Department placed into service a digital, trunked, 800MHz radio system that is shared with the Portland Fire Department. Each department maintains a separate primary dispatch channel and shares 10 Operations channels.

Guidelines:

800 MHz Mobile Radios

Each apparatus in the South Portland Fire-Rescue Department is equipped with an 800 MHz mobile radio. For operations within the City of South Portland and City of Portland, companies will use the 800MHz radio for in-field communications. Upon receipt of an alarm, the dispatcher will assign the unit(s) an Operations Channel to be used for the duration of the incident. When initiating their response, companies will switch to the assigned OPS channel and remain on that channel while operating at that incident. When receiving an alarm while in quarters, units will only acknowledge receipt of the alarm on their assigned OPS channel. When receiving an alarm from the road, units will acknowledge receipt on SP *Prime* and acknowledge that they have received their channel assignment. Upon clearing an

incident, companies will notify the dispatcher that they are “returning to prime” and switch their radios to *SP Prime*. If transporting to a hospital, ambulance units will remain on their assigned OPS channel until they deliver their patient to the receiving hospital at which point they will notify the dispatcher and switch their radios back to *SP Prime*.

800 MHz Mobile Radio Programming:

Talk Group	Zone A	Zone B	Zone C
1	T SP Prime	SP Prime	T SP Prime
2	T OPS 2	OPS 2	T OPS 2
3	T OPS 3	OPS 3	T OPS 3
4	T OPS 4	OPS 4	T OPS 4
5	T OPS 5	OPS 5	T OPS 5
6	T OPS 6	OPS 6	T OPS 6
7	T OPS 7	OPS 7	T OPS 7
8	T OPS 8	OPS 8	T OPS 8
9	T OPS 9	OPS 9	T OPS 9
10	T OPS 10	OPS 10	T OPS 10
11	T PFD PRIME	PFD PRIME	T PFD PRIME
12	T SP FIRE 2	SP FIRE 2	T SP FIRE 2
13	SPPD 1	SP DPW	SPPD 1
14	SPPD2	SPPD 1	SPPD 2
15	HOSPITAL	PORT PD 1	HOSPITAL
16	JETPORT	SP PRIME	JET PORT

Each zone provides the user with different features or different means to communicate. *Zone A* allows the user to communicate on the 800 MHz network and to activate the unit’s VRS (if equipped). *Zone B* is designed for use in the event of a catastrophic failure of the 800 MHz system. *Zone B* is of limited range and utilizes radio-to-radio communications similar to a “talk around” type systems. *Zone C* allows the user to communicate on the 800 MHz network and allows the user to scan other talk groups. *Zone C* does not allow the user to activate the unit’s VRS.

Emergency Button

800 MHz mobile radios are equipped with an orange emergency button located on the face of the unit. Pressing this button activates an alarm in the communications center allowing the dispatcher to identify the unit in distress by its unique identifier. When the dispatcher recognizes the alarm he or she will contact the unit to determine if an emergency exists and take appropriate action.

VHF Mobile Radios

Each apparatus in the South Portland Fire-Rescue Department is also equipped with a VHF mobile radio. For operations in mutual aid communities other than Portland, the VHF radio can be used to communicate with the MA community dispatcher and in-field units. For

apparatus equipped with a VRS, the radio can be used in conjunction with the VRS and 800 MHz portable radios to provide a gateway to communicate via portable radios to the MA dispatcher and in-field units (this is accomplished using the VRS and *Zone A #16* on the 800 MHz portables).

Vehicle Repeater System

All permanent, front line apparatus within the South Portland Fire Department are also equipped with Vehicle Repeater Systems (VRS). These systems allow for enhanced on-scene communication on the 800 MHz network by providing units with the capability of utilizing a repeater in close proximity to the incident. These systems will be routinely used at incidents to improve in-field communications. To ensure one is always available, the Officer or OC of an apparatus equipped with a VRS shall activate the unit *upon arrival* at an incident. It is important due to system characteristics not to activate a VRS unit prior to arrival at an incident.

VRS units can also be used in conjunction with VHF mobile radios to allow 800 MHz portable radios to communicate on VHF channels.

800 MHz Portable Radios

800 MHz portable radios are programmed with numerous talk groups separated into three Zones that can be used for emergency and non-emergency communication primarily between other agencies on the 800 MHz network. Each Zone provides the user with a different means to access the communications system. *Zone A* allows the user access to the system primarily through a VRS unit. *Zone B* is a back-up Zone that provides radio-to-radio communication without using either fixed or mobile repeaters. *Zone B* has a limited range and will likely only be used in the event of a failure of the 800 MHz network or if a member cannot communicate on either of the other Zones. *Zone C* allows the user to access the system through the use of strategically placed fixed repeaters.

Portable radios will routinely utilize VRS units to access the 800 MHz network. Therefore, portable radios should routinely be kept in *Zone A*. Members must be cognizant that when a VRS unit is not available, portable radios in *Zone A* will not have access to the 800 MHz network or the capability for radio-to-radio communication. If a VRS unit is not available, portable radios must use *Zone C*.

Upon receipt of an alarm, the dispatcher will assign the unit(s) an Operations Channel to be used for the duration of the incident. When initiating their response, members will switch their portable radios to the assigned OPS channel and remain on that channel while operating at that incident.

