

Morris County Radio Communications for the Fire/EMS services

JUNE 2021



GOALS & OBJECTIVES

- Motorola Radio Operation
- Local radio communications
- General radio usage
- County Radio System background
- Mutual Aid communications

MOTOROLA RADIO OPERATION



- UHF/700 Dual Band "Phase II" (TDMA) Trunked Radio System Radios
- Mobile Unit = APX8500
- Portable Radio = APX8000
- Capable of Transmitting in Digital or Analog format.
- Both have dual capability to RECEIVE Digital and Analog transmissions.
- Narrow Band operation complies with FCC rules for 1/1/2013



TURNING THE MOBILE RADIO ON/OFF

- To turn the radio on, push the power button
- Adjust volume knob (left side) clockwise to the desired volume _____ setting.
- Wait for the radio to affiliate with the system.
- To turn the radio off, push the power 4 button
- Most should be wired to turn on/off with vehicle ignition





SELECTING A TALK GROUP/CHANNEL

To select a talkgroup, simply turn the right hand knob (mode knob).





CHANGING ZONES



| Use Zone UP | Use Zone menu | Use Zone Down |
|----------------------|---|----------------------|
| Increase 1 at a time | Select menu to scroll through all zones | Decrease 1 at a time |

TRANSMITTING AND RECEIVING

- To transmit, press Push to Talk button.
- Wait for permission to talk tone!



- Begin transmitting your message.
- When completed, release the Push to Talk button.



TRANSMITTING AND RECEIVING

• If the system is busy, you will hear a tone indicating that you are unable to transmit.

- Your transmission is placed into the "busy queue" in the order that it is received.
- When the system is available, you will hear the permission to talk tone.



HOME BUTTON

- Pressing the Home button will automatically switch your radio to your "Primary zone", channel 1
- You can program your own using the "P" button





SCAN FEATURE

- To activate or deactivate the scan feature, simply push the scan button.
- Scans selected channel, and others user selected

SCAN ON INDICATOR





SCAN FEATURE

- Program your own scan list
- Select 3rd buttons menu page
- Select SCNL
- Navigate to channel you want in scan
- Choose SEL
- Continue for additional channels
- Push HOME to exit scan list program mode

IN SCAN LIST INDICATOR



Menu pages



RECORDING FEATURE

- Press and hold orange button to record past
 30 seconds of transmissions
- Press once to playback stored recording





DISPLAY BRIGHTNESS

You can adjust the display brightness by pressing the "Dim" — button until the desired brightness is achieved.





MOBILE RADIO BUTTONS





PORTABLE RADIO OPERATION



| Buttons | and Controls | | | |
|---------|-------------------------|--------------------------|--------------------------|---|
| Index | Description | Conventional | Trunking | |
| 1 | | Power/Volume | Power/Volume | |
| 2 | Two Position Concentric | | | |
| | Position A | Blank | Blank | |
| | Position B | Scan | Scan | |
| 3 | Three Position Toggle | | | |
| | Position A | Blank | Blank | |
| | Position B | Keypad/ Controls Lock | Keypad/ Controls Lock | |
| | Position C | Scan List Prgm | Scan List Prgm | |
| 4 | Rotary Control | Channel/Sub Select | Channel/Sub Select | |
| 5 | Top Button | Emergency | Emergency | |
| 6 | Side Top Button | Nuisance Delete | Nuisance Delete | |
| 7 | Side Middle Button | Audio Playback | Audio Playback | |
| 8 | Side Bottom Button | Light/Flip | Light/Flip | _ |

There is no keypad on the radios provided



PORTABLE RADIO SCREEN

Display Status Symbols

| | Battery Conventional = Blinks when the battery is low. | |
|-------------|--|--|
| | Smart = The number of bars (0-3) shown indicates the charge remaining in your battery. | |
| !+] | Talkaround. You are talking directly to another radio or through a repeater; On = direct; Off = repeater | |
| [æ | Monitor (Carrier Squelch). This channel is being monitored. | |
| 목 | Scan. The radio is scanning a scan list. | |



MAINTENANCE

Years ago, it was required by the FCC that all RF radio equipment be evaluated every year. With that, the term Preventative Maintenance evolved. Older radios were crystal controlled and the crystals had a tendency to drift and go off frequency. With the frequency drifting up or down, the chances of interfering with your adjacent neighbor in the RF Band became an issue.

