



*Radio
Operations*



Rensselaer County Bureau of Public Safety 800 MHz Radio User Training Radio Operations and Policies EMS SPECIFIC TRAINING EMS AND CFR CLASSES



Radio Operations: Message From the Director of Public Safety



*Radio
Operations*

Message From the Director:

- This manual provides a plan and directive for uniform procedures in radio communications and provides for the procedures to be followed by users in the field including proper radio use and operation, fleet map and channels, mutual aid requests, fire ground operations and Incident Command
- With over 2,000 radios on the Rensselaer County system, lack of adherence to procedures becomes a serious problem when a large scale or multiple incidents occur.
- Radio communication is a valuable tool in the first responders tool box
- The full set of policies and procedures governing Rensselaer County Emergency Service Communications can be found in the Communications Field Operations Guide.
- The Communications Field Operations Guide and this Field Users Manual can be found online at:

<http://rensko.com/departments/publicsafety/>

Radio Operations: System Description



*Radio
Operations*

System Description:

- The Motorola 800 MHz Digital Trunked Radio System provides simulcast trunked and direct channels for Fire, EMS, Law Enforcement, County Highway and County Government throughout the county.
- The trunked system is designed to provide a high degree of street level portable radio coverage.
- Direct channels are simplex (single frequency) 800 MHz channels that do not require access to a trunked repeater and are to be used for on scene and interior building operations.
- There are eight (8) trunked frequencies and 4 direct frequencies.
- Radio signal coverage is established at a 95% countywide standard.



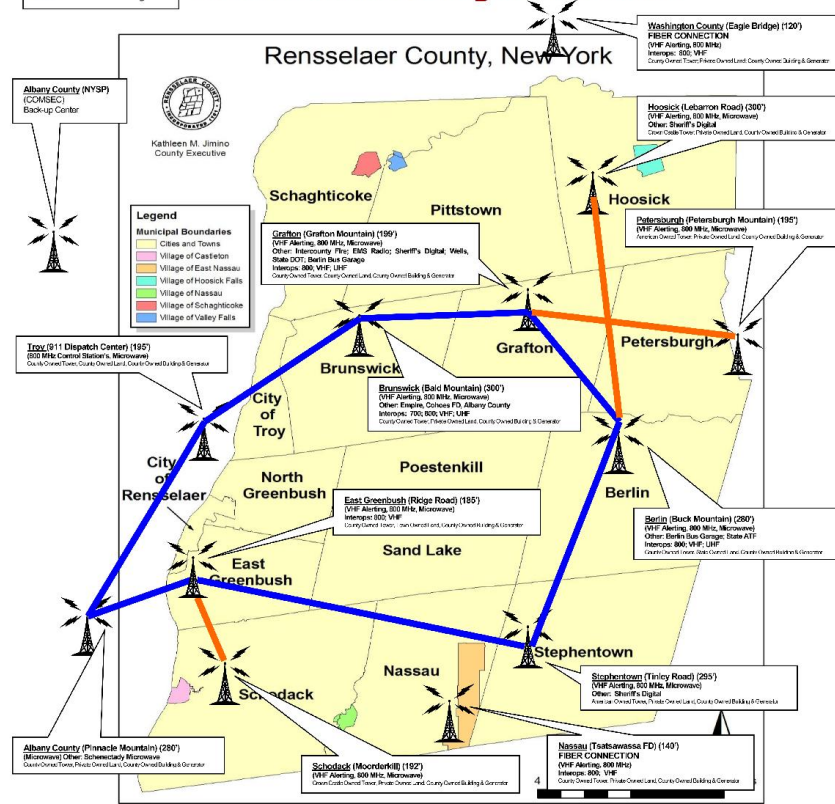
RENSELAEER COUNTY
BUREAU OF PUBLIC SAFETY
 KELLY PASLOW
 DIRECTOR OF PUBLIC SAFETY
 E-911 COORDINATOR



**Radio
 Operations**

Legend
 Orange = Microwave Spur
 Blue = Microwave Ring

Rensselaer County Tower Sites



Rensselaer County Bureau of Public Safety, 4000 Main Street, Troy, NY 12180
 270-4160 (Telephone); 270-4164 (Facsimile)

Radio Operations: Alerting and Messaging

Alerting:



*Radio
Operations*

- Paging will be broadcast on VHF frequency 155.6550, and 800 Alert channel.

