

Emergency Communications Procedures

CERT Communications Team
Fremont and Union City, California

September 26, 2000

Notes:

CERT Communications Team Procedures

Table of Contents and Cross Reference

Revised 09/26/2000

CERT Comm, Fremont, CA.

The organization and information flow diagrams on the following pages presents a quick overview of the roles and responsibilities of each of the following functions: Communications Commander (CC), Net Radio Operator (NRO), Local Net Control (LNC) and Team Radio Operator (TRO). The individuals filling these positions should familiarize themselves with the contents of the documents indicated with an 'X'.

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About this Document

Emergencies are stressful situations, particularly for volunteers with little or no experience outside of a few controlled drills. The purpose of this document is to allow CERT members responding to a disaster to be more effective communicators by providing them with simple step-by-step instructions. It is not a complete manual of emergency communications.

We have tried to capture emergency communications ‘best practices’ and in particular, to be consistent with local Amateur Radio Emergency Service (ARES) operating practices. The latter is important because, although CERT Communications Team members are CERT team members first, when providing communications support using Amateur Radio they will be part of a larger network supporting many other organizations and agencies.

While maintaining consistency with general emergency communications practice, these guidelines have been written to be specific to CERT procedures and training. They are based on the *self-activating* nature of CERT Teams: that CERT teams will form spontaneously in response to a disaster without being *called out* by any specific authority. However, CERT teams may support relief operations for emergencies that are too small to initiate self-activation. In such cases minor modifications of these guidelines may be required to be consistent with the practices of whatever organization is running Incident Command. It is the responsibility of the Communications Commander to make these changes and explain them to the rest of the Communication Post Staff. A simple example would be to use the Incident Command’s name rather than a CERT district name as the tactical call sign for the Communications Post.

When confronted with a choice between efficiency and redundancy, we erred on the side of redundancy in the belief that this would reduce the number of errors in chaotic situations with operators of varying levels of experience and training.