In today's world, we use circuits such as Phase Lock Loop or PLL circuits that keep the frequency locked on the channel. Drift is less common, but still occurs and is crucial in P25 systems such as Morris County's. We recommend that your equipment be serviced on a periodic basis.

Battery life is about 5 years on portables

FOUR (4) DIGIT BATTERY DATE CODE FORMAT (2011 & LATER): Battery Date Code Format: Y Y W W I I I I - Year of Battery Manufacture (1st and 2nd position of battery code)

 $11 = 2011 \quad 12 = 2012 \quad 21 = 2021$

- 13 = 2013 14 = 2014
- 15 = 2015 16 = 2016
- 17 = 2017 18 = 2018
- 19 = 2019 20 = 2020

THREE (3) DIGIT BATTERY DATE CODE FORMAT (2011 & BEFORE): Battery Date Code Format: Y W W I I I I

0 = 2010 (could also mean year 2000)

1 = 2011



VIDEO TRAINING

See related operational and usage videos for:

- Scan list programming
- Dynamic zone programming

at

https://www.morriscountynj.gov/Departments/ Communication-Center/Training-Guides



RADIO GENERAL USAGE INFORMATION

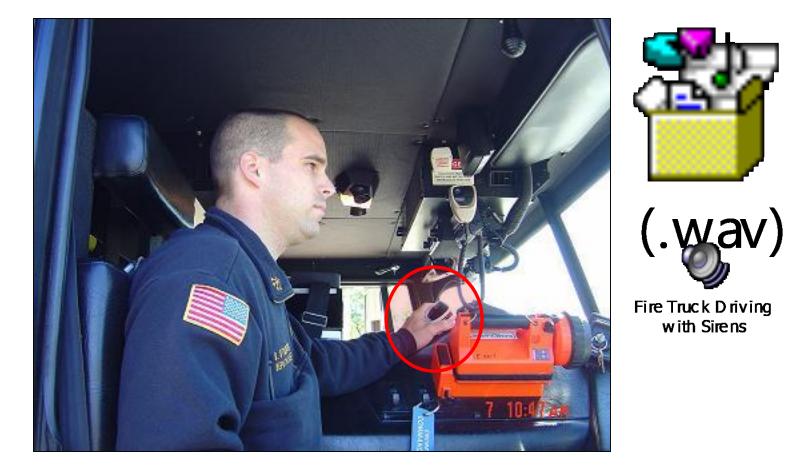


- Using the "IAFC Best Practices" transmit audio quality and intelligibility improves significantly.
- Keys for improvement
 - The position and angle of the radio microphone
 - Holding the radio microphone 1-2 inches directly in front of the mout (IAFC Best Practice, Section 1, Recommendation 2)
 - The volume level and clarity of voice
 - Speaking in a loud (not shouting), clear voice produces the best transmit audio quality and intelligibility (IAFC Best Practice, Section 1, Recommendation 3)
 - Minimize background (i.e. sirens, pump/engine noise)



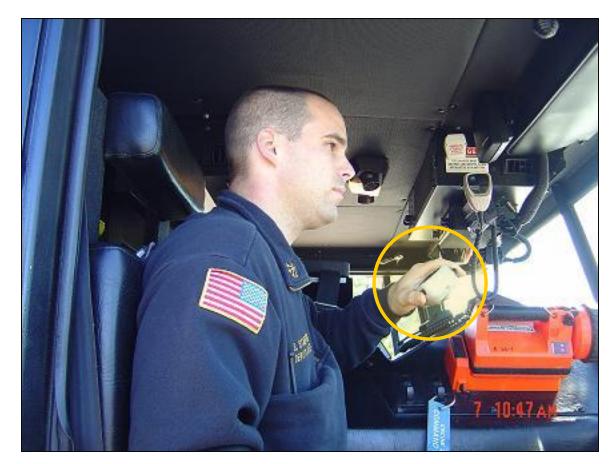
Example: Radio Mic Position No. 1

CONSOLE POSITION (12" or further from the mouth)



Example: Radio Mic Position No. 2

STANDARD POSITION (6-8" from the mouth)