Text Messaging:

- CAD technology will transmit text messaging via Internet to various devices using SMS technology.
- Stations using "I AM RESPONDING" will receive direct IP connectivity

Radio Operations: Testing of Pagers and Siren Monitors



*Radio
Operations*



Testing of Pagers and Siren Monitors:

- Emergency Alerting pager testing will be conducted weekly at 1800 hours on the following schedule:
 - Sunday Stations 1-30
 - Monday Stations 31-64
 - Tuesday All others
 - Saturday (Noon) Group call testing for station siren monitors and alerting pagers

Radio Operations: Dispatch Procedures



*Radio
Operations*



Dispatch Procedures:

- Dispatch and transmissions will be broadcast on DISPATCH and 800 ALERT CHANNEL.

The sequence for dispatching is as follows:

- Pager activation tones for stations being alerted
- Announce Fire/EMS Agencies being dispatched
- INCIDENT information
- REPEAT INCIDENT Information
- Siren Activation Tones for FD
- Dispatcher will conclude all dispatches with time and Dispatcher number
- Station response will be announced on VHF Dispatch and 800 Alert

Radio Operations: Dispatch Procedures



*Radio
Operations*

Dispatch Procedures:

- Fire Departments are not to acknowledge dispatches.
- Each responding ambulance/apparatus and the first line office of each responding agency, upon notification of response, will be provided detailed call/patient information.
- Station response will be announced on VHF Dispatch and 800 Alert.

Radio Operations: Field Communications Procedures



*Radio
Operations*

Field Communications Procedures:

- Dispatch is referred to in all radio communications as "Dispatcher".
- No codes are to be used, except those specifically authorized in the Radio User Guide.
- Blind Transmissions
 - Blind Transmission is defined as the calling unit transmitting a message without first identifying the party they are calling and without waiting for the receiving party to acknowledge that they can copy the message
 - When messages are transmitted in this format, the dispatcher will reply by stating; "Dispatcher is on unit calling, identify and repeat your message."

Radio Operations: Field Communications Procedures



*Radio
Operations*

Field Communications Procedures:

- Mutual Aid Response
 - Only the units requested to respond to a mutual aid incident shall contact the Dispatcher.

Radio Operations: Field Communications Procedures



*Radio
Operations*



Field Communications Procedures (contd.):

- Response Mode Terminology
 - Emergency Mode - red lights & siren
 - Non-Emergency Mode - no red lights & siren
 - Stand-by Mode - no response
- Dispatch is now capable of, and will record, all transmissions on the trunked system, on all channels. Recordings are confidential and will be released for authorized purposes only.

Radio Operations: Field Communications Procedures



*Radio
Operations*



Field Communications Procedures (contd.):

- All responding units will communicate when enroute to Dispatch, except as noted for Chiefs on Mutual Aid calls
- Only the first chief officer and first apparatus arriving will communicate to Dispatch. All other units, including chief officers, will communicate directly to Incident Command on the appropriate Battalion TAC channel
- Fire Department units will communicate with Dispatch on FIRE DISPATCH and switch to the correct BATTALION TAC for operations. Fire Department units will communicate with EMS Units on TAC 10

Radio Operations: Field Communications Procedures



*Radio
Operations*



Field Communications Procedures (contd.):

- Mutual Aid
 - Only apparatus requested shall communicate when enroute with Dispatch.
 - Only the first Mutual Aid apparatus from each Fire Department will communicate arriving to Dispatch.
 - All other arriving Apparatus and chiefs responding should communicate directly with Incident Command for arrival instructions and assignments.