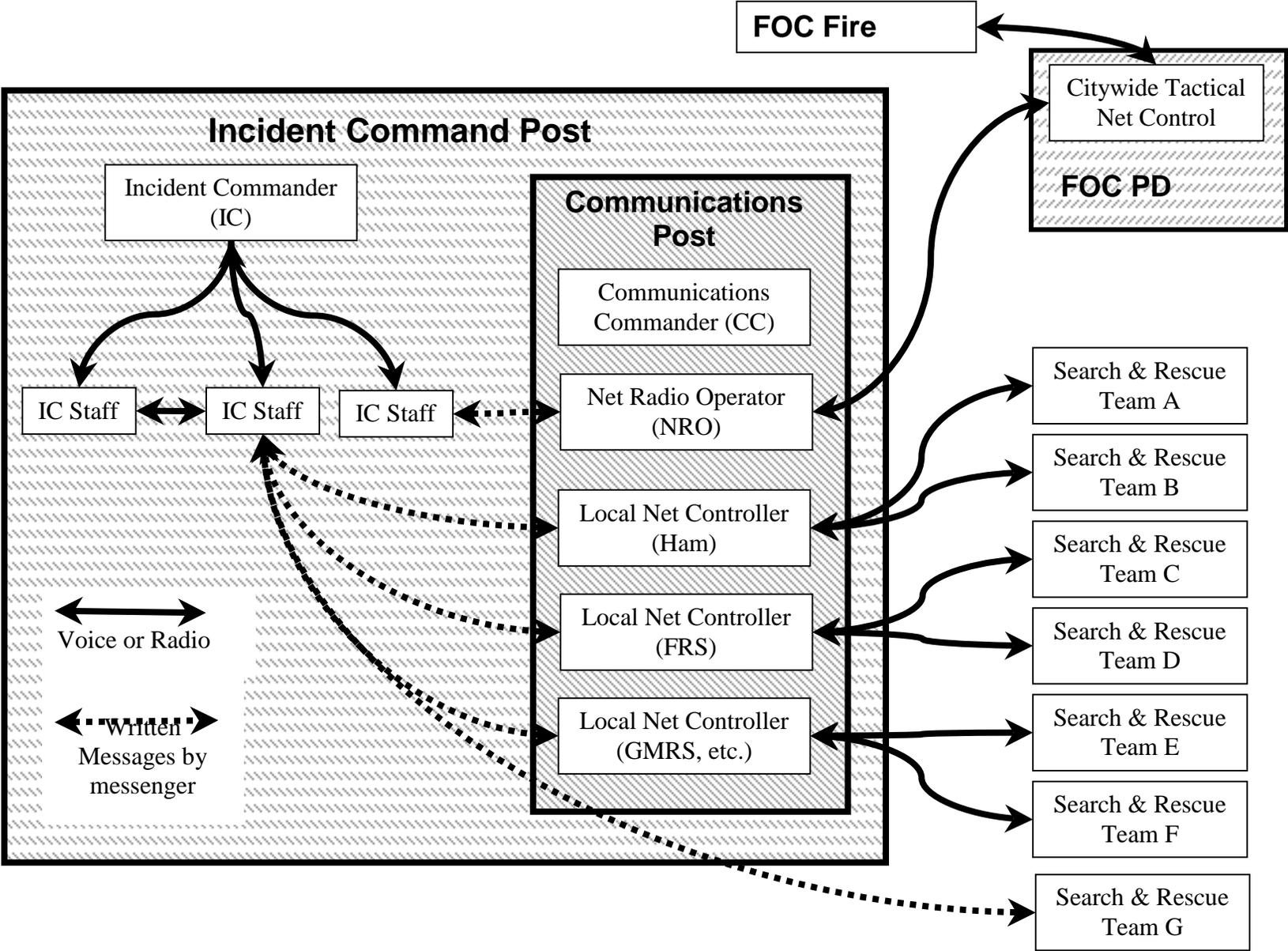
Throughout this document, CC, NRO, LNC, and TRO refer to *positions* or *functions*. If resources are scarce, one person may need to fill several of these positions at one time. Different people may fill these positions at different times. In fact, if the emergency lasts longer than 4 – 6 hours, new people should rotate into these positions. Each person filling a given position should familiarize themselves with the appropriate documents indicated above.