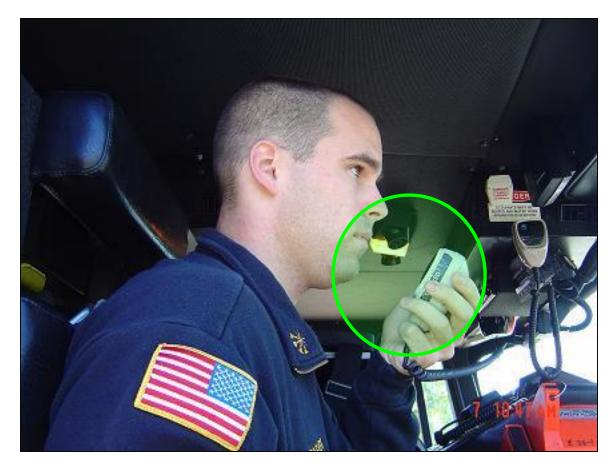
Fire Truck Driving



Fire Truck Driving with Sirens

Example: Radio Mic Position No. 3

"BEST PRACTICES" POSITION (1-2" from the mouth)





Fire Truck Driving



Fire Truck Driving with Sirens



- All Must comply with NIMS
- Use only "Clear text"/Plain Language NO TEN CODES
- Dispatch center is "COUNTY"
- Vehicle ids Town name / service / #
- Only *relevant* communication to dispatcher
 - responding, on scene, size-up, etc.



- Keep transmissions, brief, concise, relevant
- DO **NOT** use for:
 - "On the air"
 - "Awaiting crew" or "standing by"
 - Driver training
 - Fuel runs
 - Non-emergency details (unless an "incident card" is required or assigned OPS TG by communications center)
 - These add nothing to the incident card or timing and can be distracting to the dispatcher



- Avoid "buzz words" or unnecessary extensions of transmissions, i.e.
 - "At this time"
 - "Be advised"
 - transmissions not relevant to the incident run card
 - These add nothing to the content of the message
 - i.e. "Be advised the fire is knocked down at this time" vs. "the fire is knocked down". Speak normally!
- Remember the term "DIM-WIT"*: "Does It Matter What I'm Transmitting?" If not, stay off the radio!



- Every person with a radio does not need to use it!
 No need for every officer to call in service; it's the apparatus that counts!
- Dispatch will contact the IC at 20 minute intervals for Status updates, not just to tell you the time. Give a status!
- Only I.C. needs to clear all units from a scene, not each individually



- <u>Short-Specific</u> Before transmitting, know what you are going to say; don't make it up as you go along. Choose precise terms to communicate the desired message as clearly and briefly as possible without wasting airtime.
- **Pause Slightly Before Speaking** Once you "key" the transmitter (push the transmit button), PAUSE one second before speaking. This ensures that you do not begin speaking before the radio is ready electronically to transmit your message and receiving units are ready to hear your message.
- <u>Indicate Objective</u> Assignments should indicate an objective to the action. The officer(s) should know exactly where to go, whom to contact, and what the problem is. Officers should be specific about where they are, address, cross street, direction of travel, and what assistance/resource is needed.
- <u>Clear Tone -- Self Control -- Effective Rate</u> Speak clearly at a practiced rate, not too fast or too slow.
 Deliberately control your emotions and excitement. If you do not consciously control your voice, it will become garbled under stress.
- <u>Well Timed/Spaced</u> Prioritize your messages. Do not use up valuable airtime with unimportant messages and insignificant details. Let critical messages go first. Maintain an awareness of the overall situation and how you fit into it. Do not interrupt conversations unless you have EMERGENCY TRAFFIC. Listen before transmitting and wait until a message transaction has been completed. Pause between consecutive or lengthy messages ('break'). This will make it clear when one has been completed and another message started, or that there is more information to follow. It will give other units a chance to get on the air with important messages.

FIRE & TACTICAL TALKGROUPS

- Used by Incident Commander to coordinate incoming units
- Used to communicate with dispatcher
- Utilizes "trunked radio system" to transmit via repeaters and computers
- DANGEROUS for inside or on-scene operational communications
 > Basements

Steel/concrete structures

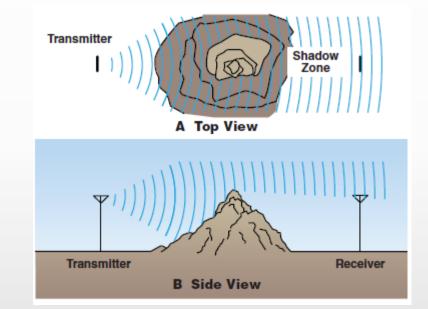
> Even with "Permission to talk" tone, is your digital message getting through?