Radio Operations: Field Communications Procedures



*Radio
Operations*



Field Communications Procedures (contd.):

- Radio Identifiers
 - All identifiers must be authorized and approved.
- Unit Identification Number (UID)
 - Each radio (mobile, portable, or control station) on this system will have programmed a unique identification number assigned by the Bureau.
 - This number will identify the radio.
 - Dispatch will maintain a master copy of all UID's on the system.
 - The full Radio Identifier will be displayed at the Dispatch console.

Radio Operations: Signals



*Radio
Operations*



Fire Departments should use the following signals:

- Signal 10
 - No fire condition present, A Signal 10 is essentially Investigation only, no action by the Fire Department
 - When Signal 10 is called, all units are in service. No further radio transmissions are necessary
 - The reporting unit should provide dispatch with identification of situation
 - Examples include Alarm Malfunction, Culinary Incident, and False Alarm
- Signal 20
 - Fire Condition or Situation present that requires FD activity
 - Reporting unit should provide dispatch with identification of the situation and action taken, for example, holding what apparatus
 - No additional resources are needed

Radio Operations: Signals



*Radio
Operations*



Fire Departments should use the following signals:

- Signal 30
 - Fire Condition / Situation present that requires FD activity
 - Reporting unit should provide dispatch with identification of situation and action taken
 - Additional resources likely

Radio Operations: ARRIVING AND PROGRESS REPORTS



*Radio
Operations*



Special Transmissions:

- Arriving reports should be concise, basic and to the point.
- Progress Reports provide situational awareness to Dispatch and Field Units. Only basic information is needed to provide essential status such as change in tactics, Fire Under Control, or Fire Out.

Radio Operations: Special Transmissions



*Radio
Operations*



Special Transmissions:

- It is not necessary for apparatus to advise Dispatch when on drills, details or other activities as long as the piece of apparatus remains on-duty or available for assignment.
- Dispatch must be advised of all pieces of apparatus that are taken off-duty or placed back on duty.
- This may be done via radio transmission OR telephone notification to Dispatch.

Radio Operations: Priority Transmissions



*Radio
Operations*



Priority Transmissions:

- EMERGENCY is defined as a potentially critical life threatening situation.
- There are 2 accepted priority transmissions:
 - Emergency Traffic
 - Priority Air

Radio Operations: Priority Transmissions



*Radio
Operations*



Priority Transmissions:

- Emergency Traffic is a message from the field that requires an immediate response from the dispatcher.
- In the event that an incident occurs, or a situation arises where an Emergency Transmission is required, the following procedure should be used:
 - Contact the Dispatcher using your Radio Identifier, and state "Emergency Traffic".
 - The Dispatcher will immediately acknowledge your transmission.
 - Once the Dispatcher acknowledges you, transmit your Emergency message.

Radio Operations: Priority Transmissions



*Radio
Operations*



Priority Transmissions:

- Priority Air is a declaration by the dispatcher. Once declared, this means that no other units are to transmit until the Priority Traffic is cleared by Dispatch
- Emergency traffic is the only radio traffic allowed on the system, until the Priority Air is lifted.

Radio Operations: Emergency Alert

Emergency Alert:



*Radio
Operations*

Radio Operations: Emergency Alert

Personnel operating at an incident may be subject to various emergency situations that require communications support.



*Radio
Operations*

Emergency Alert:

- Evacuation - Incident Commander orders an emergency evacuation of personnel out of a building
- Mayday - Personnel declare an emergency using the term "MAYDAY" or other verbal communication requesting assistance.
- Emergency Alert should only be used for life threatening situations. It is activated by pressing the Emergency Button on the radio. Additional detail on Emergency Button functionality are provided in the mobile radio and portable radio training sessions.

