

Jefferson County Radio System

Concept of Operations – Fire & EMS



Jefferson County Radio System

Please Hold Questions till the end...

Definitions



- TLMR Trunked Land Mobile Radio
- PTT Push To Talk
- Talk Group Synonymous with "Channel"
- Direct Off Network / Line of Site channel / Simplex
- On Network Connecting to the Jefferson County "System"
- End User You, the person that uses the radio
- Subscriber Unit The Radio that you use



The TLMR System

The Jefferson County TLMR System



- P25 Digital Trunked System
 - Jefferson County has 12 pair of frequencies licensed with the FCC
 - Those 12 pair are "pooled" or "shared" for use by ALL Jefferson County end users and subscribers
- Advantages
 - Users have access to more talk groups / channels
 - Utilizes idle frequencies system frequencies are available to all users
- The Jefferson TLMR System incorporates over 275 talk groups remember talk group is synonymous with "channel"

The Jefferson County TLMR System



- The coverage of the new TLMR system differs greatly from legacy low band systems.
- The new system is built to a guaranteed >97% Portable Radio Coverage on the street
 - Coverage testing has validated >97% with full foliage (leaves & tree cover)

The Central New York Interoperable Communication Consortium (CNYICC)



- CNYICC SHARED CORE MEMBERS
 - Onondaga (UHF)
 - Jefferson (UHF)
 - Oswego (UHF)
 - Cayuga (UHF)
 - Madison (UHF)
 - Broome (UHF) Under Const.
 - Oneida (VHF)

- A "System of Systems"
- Shared CORE
- Shared resources
- Completely Interoperable
- AND completely autonomous (can fully function on our own)

The Central New York Interoperable Communication Consortium (CNYICC)



- Non-Core Members (not using the shared core)
 - Cortland (UHF) interoperable, on their own core
 - Tompkins (800) interoperable, on their own core
 - Lewis (UHF EF Johnson) interoperable, on their own core

TLMR System Design – Jefferson & CNYICC



- Trunking systems are designed or sized based
 - The CNYICC (including Jefferson) operate on 1 Core/Master Site located at Onondaga County 911
 - Each County can FULLY operate without connection to the Core
 - It is interoperable with all agencies of public service and public safety across all counties connected to the Core

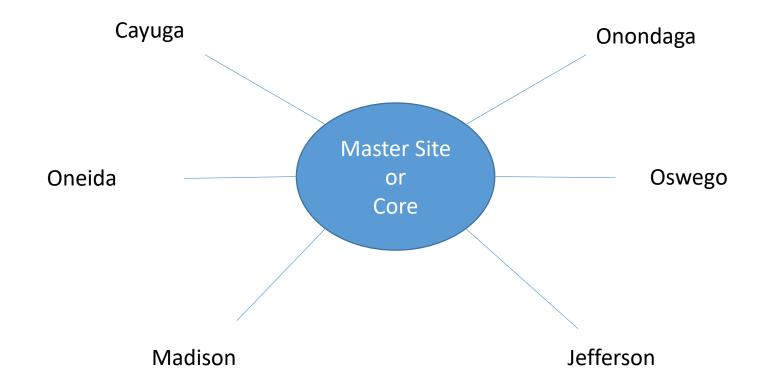
TLMR System Infrastructure



- Every CNYICC County's TLMR System includes:
 - System Towers The Jefferson System has 12 tower sites
 - MANY radios at each site The Jefferson System has at LEAST 12 radios at each tower site
 - Multiple FCC licensed SYSTEM frequencies The Jefferson System has 12 pair for trunked system plus MANY for use with direct or conventional use
 - A Zone Controller or Primary Site located at County Highway
 - Built to be resilient has built in redundancy and back-up's

TLMR System Infrastructure





Each County has a Prime Site

TLMR System Redundancy / Back-Up



- Trunking Systems have many layers of redundancy or "back up" to ensure that communications continue in even extreme situations
 - Looped Microwave that travels two directions
 - Looped Fiber Connections

- What End Users may see when there are fail-overs (Back-Up Notifications)
 - Site Trunking
 - Failsoft

Site Trunking

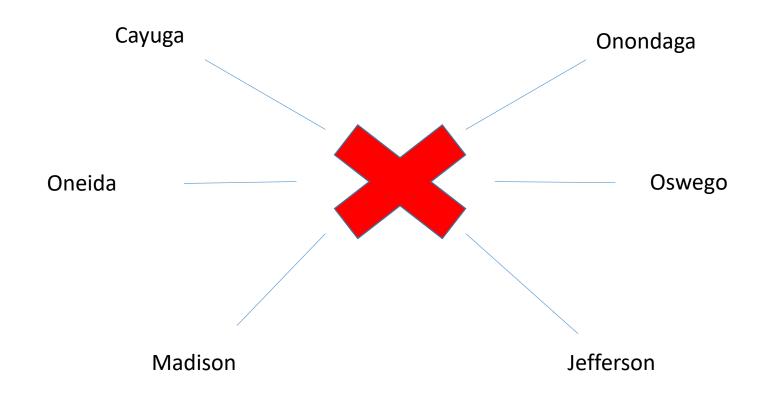


• Definition - The Master Site (Onondaga County 911) has lost communications with the local Prime site (Watertown, County Highway).

 Jefferson County will still function on the local Prime Site (County Highway)

Site Trunking





Each County operates on it's Prime Site

Site Trunking



- How this affects the End User (Subscriber)
 - The radio will display SITE TRUNKING
 - The radio will still function on network and off network
 - The EMERGENCY button will still function (within Jefferson County)
 - Communications footprint will diminish (coverage will be limited to Jefferson County ONLY) Ex: Ambulance located in Syracuse WILL NOT be able to talk back to Jefferson 911





 Definition - The Master Site (Onondaga County 911) and the County Prime Site (Watertown, County Highway) have failed

LOST CONNECTION TO THE SYSTEM (prime site)

AND

LOST CONNECTION TO THE PRIME SITE (in Jefferson County)

Failsoft



Bad Day

Failsoft



- How this affects the subscriber (the radio)
 - The radio will display "FAILSOFT"
 - The radio will emit a low level alert every 10 seconds
 - The radio will still function as it would on a conventional repeater system
 - Off-Network or DIRECT channels will still work (radio to radio direct)
 - Essential channels are mapped to a specific frequency
 - The **EMERGENCY** button will **NOT** function
 - Communications footprint <u>WILL</u> be GREATLY diminished

Failsoft



- What should the End User (YOU) do?
 - If you are on the appropriate primary talk group (channel) for your discipline use, leave the radio where it is selected and listen for transmissions
 - JE-FIRE DISP (Fire Dispatch)
 - If you are working on a talk group (channel) other than the appropriate primary channel for your discipline, turn your channel selector to the appropriate primary channel and listen for transmissions
 - Minimize ALL non-essential and unnecessary radio traffic



The Hard Stuff



- Turning the Radio On and Off
 - Turn the dial clockwise to power on and for volume control
 - Turn the dial counter-clockwise to power off and decrease volume
- Changing the Channel
 - Channel control has 16 "positions"







DO



DO NOT



WHY?