WHY NOT TO USE TRUNKED CHANNEL INSIDE

DANGEROUS because:

Radio waves can travel through some materials, such as glass or thin wood, but the strength is reduced due to absorption as they travel through. Materials such as metal and earth completely block the waves due to their composition and density. In addition, some materials will reflect radio waves, effectively blocking the signal to the other side.





ALSO DANGEROUS BECAUSE....

- If a microphone is keyed (stuck open) no one else can get through or interrupt
- The distance the signal must travel to the repeater may be beyond the reach of your low wattage portable radio from inside a structure or below grade
- Weather conditions could affect the operation of the digital trunked radio system

USE DIRECT CHANNELS ON SCENE

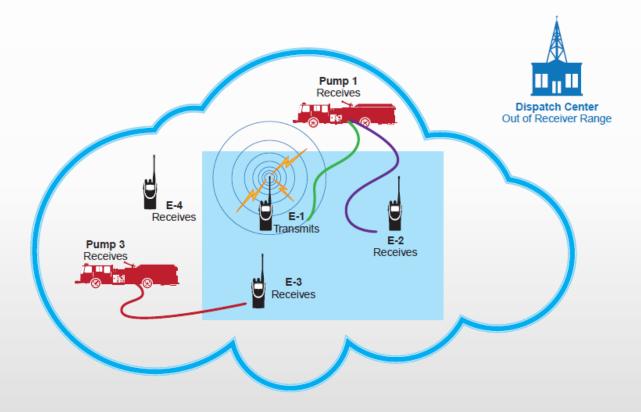
- Direct unit to unit (analog-simplex mode)
- Everyone on scene can hear you
- In many cases, stuck open mike can be transmitted over
- Emergency signals go to all other radios operating on scene
- Four channels available.
- Short distance (< 1 mile) so can be reused throughout County
- No permission required for use
- In EVERY County fire radio

FIREGROUND OPERATIONS

OMMUNICATION

Public

Vew Jerse'



The cloud represents the maximum transit range of the portable radio.



NFPA 1221 REQUIRES....

9.3.1.3* A communications radio channel, separate from the radio dispatch channel, shall be provided for on-scene tactical communications.

9.3.1.4* At a minimum, the tactical communications channel identified in 9.3.1.3 shall be capable of operating in analog simplex mode.

SPECIAL CHANNEL REQUESTS

Long Distance vs. Short Distance

For repeated/wide area requests, Tactical channels may be assigned by the dispatcher based on discipline. These can also be made available for planned events. UTAC44, 45, 46, 47, 48 are also available (UHF Bank A2), but require permission from UASI Central as well.

"ALL RADIOS" is present in ALL county radios including non-public safety if communication is required with <u>other county</u> <u>services</u>.

For local area needs, (approx. 1 mile or less) users do not necessarily require coordination, since range is limited.

- For Fire, use **MC Fireground** 1-4.
- For EMS, EMS Direct.
- For cross discipline, **ALL-IOP**. (UHF Zone B2 channel 16)
- UTAC41-48 talkaround (UHF Bank B2) are also available.
- Federal and state tactical channels are also available in the "Federal" and "State" zones, but must be coordinated

While there are over 100 talkgroups on the Morris County system, not all are active and all/any are still constrained to using the same 10 frequencies in the system. So adding more active talkgroups does not alleviate congestion but may actually increase it, resulting in busy signals.



IDENTIFICATION/CALL SIGNS

- All units should use naming established by County Active Chiefs Alliance in 2006.
- Apparatus
 - Town or Company name, Vehicle Type, Company number (if applicable), Sequence Number
- Officers
 - Town or Company name, Position, Company Number (if applicable), ID Number. i.e.
 - Chief
 - Assistant/Deputy/Battalion
 - Captain
 - Lieutenant/Engineer, etc.