Company Officers may elect to direct a member to keep a portable radio in *Zone C*. This allows that member to scan the other OPS channels to maintain awareness of city-wide operations. However, one must remember that when a VRS unit is active, portable radios in *Zone C* may be subject to a de-sensitivity phenomenon that will not allow them to communicate effectively.

Portable Radio Programming:

Talk Group	Zone A	Zone B	Zone C
1	T SP Prime	E SP Prime	T SP Prime
2	OPS 2	E OPS 2	T OPS 2
3	OPS 3	E OPS 3	T OPS 3
4	OPS 4	E OPS 4	T OPS 4
5	OPS 5	E OPS 5	T OPS 5
6	OPS 6	E OPS 6	T OPS 6
7	OPS 7	E OPS 7	T OPS 7
8	OPS 8	E OPS 8	T OPS 8
9	OPS 9	E OPS 9	T OPS 9
10	OPS 10	E OPS 10	T OPS 10
11	PFD PRIME	E PFD PRIME	T PFD PRIME
12	SP FIRE 2	E SP FIRE 2	T SP FIRE 2
13	SPPD 1	SP DPW	SPPD 1
14	SPPD2	SPPD 1	SPPD 2
15	SP PRIME	PORT PD 1	HOSPITAL
16	VHF	T SP PRIME	JET PORT

Notes on highlighted talk groups:

- OPS 5 is normally reserved for emergencies at the Portland International Jetport and typically will only be assigned for incidents at that facility.
- SP FIRE 2 may be used for more casual unit-to-unit communication or for longer term incidents.
- The JETPORT talk group is accessible to many agencies operating at the Portland International Jetport. It is **not** the emergency OPS channel that will be assigned to unit(s) responding to the Jetport.

Each permanent officer is supplied with a personal portable radio. Each permanent firefighter shall have access to a portable radio for the duration of their shift and should have that radio with them while operating in the field. Each portable radio is programmed with a unique identifier and members should ensure that they have the correct radio for their riding assignment. Radios shall be assigned as follows:

Engines (to also include Squads):

Radio	Assignment
1	Officer/OC (Engine 8)
2	Chauffeur (Engine 8 Pump)
3	Nozzle Firefighter (Engine 8 Portable)
4	Firefighter (Engine 8 Portable 2)

Ladders:

Radio	Assignment
1	Officer/PIC (Engine 5)
2	Chauffeur (Engine 5 Truck)
3	Irons Firefighter (Engine 5 Portable)
4	Roof Firefighter Engine 5 Portable 2)

Rescues:

Radio	Assignment
1	Attendant (Rescue 1)
2	Chauffeur Rescue 1 Portable)

Two batteries have been provided with each portable radio. The batteries are engraved to reflect which particular radio they are assigned to and are engraved with a “D” or “N.” In order to keep batteries appropriately charged and conditioned, members should swap batteries at the change of shifts in the morning (place the battery marked “D” onto the radio) and before retiring for the evening (swap the battery marked “N”) onto the radio.

Portable radios assigned to call company apparatus and reserve apparatus will be kept in charging units installed in the apparatus.

Emergency Button

Each portable radio is equipped with an orange emergency button located on the top of the unit. Pressing this button activates an alarm in the communications center allowing the dispatcher to identify the unit in distress by its unique identifier. If the unit is known to be operating within a command structure (i.e. structure fire, haz-mat, MCI etc.) the dispatcher will notify the Incident Commander of the specific emergency activation. The Incident Commander will then initiate the appropriate on-scene actions.

If the unit is not operating within a formal command structure (i.e. EMS) the dispatcher will contact the activated unit to determine if an emergency exists and take appropriate action.

Note: If operating on VRS the dispatcher will only be able to identify the truck that the alarm is coming from.

Mutual Aid Companies

When mutual aid companies enter into South Portland it is important to bring those companies onto our network. The following Radio Protocols are to be used when out of town companies are operating in the city of South Portland as part of our mutual aid agreements.

During a second alarm, or greater fire, coverage in the City of South Portland that is covering and available to respond to calls within the city should be assigned to the old South Portland

Fire VHF frequency (154.430). South Portland companies either call back or remaining uncommitted apparatus should be working on "T SP Prime" (800) and not assigned another operational channel for any additional calls within the city. This will allow for seamless communication between available South Portland units and coverage units assisting within the city.

Out of town companies that are assigned directly to the multiple alarm fire, should be assigned to 280/water supply. All our neighbors should have that channel available in their trucks. Dispatch should then create a patch between 280 and the fireground operational channel. This should allow us to communicate directly with the out of town units working the fire.

All units from Portland shall be directed to appropriate Operational channel if responding direct to a multiple alarm fire in South Portland. South Portland does utilize VRS units as well and portables should be on the "A" bank when operating on an operational channels.

Language

All radio communications should be in plain English. Transmissions should typically be brief and always polite.

Radio System Malfunction Report

It is important to identify circumstances surrounding any malfunction of the radio system. In order to ensure that our system is functioning properly any poor performance of the system should be documented as accurately as possible. Whenever a malfunction is experienced, members should document the circumstances using a *South Portland Fire-Rescue 800MHz Radio Malfunction Report* which is on the Intranet and forward that report to the Office of the Fire Chief.

3. REFERENCES:

- None

By Order Of:

Kevin W Guimond

Kevin W. Guimond
Fire Chief