- The single most important button:
 - Press and hold the "HOME" button and:

Your radio will go to Zone 1, Channel 1, or the JE-FIRE DISP talk group (channel

 No matter where you are or how lost you get in the radio, you can always get "home" and talk to Jefferson Fire



Radio Operation – What is your screen telling you?



Z Scan Indicator (not shown)

Signal Strength

CLOCK

Talk Group / Channel Name



RADIO POWER (H-High / L-LOW)

Battery Power

ZONE NAME

Radio Name / ALIAS



- Changing the Zone
 - Picture shows the "home" screen
 - Press the "soft key" below the word "Zone" on the screen
 - That will take you to the "Zones" screen



- Changing the Zone
 - Picture shows the "Zones" screen
 - Use the arrow up / arrow down soft keys to scroll to "highlight" the desired zone
 - Press the single dot "soft key" below the word "Sel" on the screen to "select" the desired zone
 - Then press the three dot "soft key" below the word "exit" to return to the home screen











- Changing the zone
 - The A/B/C toggle switch will also immediately move the radio into one of the first three zones
 - A = Jefferson Fire
 - B = Jefferson EMS
 - C = Oswego County or Lewis County
 - Beneficial if a "quick" return to one of those zones is necessary





- Emergency Button Operation
 - Short press activates the "EMERGENCY"
 - Activation will make the radio "alarm", and will "alert" EVERY radio on the selected talk group
 - Press and HOLD for 3-4 seconds (wait for the long tone) to "reset" or "cancel" the emergency
 - ONLY the radio that activates the emergency can "reset" or "cancel" it, THE DISPATCHER CAN NOT RESET THE ACTIVATION





- Emergency Button Activations have a "HOT MIC"
 - The microphone of the activated radio will have a 10 Second open mic
 - Meaning that <u>EVERYTHING</u> said in those 10 seconds is going out to <u>EVERY</u> other radio on that talk group (channel)
 - The alarmed radio open mic WILL NOT be interrupted by other PTT's, meaning that the open mic has the talk group locked up
 - After the Hot Mic (10 Seconds), users can push the PTT to talk to alarmed radio



- "HOT MIC" What do I say now?
 - LUNAR
 - Location Where are YOU?
 - Unit What unit are you operating with?
 - Name State your name. Nobody cares what radio number you have in a MAYDAY!
 - Assignment Where were you tasked to operate?
 - Resources What (resources) do you need

AND

What EXACTLY happened, WHAT is YOUR EMERGENCY?



- Emergency Button Activations are TACTICAL
 - Meaning that they activate on the SELECTED talk group (channel)
 - Remember, not all talk groups are monitored in the 911 Center, so it is the
 officers and IC's <u>DUTY</u> to pay attention to activations at incidents
 - EVERY radio on the selected talk group (channel) will alert and will display EMERGENCY in and ORANGE banner
 - An activation will "follow" you if you change channels



- Emergency Button Activations <u>MUST</u> be acknowledged
 - If an EMERGENCY activation is on a talk group (channel) that is MONITORED in the 911 Center (any of the monitored talk groups), the dispatcher WILL be calling the radio and end-user to check their status
 - If it was accidental, <u>OWN IT</u>
 - Do not ignore it, it won't go away
 - Do not "turn off the radio" or "disconnect the battery", that does not clear it
 - Do not "change the channel", because it actively follows you
 - Simply advise that it was accidental and tell them that you are resetting it



- IGNORED accidental EMERGENCY activations on MONITORED talk groups will result in ACTION...
- IF you ignore the status check AND your location is known (you are on a call), a patrol will be sent to find you, assuming you have an actual emergency
- IF you are not on a call and your location is UNKNOWN, your Chief / Director will be called, 24/7, to track you and your radio down



- Emergency Button Activations
 - County POLICY for clearing an emergency activation is a work in progress
 - End Game is EVERYONE DOES IT THE SAME WAY
 - We all can account for a time when you have an emergency but can't speak (injury or danger close)
 - There must be security built in, a safe word or code, that can verify that end users are NOT UNDER DURESS
 - The goal is to have that in place and socialized <u>BEFORE</u> a go live date



- Side Button Functions
 - Scan On / Off Button
 - ALSO Scan Program (long press)
 - Push to Talk (PTT) Button
 - Light On / Dim
 - Nuisance Delete





- Turning Scan Function On / Off
 - Scan On / Off Button Short (momentary) Press
 - Tone Low / High Scan On
 - Tone High / Low Scan Off





Scan Programming

• To enter Scan Programming, long press (until the radio "single beeps"

• Then look at the front screen for further...





- Scan Programming
 - Like changing Zones, use the three soft keys and up / down navigation buttons to program scan
 - Scroll to the desired channel with the up/down navigation key then add the talk group to the scan list by using the "sel" (select) soft key
 - To remove from scan list, scroll to the talk group and use the "Del" (delete) soft key to remove
 - The 3rd soft key is to enable "Rcl" (recall), to review "what's in your scan list"





- What's in your scan list?
 - When programmed, the scan list included:
 - JE-FIRE DISP
 - JE-CNTY WIDE 1
 - Your AGENCY talk group
 - Your scan list should ALWAYS have JE-FIRE DISP, YOUR TALK GROUP, JE-CNTY WIDE 1 and JE-EMS TAC 1
 - EXERCISE... ADD EMS Tac 1 to your scan list now!
 - Whatever talk group (channel) you are on is ALWAYS the priority channel in scan



- DO NOT OVER-POPULATE YOUR SCAN
 - DO NOT try to scan On Network and Off Network at the same time. It will not allow it!
 - Scanning too many channels will result in missing essential radio traffic, the less you scan the better!
 - You should NEVER have scan ON while operating in an IMMEDIATELY DANGEROUS TO LIFE OR HEALTH situation
 - SCANNING is the **DEVIL**.