NIMS Vehicle/Resource types Engine Ladder Platform Quint Brush Tender Utility Cascade Rescue Boat Haz-Mat EMS ALS/BLS

IDENTIFICATION/CALL SIGNS

- To avoid confusion on the fire ground, only utilize recommended call signs to speak with other units.
- In the event that you wish to communicate with an assignment or function being performed you can use the assignment as the call sign, such as "Roof", "1st Floor Interior", "Hose Line", etc.
- In the event that a firefighter has no assigned call sign or assignment, they can use their last name as a call sign. An example is "Smith to *Town* Engine 41"



TRANSMITTING ON THE COUNTY SYSTEM

- When you push the Transmit key a "Chirp" type sound will be heard.
- Wait until after this tone is complete, then begin speaking. This tone is the radio connecting with the repeater.
- If you speak immediately and do not wait for the "Chirp" to complete, part of your message will be cut out.
- If you hear a "BUZZ" type sound, you cannot connect with a repeater, and therefore cannot transmit. Either because you are out of range, or because someone else was transmitting at the exact same time. Wait a few seconds or move a short distance (as little as across the street) then try transmitting again.







TALK GROUP (CHANNEL) CONFIGURATION

- Municipal/Local & County talk group programming is slightly different for Police, Fire & EMS agencies.
- But, all Emergency Services have similar, common programming, for easier interoperability between all agencies. PS Tactical and State and Federal channels are common.
- To communicate between any Municipality, whether dispatched by County or not, you must use the appropriate Talk Group assigned by the communications center for the incident.
- Fire, EMS and tactical talk groups can ONLY be assigned by the comm. center. Agencies can NOT freelance to any talk group without County permission.

CHANNEL PROGRAMMING

- All radios by service are identical regardless if dispatched by county or not
- Extended or major operations will always be assigned a common tactical channel.
- Larger events will utilize the "host's" primary channel to simplify operation for the host
- Other regular users of the same primary channel will be moved for their incidents if they occur

CHANNEL LAYOUT (FIRE PAGE 1)

| ZONE/BANK | | * = These zo | ones will be de | 2022 | | |
|-----------|-----------------|--------------|-----------------|---------------|------------|-------------------|
| Ch. | UHF A1* | UHF B1* | UHF C1 | UHF A2 | UHF B2 | DYNAMIC |
| 1 | Fire Response n | OPS 10 | CUSTOM | UCALL40-RP | UCALL40-TA | User programmable |
| 2 | OPS 1 | OPS 11 | L | UTAC41-RP | UTAC41-TA | |
| 3 | OPS 2 | OPS 12 | 2 | UTAC42-RP | UTAC42-TA | |
| 4 | OPS 3 | OPS 13 | 3 | UTAC43-RP | UTAC43-TA | |
| 5 | OPS 4 | OPS 14 | Ļ | UTAC44-RP | UTAC44-TA | |
| 6 | OPS 5 | OPS 15 | 5 | UTAC45-RP | UTAC45-TA | |
| 7 | OPS 6 | OPS 16 | 5 | UTAC46-RP | UTAC46-TA | |
| 8 | OPS 7 | OPS 17 | , | UTAC47-RP | UTAC47-TA | |
| 9 | OPS 8 | OPS 18 | 3 | UTAC48-RP | UTAC48-TA | |
| 10 | OPS 9 | OPS 19 |) | | | |
| 11 | Fireground 1 | OPS 20 |) | | FG1 EVAC | |
| 12 | Fireground 2 | OPS 21 | L | DynRgrp | FG2 EVAC | |
| 13 | Fireground 3 | OPS 22 | 2 | | FG3 EVAC | |
| 14 | Fireground 4 | OPS 23 | 3 | FD Emergency* | FG4 EVAC | |
| 15 | | OPS 24 | ł | ALLCOM* | | |
| 16 | Fire Response n | OPS 25 | ; | MIRS1* | ALL-IOP | |

• • • •



CHANNEL LAYOUT (FIRE PAGE 2)