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Message Flow

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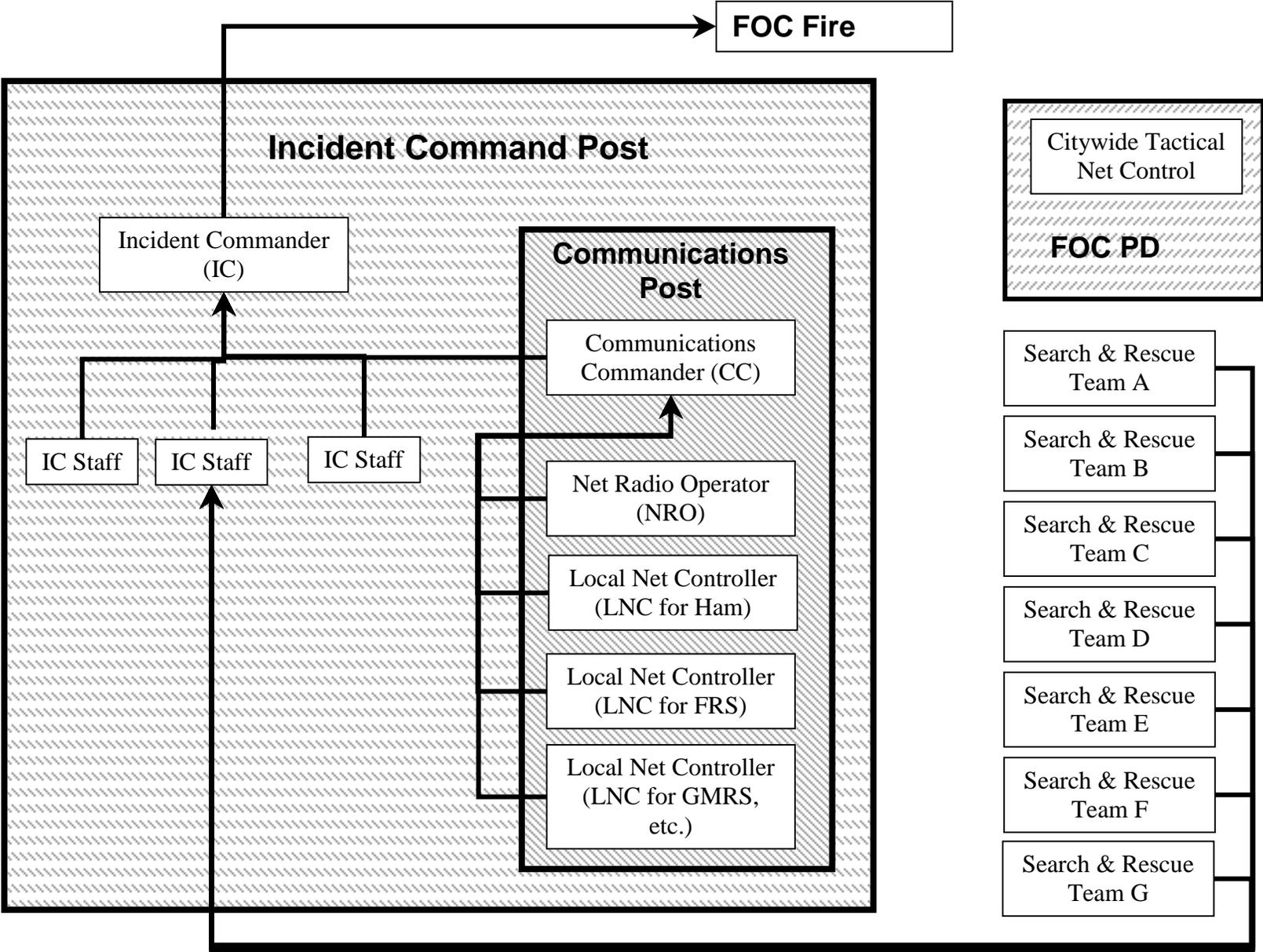


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Reporting Structure

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Guidelines for All CERT Communication Team Members

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Before Responding to an Emergency

- 1) Make sure that you and your family are safe.
- 2) If you desire to help the greater community, and are satisfied you are physically and emotionally able to do so, pick up your CERT/Radio Operator's Go-Pack(s) and proceed to your district's staging area, or other designated rally point. Recommended contents of a CERT Comm Team members Go-Pack is given in the *Resource Checklist: Radio Operator Equipment & Supplies*.
- 3) Bring your radio (Ham, Citizen Band or Family Service Radio) with you when you report to your staging area.
- 4) Make sure you have fresh batteries and spare sets (dedicated ONLY to your radio).

Checking In

- 5) When you arrive at the staging area, find the person who is checking people in. Give them your name and INFORM them that you are a member of CERT Comm, trained in emergency communications.
- 6) ASK if a Communications Commander has been appointed. If one HAS been appointed, suggest that you be assigned to the Communications Commander. *IF* so assigned, report to the Communications Commander and follow the instructions he or she gives you. Read the *Operational Guidelines* or *Quick Reference* for the position assigned to you.
- 7) If NO Communications Commander has been appointed, offer to fill that role. *IF* appointed, read *Operational Guidelines for Communications Commanders*.

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RESPONSIBILITIES

As Communications Commander you will:

- ◆ Report to the Incident Commander or designee.
- ◆ Have over-all responsibility for the district's communications needs for the duration of the incident or until this responsibility is transferred to another person.
- ◆ Be responsible for the safety and well being of the communications crew.
- ◆ Establish and maintain the operation of the Communications Post (Comm Post) as a unit of Incident Command (IC).
- ◆ Assign roles to other members of the Communications Post staff during an incident.
- ◆ Provide just-in-time training in emergency communications procedures to other IC staff as needed.
- ◆ Provide just-in-time training to the Net Radio Operator, Local Net Controllers, and Team Radio Operators.
- ◆ Make on the spot changes to these guidelines to best meet the conditions and constraints of the specific situation.