 What matters is what is pertinent to your incident



Battery and Charger

JEFFERSON COUNTY FIRE & EMO

- "Smart Battery"
 - Has computer chip in battery



- Will read the chip in the battery for status of the battery
- Just put the radio in the charger and walk away.







The Programming

Zones & Talk Groups



• **ZONE** refers to a "bank" of sixteen talk groups (channels) for use on the TLMR system.

TALK GROUP refers to a radio "channel" that may be utilized, TALK
 GROUP and CHANNEL are synonymous for our purposes

Fire & EMS Zones

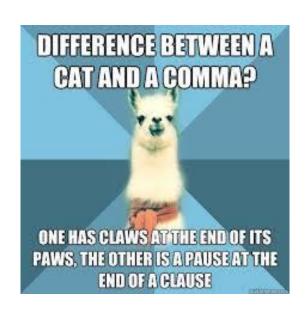


- ZONE 1 Jefferson County Fire
- ZONE 2 Jefferson County EMS
- ZONE 3 Oswego County Fire / EMS OR Lewis County Fire
- ZONE 4 Lewis County Fire / EMS OR Oswego County Fire
- ZONE 5 Jefferson County Events
- ZONE 6 CNYICC Regional Channels and National Interop Channels
- The Lewis County ZONE is only in radios approved by Lewis County for their system. Departments contiguous too Lewis and those MOST LIKELY to provide mutual aid.
- If your agency does not have Lewis County, then ZONE 5 and 6 simply move up one number to ZONE 4 and 5

But First



- A Lesson from Elementary School and the Dictionary!!
 - Talk Group Names, like words, have three distinct parts
 - A PREFIX
 - The ROOT WORD, and
 - A SUFFIX
 - The word < Reprogrammed >
 - RE is the prefix, in this case "to do it again"
 - PROGRAM, verb (action word) is the root word
 - ED is the suffix, in this case, "the action has been completed"



Talk Group PREFIXES



- All Fire & EMS radios have at least two county systems, and that there
 are similar talk group functions in each County, such as FIRE
 DISPATCH, prefix identifiers aids the end user in identifying who's
 system they are on
 - **JE** An indicator that YOU are on a Jefferson County talk group
 - OS An indicator that YOU are on an Oswego County talk group
 - LE An indicator that YOU are on a Lewis County talk group
 - **RE** An indicator that YOU are on a Regional talk group
- The National Interoperability channels DO NOT have a prefix, as their names are established by the FCC and federal doctrine

Talk Group ROOT WORD



- The root word in a talk group indicates the purpose
 - My channel (Agency Talk Groups)
 - My Discipline (FIRE, EMS, LAW, ALL)

Talk Group SUFFIXES



 Talk Group Suffixes are designed to provide end users with some direction on the connectivity and range of the channels.

• Remember, there are ON NETWORK (system wide) talk groups and OFF NETWORK (Direct or local / line of sight) talk groups.

 Talk group names DO vary from County to County in the CNY Consortium



Jefferson	Oswego	Lewis	Purpose
DISP	DISP	DISP	Dispatching / Command
TAC AGENCY OPS	GRND OPS	APRCH EXTER INTER	On Network Operations
DIR	TALK	DIR	Off Network Operations
WIDE	WIDE	WIDE	In ALL Subscriber Units (Fire, EMS, LAW, Highway)



Jefferson Suffixes

- DISP Talk group for DISPATCH / COMMAND, ON NETWORK
- TAC Talk group for TACTICAL OPERATIONS, ON NETWORK
- DIR Talk group for TACTICAL OPERATIONS, OFF NETWORK
- WIDE Talk group for COUNTY WIDE interoperability, ON NETWORK



Oswego County Suffixes

- GRND Talk group for TACTICAL OPERATIONS, ON NETWORK
- OPS Talk group for TACTICAL OPERATIONS, ON NETWORK
- TALK Talk group for TACTICAL OPERATIONS, OFF NETWORK
- WIDE Talk group for COUNTY WIDE interoperability, ON NETWORK



Lewis County Suffixes

- APRCH Talk group for TACTICAL OPERATIONS, ON NETWORK
- EXTER Talk group for TACTICAL OPERATIONS, ON NETWORK
- INTER Talk group for TACTICAL OPERATIONS, ON NETWORK
- **DIR** Talk group for TACTICAL OPERATIONS, **OFF NETWORK**
- WIDE Talk group for COUNTY WIDE interoperability, ON NETWORK

Zone 1 – County Fire Talk Groups



Position 1	JE-FIRE DISP	Jefferson - Fire Dispatch
Position 2	JE-AGENCY	Jefferson - Department / Agency Talk Group
Position 3	JE-EMS TAC 1	Jefferson - Emergency Medical Service Tactical 1
Position 4	JE-FIRE DIR 1	Jefferson - Fire Direct 1 (off network)
Position 5	JE-FIRE DIR 2	Jefferson - Fire Direct 2 (off network)
Position 6	JE-FIRE DIR 3	Jefferson - Fire Direct 3 (off network
Position 7	JE-FIRE TAC 1	Jefferson - Fire Tactical 1
Position 8	JE-FIRE TAC 2	Jefferson - Fire Tactical 2
Position 9	JE-FIRE TAC 3	Jefferson - Fire Tactical 3
Position 10	JE-FIRE TAC 4	Jefferson - Fire Tactical 4
Position 11	JE-FIRE TAC 5	Jefferson - Fire Tactical 5
Position 12	JE-FIRE TAC 6	Jefferson - Fire Tactical 6
Position 13	JE-FIRE TAC 7	Jefferson - Fire Tactical 7
Position 14	RE-FIRE WIDE	Regional - Fire Wide
Position 15	JE-CNTY WIDE 2	Jefferson - County Wide 2
Position 16	JE-CNTY WIDE 1	Jefferson - County Wide 1