ZONE/BANK

| ch. | FD Primary | TAC | State | NJ-PSIC-SW | NJ-PSIC-REG | Federal1 | Federal2 | Federal3 | 8TAC |
|-----|--------------|-----------|------------|------------|---------------|----------|----------|----------|------------|
| | 1 MC FIRE1 | PS TAC1 | 7FIRE11D | STATECALL1 | UASI1 | 7GTAC57 | 7FIRE63 | 7FIRE63D | 8CALL90-RP |
| | 2 MC FIRE2 | PS TAC2 | 7FIRE12D | STATECOM2 | UASI2 | 7AG58 | 7FIRE64 | 7FIRE64D | 8CALL90-TA |
| | 3 MC FIRE3 | PS TAC3 | 7TAC11D | STATECOM3 | UASI3 | 7AG60 | 7FIRE83 | 7FIRE83D | 8TAC91-RP |
| | 4 MC FIRE4 | PS TAC4 | 7TAC12D | STATECOM4 | UASI4 | 7AG67 | 7FIRE84 | 7FIRE84D | 8TAC91-TA |
| | 5 MC FIRE5 | PS TAC5 | 7TAC15D | STATECOM5 | UASI5 | 7TAC75 | 7CALL50 | 7CALL50D | 8TAC92-RP |
| | 6 MC FIRE6 | PS TAC6 | | STATECOM6 | UASI6 | 7TAC76 | 7CALL70 | 7CALL70D | 8TAC92-TA |
| | 7 MC FIRE7 | PS TAC7 | | STATECOM7 | USAR7 | 7GTAC77 | 7TAC51 | 7TAC51D | 8TAC93-RP |
| | 8 MC FIRE8 | HWY/AIRPT | | STATECOM8 | USAR8 | | 7TAC52 | 7TAC52D | 8TAC93-TA |
| | 9 MC FIRE9 | FE TAC1 | | STATECOM9 | HW INT I-80 | | 7TAC53 | 7TAC53D | 8TAC94-RP |
| 1 | LO MC FIRE10 | FE TAC2 | 7TAC21 | STATECOM10 | HW INT I-280 | 7GTAC57D | 7TAC54 | 7TAC54D | 8TAC94-TA |
| 1 | L1 MC FIRE11 | FE TAC3 | 7TAC22 | STATECOM11 | HW INT I-78 | 7AG58D | 7TAC55 | 7TAC55D | 8TAC95-RP |
| 1 | 12 MC FIRE12 | FE TAC4 | 7TAC23 | STATECOM12 | HW INT I-287 | 7AG60D | 7TAC56 | 7TAC56D | 8ТАС95-ТА |
| 1 | 13 MC FG4 | FE TAC5 | 7FIRE21 | STATECOM13 | HW INT CMD N | 7AG67D | 7TAC71 | 7TAC71D | 8TAC96-RP |
| 1 | L4 MC FG3 | FE TAC6 | 7FIRE22 | STATECOM14 | HW INT OPS 1N | 7TAC75D | 7TAC72 | 7TAC72D | 8ТАС96-ТА |
| 1 | 15 MC FG2 | UTAC43 LZ | FIRE EMER | STATECOM15 | HW INT OPS 2N | 7TAC76D | 7TAC73 | 7TAC73D | |
| 1 | L6 MC FG1 | MIRS700 | ALL RADIOS | REGROUP | HW INT OPS 3N | 7GTAC77D | 7TAC74 | 7TAC74D | |



ZONE/BANK

* = These zones will be decommissioned in 2022

| Ch. | UHF A1 | * UHI | B1* | C1 | UHF A2 | UHF B2 | DYNAMIC |
|-----|--------|----------------|--------|--------|-----------------|------------|-------------------|
| | 1 | EMS Response n | OPS 10 | CUSTOM | UCALL40-RP | UCALL40-TA | User programmable |
| | 2 | OPS 1 | OPS 11 | | UTAC41-RP | UTAC41-TA | |
| | 3 | OPS 2 | OPS 12 | | UTAC42-RP | UTAC42-TA | |
| | 4 | OPS 3 | OPS 13 | | UTAC43-RP | UTAC43-TA | |
| | 5 | OPS 4 | OPS 14 | | UTAC44-RP | UTAC44-TA | |
| | 6 | OPS 5 | OPS 15 | | UTAC45-RP | UTAC45-TA | |
| | 7 | OPS 6 | OPS 16 | | UTAC46-RP | UTAC46-TA | |
| | 8 | OPS 7 | OPS 17 | | UTAC47-RP | UTAC47-TA | |
| | 9 | OPS 8 | OPS 18 | | UTAC48-RP | UTAC48-TA | |
| | 10 | OPS 9 | OPS 19 | | | | |
| | 11 | EMS Direct | OPS 20 | | | | |
| | 12 | | OPS 21 | | DynRgrp | | |
| | 13 | | OPS 22 | | | | |
| | 14 | | OPS 23 | | Fire Emergency* | | |
| | 15 | | OPS 24 | | ALLCOM* | | |
| | 16 | EMS Response n | OPS 25 | | MIRS1* | ALL-IOP | |