STEP BY STEP PROCEDURES

Setting up the Communications Post

- 1) Describe to the Incident Commander the steps you will be taking to set up the Communications Post. Review standard communications procedure and agree on how the Communications Post will interact with the rest of Incident Command. Ask if there are any specific communications needs or constraints of which you need to be aware.
- 2) Find a location for your communications post. It should be:
 - ◆ Free of hazards.
 - ◆ Close enough to the rest of Incident Command (IC) that messages can be conveniently exchanged, but
 - ◆ Far enough from the IC that you won't be distracted by their activities and they won't be distracted by yours.

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- ◆ Relatively quiet (away from major noise sources).
 - ◆ Without obvious obstructions to radio communications.
- 3) Introduce yourself to the other members of the IC staff. Inform them that you have been appointed Communication Commander. Tell them the location of the Communications Post, and ask that any CERT members with emergency communications expertise be sent to you at the Communication Post. Explain your need for administrative support (for example, ‘runners’ to carry messages between the communications post and the IC), and request that such people be assigned to you, if possible.
- 4) Provide Just-In-Time training on communications protocols to other members of the IC staff, as needed. IC staff should be made aware of the following:
- ◆ Tactical names must be assigned to all Search and Rescue Teams when they are formed. The name will be the team’s Tactical Call Sign. Search and Rescue Team names should consist of a prefix that identifies the district and a unique identifier, for example, *Irvington Bravo*. Do not use numbers for the team’s unique identifier as this can be confused with message numbers.
 - ◆ A representative from each Search and Rescue Team should be sent to you for Just-In-Time training in emergency communication procedures immediately after each team is formed. Family Service Radios may be distributed, or a ham Team Radio Operator assigned by you at this time.
 - ◆ All radio communications between the IC and Search and Rescue teams in the field is handled by written messages exchanged between an IC staff member designated by the Incident Commander and a Local Net Controller.
 - ◆ All radio communications between the IC and city officials or other districts is handled by the exchange of written messages between the Incident Commander (or designee) and the Net Radio Operator.
 - ◆ The Net Radio Operator and Local Net Controller will review messages and request modification of those messages that do not meet emergency communications standards. **However, the Incident Commander has final say over the content of all messages.**
- 5) Determine if any Search and Rescue Teams have been dispatched. If so, find out what communications resources the teams have. (For example, does someone on the team have a Family Service Radio?)

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- 6) Begin collecting any district-owned communications gear (radios, antennas, masts, etc.) and stage them at the Communications Post. (NOTE: maintaining contact with Search and Rescue teams in the field is your first priority; other activities must be fit around that.)
- 7) Build a roster of Communications Team Members as they check in.
- 8) Refresh Team members on communication protocol, and inform them of anything new or unique to this incident.
- 9) Give Team members their assignments. A suggested Communication Post Team structure is:
 - ◆ One Net Radio Operator on the citywide ARES tactical net (146.940-) for communications between the district and the Fire Department's Field Operations Center (FOCFIRE, pronounced "eff-oh-see Fire"). If insufficient staff is available, the Communications Commander will need to also be the Net Radio Operator. (NOTE: if the repeater is not operational, use 146.940 simplex.)
 - ◆ One Local Net Controller communicating with ham-equipped Search and Rescue Teams on simplex (145.700 or other available frequency).
 - ◆ One Local Net Controller communicating with Family Service Radio-equipped Search and Rescue Teams. (NOTE: all radios should be set to the same channel. For simplicity, it is recommended that PL be turned OFF.)
 - ◆ At least one person to carry messages between the Communication Post and Incident Command. (These individuals can have little or no emergency communications training. Make sure the IC Logistics staff knows of your need for such individuals.) A scribe to assist with message recording can also be useful.
- 10) Even if packet radio is to be used for communication between the communications post and FOCFIRE, set up voice communication FIRST.
- 11) Establish a rotation schedule. A shift is preferably four hours or less, with a maximum of six hours. Remember to have people available to take over when one of the other staff members needs a break. Send extra communications team members home, with explicit instructions to REST, and to report back at a specified time. Be sure to arrange for a replacement Communication Commander for the next shift.