Zone 2 – County EMS Talk Groups



Position 1	JE-FIRE DISP	Jefferson - Fire Dispatch
Position 2	JE-AGENCY	Jefferson - Department / Agency Talk Group
Position 3	JE-EMS TAC 1	Jefferson - Emergency Medical Service Tactical 1
Position 4	JE-EMS TAC 2	Jefferson - Emergency Medical Service Tactical 2
Position 5	JE-EMS DIR 1	Jefferson - EMS Direct 1 (off network)
Position 6	JE-EMS DIR 2	Jefferson - EMS Direct 2 (off network)
Position 7	BLANK	BLANK
Position 8	BLANK	BLANK
Position 9	JE-SAMARITN MC	Jefferson - Samaritan Medical Center
Position 10	JE-CARTHG HOSP	Jefferson - Carthage Hospital
Position 11	JE-RIVER HOSP	Jefferson - River Hospital
Position 12	OS-OSW HOSP	Oswego - Oswego Hospital
Position 13	RE-EMS WIDE	Regional - EMS Wide
Position 14	RE-FIRE WIDE	Regional - Fire Wide
Position 15	JE-CNTY WIDE 2	Jefferson - County Wide 2
Position 16	JE-CNTY WIDE 1	Jefferson - County Wide 1

Zone 3 – Oswego Fire Talk Groups



Position 1	OS-FIRE DISP	Oswego - Fire Dispatch
Position 2	OS-EMS DISP	Oswego - EMS Dispatch
Position 3	OS-FIRE TALK 3	Oswego - Fire Talk 3 (off network)
Position 4	OS-FIRE TALK 4	Oswego - Fire Talk 4 (off network)
Position 5	OS-FIRE TALK 5	Oswego - Fire Talk 5 (off network)
Position 6	OS-FIRE TALK 6	Oswego - Fire Talk 6 (off network)
Position 7	OS-FIRE GRND 7	Oswego - Fire Ground 7
Position 8	OS-FIRE GRND 8	Oswego - Fire Ground 8
Position 9	OS-FIRE GRND 9	Oswego - Fire Ground 9
Position 10	OS-FIRE GRND 10	Oswego - Fire Ground 10
Position 11	OS-FIRE GRND 11	Oswego - Fire Ground 11
Position 12	OS-FIRE GRND 12	Oswego - Fire Ground 12
Position 13	OS-EMS OPS3	Oswego - EMS Operations 3
Position 14	OS-FIRE GRND 14	Oswego - Fire Ground 14
Position 15	OS-CNTY WIDE 15	Oswego – County Wide 15
Position 16	OS-CNTY WIDE 16	Oswego - County Wide 16

Zone 4 – Lewis Fire Talk Groups



Position 1	LE-FIRE DISP	Lewis - Fire Dispatch
Position 2	LE-EMS EVENT	Lewis - EMS Event
Position 3	LE-NOR APRCH 2	Lewis - North Approach Operations 2
Position 4	LE-NOR EXTER 3	Lewis - North Exterior Operations 3
Position 5	LE-NOR INTER 4	Lewis - North Interior Operations 4
Position 6	LE-NOR EVENT 6	Lewis - North Event Operations 6
Position 7	LE-CEN APRCH 2	Lewis - Central Approach Operations 2
Position 8	LE-CEN EXTER 3	Lewis - Central Exterior Operations 3
Position 9	LE-CEN INTER 4	Lewis - Central Interior Operations 4
Position 10	LE-CEN EVENT 6	Lewis - Central Event Operations 6
Position 11	LE-SOU APRCH 2	Lewis - South Approach Operations 2
Position 12	LE-SOU EXTER 3	Lewis - South Exterior Operations 3
Position 13	LE-SOU INTER 4	Lewis - South Interior Operations 4
Position 14	LE-SOU EVENT 6	Lewis - South Event Operations 6
Position 15	LE-FIRE DIRECT	Lewis - Fire Direct (off network)
Position 16	LE-CNTY WIDE 13	Lewis - County Wide 13

Zone 5 – Jefferson Events Talk Groups



Position 1	JE-FIRE DISP	Jefferson - Fire Dispatch
Position 2	JE-AGENCY	Jefferson - Department / Agency Talk Group
Position 3	JE-EVENT TAC 1	Jefferson – Event Tactical 1
Position 4	JE-EVENT TAC 2	Jefferson – Event Tactical 2
Position 5	JE-EVENT TAC 3	Jefferson – Event Tactical 3
Position 6	JE-EVENT TAC 4	Jefferson – Event Tactical 4
Position 7	JE-EVENT TAC 5	Jefferson – Event Tactical 5
Position 8	JE-EVENT TAC 6	Jefferson – Event Tactical 6
Position 9	JE-EVENT TAC 7	Jefferson – Event Tactical 7
Position 10	JE-EVENT TAC 8	Jefferson – Event Tactical 8
Position 11	JE-EVENT DIR 1	Jefferson – Event Direct 1 (off network)
Position 12	JE-EVENT DIR 2	Jefferson – Event Direct 2 (off network)
Position 13	RE-EMS WIDE	Regional - EMS Wide
Position 14	RE-FIRE WIDE	Regional - Fire Wide
Position 15	JE-CNTY WIDE 2	Jefferson - County Wide 2
Position 16	JE-CNTY WIDE 1	Jefferson - County Wide 1

Zone 6 – Regional & Interop Talk Groups



Position 1	JE-FIRE DISP	Jefferson - Fire Dispatch
Position 2	JE-AGENCY	Jefferson - Department / Agency Talk Group
Position 3	RE-ALL TAC 8	Regional All Tactical 8
Position 4	RE-ALL TAC 9	Regional All Tactical 9
Position 5	RE-ALL TAC 10	Regional All Tactical 10
Position 6	RE-ALL TAC 11	Regional All Tactical 11
Position 7	BLANK	BLANK
Position 8	UCALL 40D	UHF National Interoperability UCALL 40 Direct
Position 9	UTAC 41D	UHF National Interoperability UTAC 41 Direct
Position 10	UTAC 42D	UHF National Interoperability UTAC 42 Direct
Position 11	UTAC 43D	UHF National Interoperability UTAC 43 Direct
Position 12	BLANK	BLANK
Position 13	RE-EMS WIDE	Regional - EMS Wide
Position 14	RE-FIRE WIDE	Regional - Fire Wide
Position 15	JE-CNTY WIDE 2	Jefferson - County Wide 2
Position 16	JE-CNTY WIDE 1	Jefferson - County Wide 1



The Con Ops Foundation



FOUNDATION



• At its foundation, the concept of operations for Fire & EMS on the Jefferson County TLMR System is deeply rooted in the appropriate use of the Incident Command System (ICS).

 TLMR system leans on use of the principles of the Incident Command System.

• Use of the ICS system and language, as well as training in ICS is vital to effective and efficient communications.

ICS Policy



• It shall be the policy and is expected that all Fire & EMS agencies who utilize and operate on the Jefferson County TLMR System shall utilize the Incident Command System for <u>command</u>, <u>control</u>, and coordination of their incidents.