Radio Operations: Emergency Alert



*Radio
Operations*

Emergency Alert:

- Each of these emergency incidents will require an immediate response from Dispatch, along with on-scene operational procedures not defined in this training session.
- Definitions may be found in Department Standard Operating Guidelines or SOGs.
- Each agency must develop its own fire ground procedures for these incidents. The procedures in this training session are communications related only.

Radio Operations: Emergency Alert



*Radio
Operations*



Emergency Alert:

- Incident Commanders are reminded that communications for interior fire ground operations must be conducted on a Ground/Direct Channel.

Radio Operations: Mayday



*Radio
Operations*

Mayday:

- In the event of a firefighter trapped, incapacitated or lost at the scene of an operation, he will transmit the word MAYDAY over his radio.
- All units shall cease transmitting so that command may establish the nature and location and coordinate rescue
- If a MAYDAY or other emergency declaration is received by Dispatch for personnel at an incident, the Dispatcher will follow the Emergency Alert protocol
- If a MAYDAY or other emergency declaration is received by Dispatch from Incident Command, the dispatcher will declare an emergency and priority traffic.

Radio Operations: Mayday



*Radio
Operations*



Emergency Evacuation:

- In the event the Incident Commander orders an Emergency Evacuation, the Dispatcher will immediately sound the alert tone and broadcast the following announcement on the radio:

"EMERGENCY PRIORITY, ALL PERSONNEL EVACUATE (STATE THE ALARM LOCATION)."

- The Incident Commander shall be responsible to cause notification of the evacuation order on applicable Fire Ground and Talk Around channels.
- This will include accountability for all other operating resources on scene such as but not limited to; Utility Crews, Police, Transportation, Private Ambulance Services.

Radio Operations: Incident Timer



*Radio
Operations*



Incident Timer:

- The incident timer will be instituted upon receipt of a 911 call of a reported structure fire or HAZMAT event.
- At each ten-minute interval, the dispatcher will contact Incident Command and advise them how much time has elapsed For example: "Dispatch to Main Street Command, elapsed time is 10 minutes".
- The announcement shall be made on Dispatch.
- This process will remain in effect until the event is under control or the Incident Commander advises that no further updates are needed.

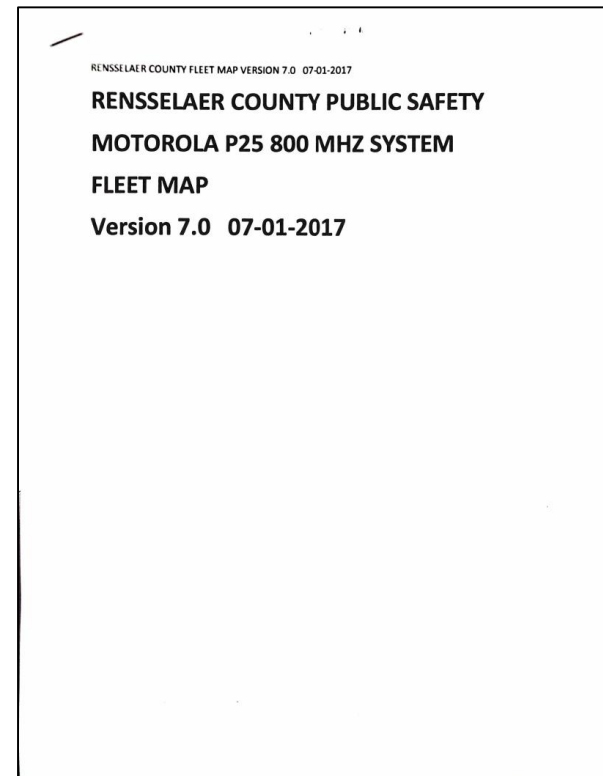
Radio Operations: Fleet Map and Channel Definitions



*Radio
Operations*

Fleet Map and Channel Definitions:

- The fleet map is designed with a framework to function within 3 Primary Zones of 16 channels each and 3 Zones are provided for Interoperability Purposes.
- The Full Fleet Map is provided in a separate document.