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Communications Team Operations

- 12) Keep in contact with the Incident Commander and routinely reassess communications needs and resources. Restructure the Communications Team as needed to best meet the anticipated needs.
- 13) Arrange for Message Pads and Message Logs to be distributed to the Net Radio Operator and Local Net Controllers. Example forms are shown later in this document. If preprinted forms are not available, capture the relevant information on whatever paper you can scrounge.
- 14) Assign ham operators to Search and Rescue teams as available, based on need. (For example, teams operating furthest from the IC should be given priority). Introduce hams assigned to Search and Rescue teams to their Local Net Controller. The Local Net Controller or the Communications Commander should provide a quick refresher on procedures and convey any information specific to the district, team or the particular incident.
- 15) Direct representatives from teams using other types of radios (for example, Family Service Radios, CB, or GMRS) to the appropriate Local Net Controller for just-in-time training and assignment of a radio (if needed).
- 16) Arrange for two masts and antennas to be erected. One is for use by the Net Radio Operator for communications on the citywide net and one is to be used by the Local Net Controller communicating with Search and Rescue teams. When setting up antennas, consider the following:
 - ◆ The antennas must be set up at least one mast-length from power lines or other hazards.
 - ◆ Flag all cables and guy wires so they are clearly visible, day and night.
 - ◆ If antennas are to be used on different frequencies within one band, they should be separated by a distance of at least $\frac{1}{2}$ wavelength, horizontally and vertically. For example, two antennas operating on the 2-meter band should be separated by more than 3 feet.
- 17) Arrange for the electrical power needs of the Comm Post to be met.
- 18) Schedule the next shift to arrive 15 minutes before the end of the previous shift. Provide a status summary and other information to the next shift when

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they report. Make sure that the Communications Commander for the next shift is fully up to speed before relinquishing command.

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Operational Guidelines for Net Radio Operators

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RESPONSIBILITIES

As Net Radio Operator (NRO) you will:

- ◆ Report to the Communication Commander.
- ◆ Relay messages, via the citywide tactical net, between the Incident Commander (or designee) and the Fire Department Field Operation Center (FOCFIRE, pronounced “eff-oh-see fire”) or between the IC and other districts.
- ◆ Maintain a record of relayed messages.
- ◆ Support the Communications Commander as required.

STEP BY STEP PROCEDURES

NRO Operations - General

- 1) Contact Tactical Net Control on 146.940- using “Net Control, this is [district name] CERT”. When acknowledged, inform Net Control and FOCFIRE that your district’s Comm Post is operational. If the repeater is down, use 146.940 simplex. (NOTE: This message also serves as a radio check. Subsequent contacts to Net Control can be abbreviated “Net Control, [district name]”. Purely procedural messages such as this between the Net Radio Operator and Net Control do not need to be recorded in the Message Log.)
- 2) Ideally, this initial check-in to the net will be the only message the Net Radio Operator initiates. The Net Radio Operator *relays* messages to and from the IC.
- 3) As a general rule, status-type messages should be sent only when requested by FOCFIRE. Status messages are those which contain statistical information (e.g. number of people injured, which blocks have been searched). The IC should initiate messages which request action (e.g. heavy rescue team needed to free trapped people, large fire threatens to spread to hospital).
- 4) For clear and concise communications:
 - ◆ Use Prowords for clarity. See the Reference section for a partial list of prowords.
 - ◆ Spell unusual words using the phonetic alphabet.