The Incident Command System



 Part of NIMS, the Incident Command System adds structure and organization to any incident, regardless of complexity.

• The TLMR System has given Jefferson County the technology tools to be successful, however, local level training and use of ICS in radio operations is critical to overall success.

Why ICS?



- This operational concept is not simply local policy, it is required by Federal and State doctrine
 - Mandated by the Federal Homeland Security Presidential Directives five and eight (HSPD 5 & 8-2/28/2003 and 12/17/2003) following the terrorist events of 9/11/2001.

• The TLMR system has been developed to incorporate concepts of the National Incident Management System including the standard related to the use of the Incident Command System (ICS).

Command



- COMMAND should be established on EVERY call.
 - This gives clear and concise direction to the 911 Center and incoming units "who is taking responsibility" for the mitigation of the incident.
 - Ambulance calls do necessarily need to "establish command"

- There is only ONE incident Commander.
 - COMMAND can transition from person-to-person, or be "transferred" from one person to another, but there is to be only one incident commander.

Unified Command



- If there is a need for more than ONE decision maker, Command should be a UNIFIED COMMAND
 - Multi-Jurisdiction
 - Multi-Discipline
 - Multi-Agency

Command



- COMMAND should be identified as "COMMAND", not by a Chief number.
 - On any given mutual aid call there may be up to ten or more "0" unit ID's responding. Clearly identifying "who is taking responsibility" for, or "giving orders / making requests" for the incident is critical for responder safety and for the 911 Center to fill requests.

Command & Who's Who?



• The primary department of the incidents name should serve as the designation of the CP name, for example, "Theresa Command".

 If two (or more) incidents are occurring in a jurisdiction, than the designator for the incident will change to an address (street) name, for example:

"Theresa Command" should change to "Route 37 Command" and

the second (or additional) incident will establish their command as the street name of their incident, i.e. "Main Street Command"

When You Get There and ICS



- Upon arrival at the scene, the officer in charge shall establish Command and provide the Dispatch Center with the location of the Command Post (CP)
 - COMMAND should be stationary, in a conspicuous location

 The Dispatch Center should repeat or echo back the location of the CP and the size-up to Command for confirmation and to notify all other responding units.

When You Get There and ICS



The IC should provide a size-up

 An adequate scene size-up is valuable and essential for fire & rescue incidents.

 Scene Size-Up provides the responders with critical information as to the immediate incident needs, situational awareness of the potential for escalation, hazards, and associated risks.

Scene Size-Up, the best kept secret!



• It is expected that first arriving apparatus officer or chief shall provide a **Scene Size-Up** on fire and rescue incidents

 The Size-Up should ALWAYS provided to the Dispatch Center on the JE-FIRE DISP talk group

• The Dispatch Center should always repeat or echo back the size-up as an acknowledgement.

Size-Up



- For "fire incidents" size up shall generally include the information that a chief or officer deems "critical" or "need to know" for responders, such as:
 - Building Height (Stories)
 - Type of Construction
 - Type of Occupancy
 - Current Conditions
 - Exposure Concerns
 - Apparent Victim Concerns

For Example:

"28-0-3 arrived, 2 story, wood frame, single family structure, heavy smoke from the second floor, cars in the driveway with no occupants outside, 28-0-3 will be Lorraine Command"

REMEMBER Command can transfer, but its still Command!

More About Size Up



• Scene size-up is not just for fire incidents, it should be communicated for rescue incidents, and motor vehicle accidents if appropriate, with the appropriate descriptors, for example:

13-0-1 Arrived with a 2 Vehicle, Head On MVA with apparent entrapment, possibly 4 victims still in the cars, 13-0-1 will be Command", or

"10-0-3 arrived, have a capsized 20 foot cabin cruiser 100 yards off shore, with approximately 6 victims in the water, 10-0-3 will be Command"

More to do for Command



 Command should advise UNITS responding to the incident on the ASSIGNED TAC CHANNEL of their assignments, for example:

"Adams Command to the first in engine, lay in from the road "Brownville Command to all mutual aid units hold up on the main road

 Command should advise Fire Control of locations of fill sites or other "off site" support locations

Operations



- After the COMMAND position, OPERATIONS is the next most critical position to be filled. There is only ONE Operations person.
 - Think of COMMAND as the person making decisions for the incident (resource requests and needs), from the road, and
 - OPERATIONS as the person making decisions for the tactics, in the doorway.

Operations



• OPERATIONS should NOT be concerned with the communications occurring from Command to the 911 Center or incoming resources.

• OPERATIONS should be focused on units "working" within the incident, safety, and changing conditions.

Operations



If OPERATIONS identifies resource needs, based on ongoing tactics,
 OPERATIONS should advise COMMAND of those needs, and

 COMMAND should be making appropriate requests to the 911 Center, again, there is only one COMMAND.

Who Else?



 Don't forget about the organizational structure running side by side with OPERATIONS, such as VENT, SEARCH, EMS, STAGING, MANPOWER, and/or WATER SUPPLY.

• A "body" capable of managing those critical roles, takes the burden off of the Incident Commander and the Operations Chief.

Those additional roles continue to be important throughout an incident.

Where do I get all those people?



- As people resources are usually scarce in the first minutes of an incident, REMEMBER, in the absence of personnel CAPABLE of filling subordinate roles (OPERATIONS, MAN POWER, WATER SUPPLY, etc., the responsibility lies with COMMAND.
- Command holds all of the cards, like playing UNO, get rid of all your cards and take the big win.

• USE PEOPLE, neighboring Chiefs, Other Officers, Deputy Coordinators, if they are standing around, and CAPABLE, give them a job!

Wait, There's More



 COMMAND and OPERATIONS are prudent and appropriate for any incident type, from a first aid call to a motor vehicle accident, to a multi-company fire.

 In other incident types, subordinate role names may change, such as TRIAGE, TREATMENT, STAGING in EMS, and tactics may be different, such as EXTRICATION, LANDING ZONE, TECHNICAL RESCUE, HAZ MAT ENTRY, but the command and control structure and channel use will be a constant.



The Con Ops Guidance

General Incident Response Guidance



 Many County Radio System policies and procedures have been in place / in effect for several years

 With the implementation of a new TLMR Emergency Communications System, there is a need for kick-off and real time guidance as it pertains to Fire and Emergency Medical Services operating on the new system and going forward.