CHANNEL LAYOUT (EMS PAGE 2)

ZONE/BANK

| ch | EMS Primary | TAC | State | NJ-PSIC-SW | NJ-PSIC-REG | Federal1 | Federal2 | Federal3 | 8TAC |
|----|---------------|-----------|------------|------------|---------------|----------|----------|----------|------------|
| | 1 MC EMS1 | PS TAC1 | 7MED11D | STATECALL1 | UASI1 | 7GTAC57 | 7MED65 | 7MED65D | 8CALL90-RP |
| | 2 MC EMS2 | PS TAC2 | 7MED12D | STATECOM2 | UASI2 | 7AG58 | 7MED66 | 7MED66D | 8CALL90-TA |
| | 3 MC EMS3 | PS TAC3 | 7TAC11D | STATECOM3 | UASI3 | 7AG60 | 7MED86 | 7MED86D | 8TAC91-RP |
| | 4 MC EMS4 | PS TAC4 | 7TAC12D | STATECOM4 | UASI4 | 7AG67 | 7MED87 | 7MED87D | 8TAC91-TA |
| | 5 MC EMS5 | PS TAC5 | 7TAC15D | STATECOM5 | UASI5 | 7TAC75 | 7CALL50 | 7CALL50D | 8TAC92-RP |
| | 6 MC EMS6 | PS TAC6 | | STATECOM6 | UASI6 | 7TAC76 | 7CALL70 | 7CALL70D | 8TAC92-TA |
| | 7 MC EMS7 | PS TAC7 | | STATECOM7 | USAR7 | 7GTAC77 | 7TAC51 | 7TAC51D | 8TAC93-RP |
| | 8 MC EMS8 | HWY/AIRPT | | STATECOM8 | USAR8 | | 7TAC52 | 7TAC52D | 8TAC93-TA |
| | 9 MC EMS9 | FE TAC1 | | STATECOM9 | HW INT I-80 | | 7TAC53 | 7TAC53D | 8TAC94-RP |
| | 10 MC EMS10 | FE TAC2 | 7TAC21 | STATECOM10 | HW INT I-280 | 7GTAC57D | 7TAC54 | 7TAC54D | 8TAC94-TA |
| | 11 FE TAC1 | FE TAC3 | 7TAC22 | STATECOM11 | HW INT I-78 | 7AG58D | 7TAC55 | 7TAC55D | 8TAC95-RP |
| | 12 FE TAC2 | FE TAC4 | 7TAC23 | STATECOM12 | HW INT I-287 | 7AG60D | 7TAC56 | 7TAC56D | 8TAC95-TA |
| | 13 FE TAC3 | FE TAC5 | 7MED21 | STATECOM13 | HW INT CMD N | 7AG67D | 7TAC71 | 7TAC71D | 8TAC96-RP |
| | 14 FE TAC4 | FE TAC6 | 7MED22 | STATECOM14 | HW INT OPS 1N | 7TAC75D | 7TAC72 | 7TAC72D | 8TAC96-TA |
| | 15 FE TAC5 | UTAC43LZ | EMS EMER | STATECOM15 | HW INT OPS 2N | 7TAC76D | 7TAC73 | 7TAC73D | |
| | 16 EMS DIRECT | MIRS700 | ALL RADIOS | REGROUP | HW INT OPS 3N | 7GTAC77D | 7TAC74 | 7TAC74D | |



FIRE AND EMS COMMUNICATION





- Dispatched via MC UHF Paging alert, 476.2875 MHz, and Paging TG from all 14 tower sites simultaneously
- Chief's & Apparatus communicate with each other and County Dispatch via MC FIRE or EMS TG, while in route and during incident on scene.
- Upon arrival, all Fire Ground Communications are on a local fireground/direct channel

In most cases, Mutual aid assistance will contact the IC on their normally assigned FIRE or EMS TG





TALK GROUPS

- All Morris County trunked Channels are available at all Comm. Center consoles
- All repeated channels are recorded at the Comm. Center.
- Every unit is identifiable and any radio can be turned off remotely if lost or abused.
- Use Direct/local Channels for long messages and traffic not appropriate on the trunked system which transmits countywide.