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- ◆ Do not use contractions such as “isn’t”, they are easily misunderstood. Say “is not” instead.
 - ◆ Use plain language. Do not use ‘Q’ signals or ‘10’ codes.
 - ◆ Say numbers as individual numerals. For example ‘501’ is “five zero one”, not “five oh one” or “five hundred one”.
- 5) Use the lowest power producing reliable communications with Net Control. This reduces interference and extends battery life.
 - 6) Pause 2 – 3 seconds before transmitting to allow higher priority traffic to break in.
 - 7) Talk across the mike, not into it. Keep your voice down. Speak slowly and calmly.
 - 8) Use a single ear headset on the radio. This will help keep you from being distracted by other sounds. It will also prevent the sound of your radio from distracting others. A boom mike can free your hands for transcribing messages.
 - 9) Net Control will handle messages in order of priority (not first come, first served). Be prepared to have your message interrupted and to resume it at a later time.
 - 10) Continuously monitor the tactical net frequency until relieved by the next shift or until the net is closed.
 - 11) At shift change, bring the new Net Radio Operator up to speed before being relieved.

NRO Operations – Outgoing Messages

- 12) Messages intended for FOCFIRE or other districts are delivered to the Net Radio Operator from the IC, in written form.
- 13) Review messages for the following:
 - ◆ Is a priority code assigned?
 - ◆ Is the recipient of the message specified? It should be a function (e.g. FOCFIRE), not an individual person.
 - ◆ Is the message clear and concise?

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- ◆ Is the message sufficiently specific and detailed to allow the recipient to decide what action is required? Is information provided which will allow the recipient to prioritize this request relative to the many others being received?
- 14) If the answer to any of the above questions is “no”, return the message to the originator, providing coaching as needed. (NOTE: For effective communications, the Net Radio Operator should press for these standards to be met. However, **the Incident Commander has the final say on the content of any message.**)
 - 15) If multiple messages have been presented for transmission, arrange them in order of priority.
 - 16) Assign the message a message number and log the message into Message Log. Message numbers consist of a prefix identifying the district followed by a sequential number (e.g. “CEN005” for the fifth message from Centerville).
 - 17) Contact Net Control:
 - ◆ Press *Push To Talk*, take a breath, then say “Net Control, [district name]”.
 - ◆ When acknowledged, say “ [district name] has a [priority code] message for [recipient – typically FOCFIRE]. Message number is [message number]”.
 - ◆ Wait for net control to acknowledge and then read the message. Speak slowly, remember: net control is writing down your message verbatim.
 - ◆ If you have more messages, terminate the message with “More to follow”. If this is the last or only message, end the message with “Over.”
 - ◆ Wait for net control to acknowledge receipt of the message (“Roger”), or to give you instructions. Follow any instructions from net control.
 - ◆ If permitted by net control, proceed with next message (if any).
 - ◆ Terminate the transmission with “[district name], Out”. If it has been more than 10 minutes since you gave your call sign, terminate the transmission with “[district name], [your call sign], Out”.
 - 18) Long messages should be broken into segments. At the end of each segment say “break”, release *Push-to-Talk*, and allow higher priority traffic to break in. This also gives net control an opportunity to catch up or request retransmission of unintelligible portions of the message.
 - 19) Place message on the *completed outgoing message spike*.

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NRO OPERATIONS – Incoming Messages

- 20) Net control will contact you with “[district name], Net Control” or simply “[district name]”.
- 21) Respond with “[district name] here”.
- 22) Copy the message verbatim on to the message form.
- 23) When Net Control indicates the message is complete:
 - ◆ If you received a complete message and understood it, respond “Roger message number [message number provided by net control]”.
 - ◆ If you did not understand any part of the message, respond with “Say again” and either “All after [the last part of the message you copied]”, or “All before [first part of the message you copied]”.
 - ◆ If there is anything that impedes your ability to deliver the message accurately, ask for clarification. Note that you do not need to understand the *content* of the message in order to relay it to the recipient accurately.
 - ◆ If net control indicated “more to follow”, say “proceed with next message”.
- 24) When all messages have been received, close with “[district name], out”. If it has been more than 10 minutes since you gave your call sign, terminate the transmission with “[district name], [your call sign], Out”.
- 25) Enter messages into the Message Log.
- 26) If you know the message was in response to a message sent by the district, make the appropriate notation next to the sent message in the log.
- 27) Have the messages delivered to the IC.