Radio Operations: Fleet Map and Channel Definitions



*Radio
Operations*



Fleet Map and Channel Definitions:

- Zone 1
 - the primary zone and used for normal day-to-day Operations. Fire Dispatch will be used by all Fire Battalions
 - Tactical, or “TAC” channels are identified by Fire Battalions
 - EMS Dispatch will be used by all EMS agencies
 - TAC 10 will be used by EMS Agencies for field communications
 - ALERT will be programmed as a receive only channel and be assigned to position # 17, therefore not on the selector switch, but in the scan list

Radio Operations: Fleet Map and Channel Definitions



*Radio
Operations*



Fleet Map and Channel Definitions:

- Zone 2
 - used for overflow operations when Zone 1 channels are busy
 - utilized if radio traffic/incident conditions warrant and may be assigned at the request of the Incident Commander or the discretion of the Communications Center Supervisory/Management Staff

Radio Operations: Fleet Map and Channel Definitions



*Radio
Operations*



Fleet Map and Channel Definitions:

- Zone 3
 - used for Special Operations and Training
 - utilized if radio traffic and/or Incident conditions warrant and may be assigned at the request of the Incident Commander or the discretion of the Communications Center Supervisory Management Staff
 - DISPATCH 2 may be established with a dedicated dispatcher should conditions warrant at the discretion of Bureau Management
 - Zone 3 WILL be used for training when no Special Operations are assigned to the Zone

Radio Operations: Fleet Map and Channel Definitions



*Radio
Operations*



Fleet Map and Channel Definitions:

- Zone 4
 - contains the 800 MHz National Interoperability Channels, direct and repeated. Zone 4 channels consist of Federal Interoperability channels that are generally required to be operational in all P25 systems.
 - CALL channels (CALL 90, CALL 90D) are established as a communications path to the local 911 Center.
 - TAC channels are established for on-scene incident use.
 - The "D" designator indicates direct or non-repeated.

Radio Operations: Fleet Map and Channel Definitions



*Radio
Operations*



Fleet Map and Channel Definitions:

- Zone 5
 - reserved for future INTERCOUNTY 800 MHz System interoperability.
 - Albany, Rensselaer and Saratoga Counties all utilize Motorola Astro 800 Systems, which will enable the 3 systems to be connected.
 - At this time, INTERCOUNTY interoperability is not operational.

Radio Operations: Fleet Map and Channel Definitions



*Radio
Operations*



Fleet Map and Channel Definitions:

- Zone 6
 - contains the 700 MHz National Interoperability Channels.
 - Rensselaer County monitors 7CALL50 from a single site and it is not repeated. The NYS OIEC Plan assigns 7TAC channels to each county.
 - Rensselaer County does not repeat any of the 7TAC channels.
 - Albany, Columbia, Greene, Rensselaer, Saratoga and Washington County 7TAC channels are included in this zone.

Radio Operations: Fleet Map and Channel Definitions



*Radio
Operations*



Fleet Map and Channel Definitions:

- There are 8 templates unique for EMS, each Fire Battalion, and the Town of East Greenbush.
- The COUNTYWIDE channel is monitored in all radios and at Dispatch, and provides full interoperability. It is also used for legacy KBS SentraLok decoding.