General Incident Response Guidance



 These guidelines are not intended to cover every possible contingency, however, should serve as an outline of acceptable and expected radio procedure in most instances

Radio Authorizations



- Policy:
 - Only authorized radios may operate on the TLMR System
 - Radios owned by Jefferson County
 - Radios owned by AUTHORIZED agencies (FIRE and EMS)
 - NO PERSONNALY OWNED RADIOS WILL BE approved or given an ID
 - Code Plugs are PROVIDED by the County, any alteration or attempt to alter is prohibited.

FOUO - PROPRIETARY



Policy:

 Code Plugs and Talk Groups are "Protected Information" and "FOUO" – For OFFICIAL USE ONLY, and <u>NOT</u> to be shared, subject to termination of user privileges and all legal remedies

Radio Authorizations



Guidelines:

- Departments, agencies, and units must operate in accordance and compliance with these guidelines and for the performance of official duties only.
- The Chief or Director is responsible to ensure that all mobile, portable, and base station radios authorized for use on the Jefferson County TLMR system and frequencies comply with all radio-use policy and procedures



• Policy:

- The Director of Fire & Emergency Management and/or a designees shall develop and enforce radio policy and procedures for the TLMR Radio System.
- Chief's and Officers / Directors shall ensure that their members and employees follow and comply the developed policies and procedures.



Guidelines:

- The 911 Center (for Fire and EMS purposes) shall be called as Jefferson Fire
- When not on a call, WAIT for an acknowledgement from Jefferson Fire before giving your message, for example:

```
"Jefferson Fire, 46-4-1" (wait for acknowledgement)

"Fire Control On"

"46-1-1 is out of service for repairs"

"Received, 46-1-1 out of service for repairs"
```



Guidelines:

• During and/or immediately after a dispatch, it shall be acceptable to direct your message without waiting for acknowledgement, for example:

"Jefferson Fire, 32-1-1, 32-1-1 is responding

• Jefferson will reply by repeating or echoing back the message and **may or may** not give a time.



- To make a Radio Call:
 - Push the PTT (push-to-talk) button
 - Wait for the PTT tone to authorize use (TAKE A BREATH!)
 - Identify whom you are calling
 - Identify yourself
 - If necessary, identify what talk group you are on or wish to talk to the other user on
 - De-Key or release the PTT and wait for a reply

Example 1: Jefferson Fire, County Car 1

Example 2: State Patrol 3D62, County Car 1 on County Wide 1



Identifying what talk group you want to have the conversation on is **NOT NECESSARY** <u>unless</u> you are asking the other user to answer you on a talk group OTHER than their "normal operations" talk group.



ALL Apparatus Identifiers are assigned by or approved by the Fire Coordinator

That is one of the Fire Coordinators "Statutory Authorities"



 As a matter of long standing policy, Jefferson County requires the use of "proper" and appropriate unit identifiers.

- Apparatus identifiers are assigned by three distinct components
 - Agency Number
 - Apparatus Type Number
 - Department Unit Number.



 Proper and appropriate unit identifiers has never been more critical to operations than with the implementation of the TLMR system

• Each radio on the system has a unique unit identification number for the system, to the extent possible, that number translates to the use of proper and appropriate unit identifiers.



For Example:

- Unit ID # (radio ID) 4510311 is Alex Bay 3-1-1 Engine
- Unit ID # 4520321 is Alex Bay Portable 21
- Unit ID # 4511651 is Depauville 16-5-1 Tanker
- Unit ID # 4521614 is Depauville Portable 14
- Unit ID # 4516891 is Indian River 68-9-1 Ambulance
- Unit ID # 4526811 is Indian River Portable 11

Chiefs ID Numbers



- CHIEF OFFICERS are department leaders who have STATUTORY authority and RESPONSIBILITY to make decisions on behalf of the TOWN, VILLAGE, or BOARD OF FIRE COMMISSIONERS
 - Statutory Authority is provided in NY State LAW
 - Statutory Authority is a SWORN obligation
 - Statutory Authority means YOU carry the liability

Chiefs ID Numbers



- ONLY Duly appointed CHIEFS will have authorization for the TLMR system and be assigned a "0" number
 - Duly APPOINTED by the Governing / Taxing authority (Village, Fire District Commissioners, possibly Town if Fire Protection District)
 - Duly AUTHORIZED by the County Fire Coordinator)
 - Having the STATUTORY AUTHORITY granted under State, County, Town, and General Municipal Law
- Subordinate Officers (Captains, Lieutenants, etc.) and other members SHALL NOT be provided or authorized to use a "0" agency identifier for any reason
- Subordinate Officers SHOULD NOT be talking on the JE-FIRE DISP talk group unless they are the initial officer / incident commander



The Concept of Operations

Con Ops – Fire / EMS Dispatch



- JE-FIRE DSIP talk group / channel is ONLY for:
 - Dispatching of calls
 - Calling unit status (responding, arrived, clear)
 - Command Use and Requesting Resources
- Dispatch controls this channel.
 - Listen before you transmit. .. channel may be busy... if not in use, transmit
 - Use three way communications when possible (repeat backs ... so other party knows you understood the message, (keep it brief)
 - Prior to calling Dispatch and requesting a repeat of dispatch information, utilize the Call Repeat option on your pager, or programs such as "I am Responding" Text

Con Ops – Fire / EMS Dispatch



 All FIRE APPARATUS and AMBULANCES may call responding on the JE-FIRE DISP Talk Group

- When responding, give unit ID and staffing information.
 - Jefferson Fire, 23-1-1 responding, with 4 SCBA / Interior
 - Jefferson Fire, 13-7-1 responding, BLS
 - Jefferson Fire, 63-9-1 responding, Paramedic
- Number of SCBA / Interior personnel tells command what his critical resources are and where they're coming from. If an EMS call, state level of care for both ambulances and First Responder groups.

When You Get There



- On scene OPERATIONS should ALWAYS occur on a Fire Direct (JE-FIRE DIR 1, 2, or 3) channel
 - same as "old" low band channel 3 function
 - Construction materials (steel / concrete) and substantial tree cover may limit connection to the system
- The IC should ALWAYS advise the dispatch center what OFF NETWORK operations channel that the incident will work on
- The dispatch center should repeat / echo back the established OFF NETWORK operations channel

FIRE TAC vs's FIRE DIR



• JE-FIRE TAC:

- ON NETWORK Uses the entire system to support communications
- Allows units to talk to each other from "portal-to-portal" for directions, orders, instructions, etc.
- Supports distance traveled (such as in a water supply operations exceeding "line of sight")
- MAY be affected or limited by heavy tree cover and/or steel and concrete construction, below grade use and/or small / confined spaces

FIRE TAC vs's FIRE DIR



• JE-FIRE DIR:

- Will not be affected by construction or foliage
- Is ONLY line of site and DOES NOT use the "system" resources
- Will work below grade and small spaces
- JE-FIRE DIR is the preferred fire ground operations channel

FIRE TAC vs's FIRE DIR



 Putting people in harms way WITHOUT being positive that you can communicate with them is....