COUNTY P25 PHASE II 700 MHz TRUNKING SYSTEM



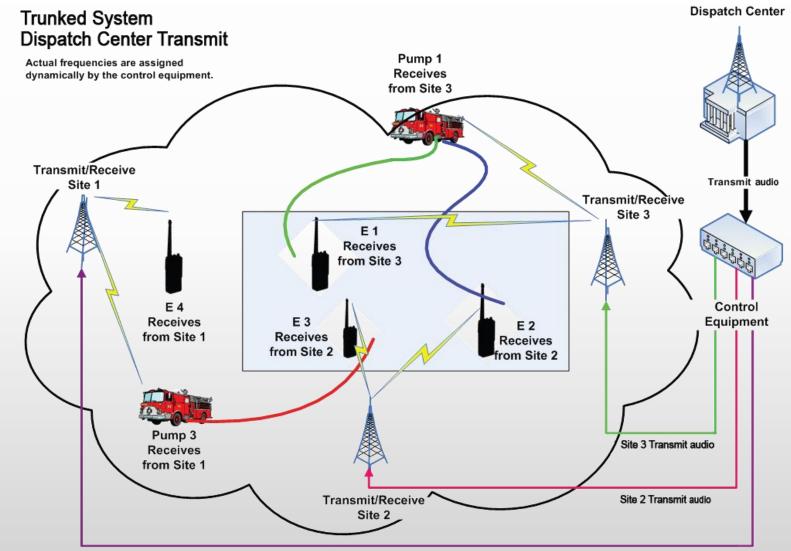


WHAT IS TRUNKING?

- Multiple frequencies available on a shared basis by all users
- Computer controlled separates users by group
- System automatically picks the radio frequency, not the radio user, from the pool of frequencies available
- Allows for more efficient use of channels which allows greater number of users
- Presently over 5000 units sharing over 100 talkgroups
- Detailed radio system technology review available via the U.S. Fire Administration, "Voice Radio Communications Guide for the Fire Service"



WHAT IS TRUNKING?



Site 1 Transmit audio



COUNTY RADIO SYSTEM

- 700 MHz Trunked Radio System supported by 14 repeaters throughout Morris County.
- On a repeated channel, if the dispatcher can hear you, everyone across the county can too! No need to have dispatcher relay information on the same channel.
- All Morris County Police, Fire, and EMS emergency services have vehicle mounted radios
- Dispatch centers have interop capability (MIRS/TAC)
- ALL Morris County Fire Chiefs, EMS Rescue Captains & OEM Coordinators have been provided with compatible portable radios.
- ALL radio's are assigned, and may be disabled by Morris County Communication Center if the system is abused or used improperly.





MUTUAL AID CALLS





- Fire & EMS Response to the County Comm. Center and initial direction done via "MIRS" talkgroup if not dispatched by Morris County
- Incidents are assigned a FIRE, EMS or TAC talkgroup by Comm. Center
- When responding as mutual aid, the IC will contact the host agency using the assigned radio talkgroup as requested by the host agency or assigned by the Morris County Comm. Center.
- Other apparatus should await instructions from the IC on their normally assigned frequency or talkgroup, and also communicate amongst other units on their primary response frequency unless instructed otherwise.





MUTUAL AID RESPONSE

- On scene, units should utilize their normal local, direct **fireground** channel(s)
- Mutual Aid should contact the Comm. Center on MIRS for assigned FIRE/EMS/TAC channel when responding to mutual aid.
- I.C. should contact the Comm. Center for channel assignment when requesting mutual aid, if different from normal.
- Most times the dispatcher will assign a channel at the time of the call if different from your normal channel assignment





FOR FURTHER ASSISTANCE



COMMUNICATIONS UNIT

Communications Unit Leader (COML) can be requested for major incidents or to help manage comms at a scene

- Prepares Incident Radio
 Communications Plan (ICS 205)
- Establishes Incident Communications Center (ICC)
- Orders and manages personnel, equipment
- Establishes needed capabilities
- Participates in incident action planning





COMMUNICATIONS UNIT

Can provide on-scene interoperability with disparate systems (i.e. out of county)



Can provide on-scene cache radios when needed or for special events







COMMUNICATIONS UNIT

- Questions? Comments? Suggestions?
- Contact Communications at 973-829-8190