Radio Operations: Fleet Map and Channel Definitions



*Radio
Operations*

Fleet Map and Channel Definitions:

- Helicopter Ambulance Landing Zone channels are used for communications between aircraft and field units. Aircraft do not have 800MHz capability.
- The Incident Commander may connect directly to 155.715 and 46.22 or may use 800 MHz System resources. The use of the 800 MHz resources for communications to aircraft is limited by the effective range of transmitter coverage from the various tower sites.
- 800 MHz channels to VHF Transmitter cross band capability is being planned as follows:
 - 4-13 Landing Zone – North
 - 4-14 Landing Zone – Central
 - 4-15 Landing Zone – South

Radio Operations: Radio Identifiers



*Radio
Operations*



Radio Identifiers:

- EMS UNITS

- STATION # & ID # Ambulances
- STATION # & ID # (60 SERIES) Medic (ALS)
- FIRST RESPONSE + STATION # First Response (BLS)
- STATION NAME & CAR # Command Officers, Duty Crew Chiefs

- FIRE UNITS

- STATION NAME & CAR # Chiefs
- ENGINES STATION # & 1 – 9 Full service engines
- SPECIALIZED APPARATUS Use Station Number with Identifier

Radio Operations: Town of East Greenbush Communications



*Radio
Operations*

Town of East Greenbush Communications:

- The Town of East Greenbush operates a secondary PSAP dispatch center for all Town emergency services, including Best-Luther, Clinton Heights, East Greenbush Fire Departments and the W.F. Bruen Rescue Squad.
- The County VHF Paging System is accessed by East Greenbush Communications for alerting. East Greenbush Communications dispatches will be simulcast on the 800 System Alert channel.

Radio Operations: Quick Reference Cards

Quick reference cards are available from your FD Chief



**Radio
Operations**

FIRE	FLEET MAP 2017
BATT 1	ZONE 1
	OPERATIONS
1	FIRE DISPATCH
2	TAC 1-BATT 1
3	TAC 2-BATT 2
4	TAC 3-BATT 3
5	TAC 4-BATT 4
6	TAC 5-BATT 5
7	TAC 6-EGB
8	TAC 7-BATT 7
9	TAC 8 OPS
10	TAC 9 ADMIN/FP
11	TAC 10 EMS
12	GROUND 4-FIRE POLICE
13	GROUND 3-FAST
14	GROUND 2
15	GROUND 1
16	COUNTYWIDE
*	ALERT

TAC CHANNEL ASSIGNMENTS			
FD	TAC SERIES	FD	TAC SERIES
1-AVERILL PARK	3	22-NASSAU	4
2-BERLIN	5	23-NORTH HOOSICK	5
19-BEST LUTHER	6	34-PETERSBURGH	5
14-BRUNSWICK 1	2	25-PITTSBOWN	2

TAC CHANNEL ASSIGNMENTS	
TAC 1, TAC 21, TAC 31	TAC 4, TAC 24, TAC 34
14-Hemstreet Park	06-Castleton
18-Hoosick Valley	12-East Schodack
19-Johnsonville	22-Nassau
20-Melrose	31-Schodack Landing
26-Pleasantdale	32-Schodack Valley
30-Schaghticoke	34-South Schodack
35-Speigletown	TAC 5, TAC 25, TAC 35
40-Valley Falls	02-Berlin
TAC 2, TAC 22, TAC 32	05-Buskirk
04-Brunswick # 1	13-Grafton
07-Center Brunswick	16-Hoosick
10-Eagle Mills	17-Hoosick Falls
21-Mountain View	23-North Hoosick
25-Pittstown	24-Petersburgh
28-Raymertown	36-Stephentown
TAC 3, TAC 23, TAC 33	41-West Hoosick
01-Averill Park	TAC 6, TAC 26, TAC 36
09-Defreestville	03-Best Luther
15-Hoags Corners	08-Clinton Heights
27-Poestenkill	11-East Greenbush
37-Taborton	TAC 7, TAC 27, TAC 37
38-Tsatsawassa	29-Rensselaer
42-Wynantskill	
43-West Sand Lake	

Radio Operations: Radio Training



*Radio
Operations*

Radio Training

- Portable and Mobile radio training must be completed as independent tasks at your home department. You must provide the completed task form from your Chief or Training as documentation of the completion of this skill.