NEGLIGENCE

• GO TO AN OFF NETWORK CHANNEL FOR INTERIOR OPERATIONS!

Company / Agency Talk Group



 Every fire and ambulance agency has been provided a Company or Agency talk group for their use as "an operations channel".

• The JE-AGENCY TALK GROUP should be the **PRIMARY OPERATIONS** channel for any **SINGLE COMPANY** or agency response.

Con Ops – Single Company Response



- Single Company Response refers to just your department
 - Having no additional FIRE mutual aid or Automatics on the response plan
 - For all operations where YOU are the only department involved

- A JE-FIRE TAC (1-7) will not be assigned for single company operations i.e.: EMS calls, MVA's, wires down, odor calls, alarm system activation with a single department response.
 - Remember, if your incident grows, Command can ask for a JE-FIRE TAC

Con Ops – Single Company Response



- First Chief calls enroute on JE-FIRE DISP 1 then moves to YOUR
 COMPANY TALK GROUP unless he/she needs to talk to dispatch
 - All additional chiefs use YOUR COMPANY TALK GROUP
- First apparatus calls enroute on JE-FIRE DISP 1 then moves to YOUR AGENCY TALK GROUP for directions, orders, etc.
 - ALL ADDITIONAL UNIT RESPONSE AND CONVERSATIONS SHOULD TAKE PLACE ON YOUR COMPANY TALK GROUP
 - DANGEROUS OPERATIONS SHOULD BE OFF NETWORK

Con Ops – Single Company Response



If you need to talk to the responding ambulance use JE-EMS TAC 1

NOTE: <u>DO NOT</u> call dispatch responding to your station!

REMEMBER – Nothing is a private channel Scanners can still hear!

Con Ops – Multi Company Response



- Multi-Company Response refers to your department and your automatics / mutual aid
 - Having additional FIRE mutual aid on the response plan
 - For all operations where MORE than just your department is involved
- A JE-FIRE TAC (1-7) will be assigned upon dispatch, by the dispatch, for any call that has mutual aid



- First Chief calls enroute and on scene on JE-FIRE DISP 1 then moves to the ASSIGNED JE-FIRE TAC Talk Group unless he/she <u>needs</u> to talk to dispatch
 - All additional chiefs use the ASSIGNED JE-FIRE TAC talk group



- When First Chief / First Officer calls arrived
 - Establishes Command over JE-FIRE DISP
 - Provides a scene size-up over JE-FIRE DISP
 - Advises Dispatch what OFF NETWORK (JE-FIRE DIR 1, FIRE DIR 2, or FIRE DIR 3) operations will take place on



- First apparatus calls enroute on JE-FIRE DISP 1 then moves to the ASSIGNED JE-FIRE TAC for directions, orders, etc.
 - ALL ADDITIONAL RESPONDING APPARATUS may call enroute on JE-FIRE DISP
 - ALL unit to unit conversations should take place on the assigned JE-FIRE TAC
 - All fire ground operations should be run on the JE-FIRE DIRECT Talk Group as determined by the IC



If you need to talk to the responding ambulance use JE-EMS TAC 1

NOTE: <u>DO NOT</u> call dispatch responding to your station!

REMEMBER - This is not a private system Scanners can still hear!



- The Incident Commander
 - MUST decide / determine the OFF NETWORK talk group that will be used for fire ground operations.
 - MUST scan JE-FIRE DISP and the assigned JE-FIRE TAC talk group
 - Will Likely be need a 2nd radio operator and a 2nd portable radio to monitor the OFF NETWORK JE-FIRE DIR Operations Channel
 - YOU CAN NOT SCAN ON-NETWORK AND OFF NETWORK CHANNELS AT THE SAME TIME
 - Command should be stationary, and if possible with a MOBILE radio

Con Ops – First Responder / Ambulance



 First Responder Calls / Ambulance response is for all intent and purpose are operationally the same as the previously discussed Single Company Response

 Patient information / update from a scene to an ambulance should be NECESSARY information only. HIPAA, HIPAA, HIPAA.

Con Ops – First Responder / Ambulance



 Patient information / update will not likely change the ambulance response. Call determinants generally drive the Ambulance Response.

• They are always "making their best time" or "expediting". Asking them to do either of those will not speed up the response. Just give them the update they need to here – "CPR in progress"

Con Ops - Ambulance



• All ambulance / first responder units responding should call enroute to the Dispatch Center on the JE-FIRE DISP talk group to ensure times are logged by Dispatch for PCR completion

 Ambulances and First Responder Units should call enroute, on scene, enroute to the hospital and back in service over the JE-FIRE DISP talk group.



- Like Systems and interoperability:
 - Oswego County System is in ALL Jefferson Radios
 - Lewis County System is in radios that were "approved" by Lewis County (generally those who border and provide routine Lewis County response)
- Not all things are alike..
 - St. Lawrence County is still VHF (high band), not UHF, meaning a UHF radio cannot talk to them
 - Interoperability remains a challenge going there
 - If you go there and have high band radios with their channels, don't sell them on EBay!



- When in Rome, be a Roman...
 - When dispatched mutual aid to another county, operate on their resources
 - You will be dispatched on JE-FIRE DISP



- Follow "normal" processes already discussed:
 - First Chief blah, blah, blah,
 - Apparatus blah, blah, blah
 - A JE-FIRE TAC should generally NOT be assigned
 - Change YOUR RADIO to the assigned OSWEGO or LEWIS talk group INSTEAD of a JE-FIRE TAC
 - If the dispatch does not include an assigned "ROMAN TAC" (when in Rome...), ask for it. The Dispatchers can call the other county dispatch center and get that information for you
 - You may not be able to connect to their system until you are within or very near their border



- For OSWEGO County, you should be able to advise Oswego County Dispatch that you are enroute from your station
 - The OS-FIRE DISP and OS-EMS DISP roam, meaning they are available ANYWHERE our (the Jefferson) system is available.

- For LEWIS County, you will not be able to talk to them UNTIL you are in their (or very near to) their County border / System
 - LEWIS County System does NOT roam



- Fun Fact: JE-FIRE DISP roams to Oswego AND Onondaga County
 - So you can talk back to our Jefferson County 911 center from ANYWHERE in the three Counties
- That means that an Ambulance can call arrived at Upstate, St. Josephs, the VA Medical Center, or Community Hospital when you arrive. Oswego Hospital too!

 Lastly, when you return from Rome, advise JE-FIRE DISP when you are back in service

Con Ops – Special Operations



- Special Operations may include, but is not limited to:
 - Water Rescue Operations
 - Mass Casualty / Mass Fatality Incidents
 - Airport / Aircraft incidents
 - Haz Mat Incidents
 - And more



 Generally, ALL of these types of incidents will be Multi Company response, and will follow Multi Company Response Con Ops that was already discussed

Where applicable, refer to the appropriate Emergency Plan (Haz Mat, MCI)

Con Ops – Inter-Agency Communications



 When Fire and EMS need to talk to Police, Highway, or any other Jefferson Subscriber

- County Wide 1 and 2 (channels 15 & 16) are in EVERY Jefferson System Radio
- JE-CNTY WIDE 1 is for hailing or calling and very short conversations (what's a patrol's your ETA, Do you have salt or sand)
- JE-CNTY WIDE 2 is for necessary "normal" chat, non-emergent conversation, and/or MAY be assigned for a Multi-Agency Operation

Con Ops – Air Medical Operations



- All air medical providers either are or will be equipped with Jefferson Air-to-Ground
- Air-to-Ground will be patched by the dispatch center to the applicable talk group assigned for operations (JE-FIRE TAC 1-7)
- Air-to-Ground is NOT in subscriber units, only in aircrafts and dispatch consoles
- FIRE should land the helicopter, EMS should be caring for patient(s)!







Clear Air in Emergency



 Jefferson Fire Control ALWAYS has the authority to CLEAR any talk group at any time for Emergency Traffic.

• If and when this occurs, users are expected to **KEEP OFF THE AIR** unless their message is part of the ongoing **OR** an additional **EMERGENCY**.

 Whenever an emergency situation exists, all radio transmissions on all talk groups shall be restricted to only those transmissions which are absolutely necessary

System Use



 All system frequencies, talk groups, and resources are for Public Safety and Public Service. As such, users must be professional at all times.

 All system resources shall be considered for emergency and authorized use only.

 All initial and additional users are expected to be trained on the system prior to functional use.

Mama Said BE SEEN AND NOT HEARD



Radios are a device to be LISTENED to, NOT to talk on.

 Most responders "talk" on the radio, not because they have something of value to say or add to an incident, but because they saw someone else do it before

If you don't NEED to talk, DON'T!!

Mama Said BE SEEN AND NOT HEARD



 Tankers DO NOT need to ask for orders. Go get in line and dump your water, then GO TO THE FILL SITE (Rinse and repeat!!)

 ALL APPARATUS that is a PEOPLE CARRIER (Incident taxi) DO NOT need to ask for orders. People should go to staging / manpower, ready to work

 Mutual Aid Chiefs DO NOT need to call on scene on the dispatch channel.

Mama Said BE SEEN AND NOT HEARD



• To close the call, just advise that all units are clear.

Example: Jefferson Fire, Town of Watertown Command (wait for a response),

Town of Watertown Command, go ahead

ALL TOWN OF WATERTOWN UNITS ARE CLEAR

A long detailed explanation is NOT required or necessary!

KISS Method





Keep it SHORT & SWEET:

- Radio transmissions take up air time.
 - Air time is a valuable commodity.
 - Radio transmissions MUST BE kept as short as NECESSARY to convey your message. Pertinent and relevant information only.



Can you give an example?

Microphone Placement



• The TLMR System is equipped with Smart Technology and Noise Reduction capabilities.

• For those features to be effective, the users must understand "correct" microphone use and placement.



 To be most effective, any radio microphone (mobile, portable, and base station) should be placed directly in front of the user's mouth, and held between four and six inches away from the face.

Voice Volume and Tone



• The TLMR System is a digital trunked system.

Digital is significantly different than traditional analog radio systems.

 Raising the level of your voice, speaking louder, and/or yelling into the radio is not effective.

• Speak in a "normal" conversation tone, with the microphone in the proper location.

Continued Radio Training



• All Chiefs, Officers, and Directors of the Fire and EMS agencies must foster a "continual education" process for their end users.

 YOU ask your members / employees to put themselves in harm's way to do their job.

ONE safety feature built in is the TLMR System.

No different than other equipment, YOUR members / employees
 MUST be trained to use the equipment correctly and effectively.

What Else?



- Oh yeah, MORE TRAINING!!!
- Besides this radio training, using the radio in other training is critical!
- Train on:
 - ICS
 - MAYDAY procedures
 - PAR Procedures and Accountability
 - Train with your neighbors
 - Train on the policies (County & Department)
 - Etc., Etc., Etc.
- Need Help? Ask Fire & Emergency Management, that's one of our favorite tasks and a fundamental of our JOB, to help you.



APX 4500 Mobile Radios







 YOU (your department / agency) ARE ONLY AUTHORIZED TO USE JE-FIRE DISP at this point

- YOU take this back to YOUR department / agency and TRAIN YOUR
 PEOPLE (we'll be glad to help if you need us)
 - VIDEOS FIRST then this presentation

• FOR TRAINING, you can explore and use the JEFFERSON FIRE / EMS TACS, the JEFFERSON FIRE / EMS DIRECTS and YOUR Company / Agency Talk Group. ONLY FOR TRAINING!



DO NOT USE THESE RADIOS DURING A RESPONSE EXCEPT TO CALL DISPATCH ON JE-FIRE DISP

IF YOU DO, AND SOMEONE GETS LOST IN THE RADIO AND/OR GOD FORBID GETS HURT, YOU (CHIEF / IC) WILL BE LIABLE

UNTIL A "GO-LIVE" DATE IS ESTABLISHED AND SET, USE LOW BAND 2, 3, & 4 FOR ALL ON SCENE OPERATIONS



You have "roughly" 4 weeks to train your people on the radios, the policies, and practices established here-in and be ready to GO-LIVE



TRAINING MUST CONTINUE BEYOND THE GO-LIVE



COMMITT TO IT!

Discussions/Questions?