Operational Guidelines for Local Net Controllers

Revised 9/26/2000

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RESPONSIBILITIES

As Local Net Controller (LNC) you will:

- ◆ Report to the Communication Commander.
- ◆ Relay messages between the designated person on the Incident Command staff and Search and Rescue teams.
- ◆ Maintain orderly communications on a specific frequency shared by one or more Search and Rescue teams by acting as the control for a directed network.
- ◆ Support the Communications Commander as required.

STEP BY STEP PROCEDURES

LNC OPERATIONS - General

- 1) Consulting with the Communications Commander, choose a frequency or channel on which to operate your net. The standard frequency in the Amateur band is 145.700 MHz, simplex.
- 2) You may have to share the frequency/channel with other CERT groups and with people who are not CERT members or Fremont volunteers. Cooperation between different users is required to make effective use of the channel.
- 3) Pace yourself, take 15-minute breaks, and take shifts of no more than 6 hours. Work with your Communications Commander to locate someone who will control the net during your breaks.
- 4) Use the lowest power that results in reliable contact.
- 5) Request a status report from the team approximately once every half-hour to verify good radio contact as well as to check the safety the team.
- 6) Check that you have enough forms to pass messages to the Incident Command team. Improvise as needed.
- 7) For clear and concise communications:
 - ◆ Use Prowords for clarity. See the Reference section for a partial list of prowords.
 - ◆ Spell unusual words using the phonetic alphabet.

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- ◆ Do not use contractions such as “isn’t”, they are easily misunderstood. Say “is not” instead.
 - ◆ Use plain language. Do not use ‘Q’ signals or ‘10’ codes.
 - ◆ Say numbers as individual numerals. For example ‘501’ is “five zero one”, not “five oh one” or “five hundred one”.
- 8) Use a single ear headset on the radio. This will help keep you from being distracted by other sounds. It will also prevent the sound of your radio from distracting others. A boom mike can free your hands for transcribing messages.
 - 9) As soon as one or more search and rescue teams are in the field, announce the Net with your tactical identifier, the purpose of the net, and your call sign if applicable. For example, “This is [district name] control, [your call sign], net control for search and rescue teams from [district name] CERT. This is a directed net, all calls should be directed to net control”. You could conduct a role call of search and rescue teams at this point. For example “[district name]-alpha, please check in now”.
 - 10) Take charge of the net, clearly & distinctly. Remember that you control this communications resource.
 - 11) Do not stop monitoring the frequency until all search and rescue teams have returned safely to the IC, or until you have transferred Local Net Control responsibility to your replacement.
 - 12) Be sure your replacement is up to speed before relinquishing Local Net Control responsibility.

LNC OPERATIONS – Fielding Search and Rescue Teams

- 13) The IC will organize Search and Rescue Teams and assign a Team Leader.
- 14) The Communications Commander may have assigned a Team Radio Operator to the team. If not, the Team Leader is the default Team Radio Operator. The Leader may delegate this responsibility to another member of the team.
- 15) Verify that the team has been given a team identifier.
 - ◆ The identifier will be the team’s Tactical Call Sign.
 - ◆ Search and Rescue Team names should consist of a prefix that identifies the district and a unique identifier, for example, *Ardenwood Bravo*.

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- ◆ A tactical identifier indicates the function of the person, not their name, location or agency (e.g. –*Niles Control* is Incident Command at Niles. *Niles Bravo* is a Niles Search and Rescue Team.)
 - ◆ The Team Radio Operator may assign tactical identifiers for their Team Members that also have radios.
- 16) Give the Team Radio Operator the channel or frequency on which the local net will operate. Remind the Team to *always* monitor this channel/frequency.
 - 17) Use the *Quick Reference for Team Radio Operators* to provide just-in-time training in emergency communications procedures to the Team Leader and Team Radio Operator as needed.
 - 18) Don't lose your Team Radio Operators! Log the team identifier, radio operator name and call sign, assigned location, and the time they leave the IC. Update the log based on reports from the team or information provided by the IC. When the team returns to the IC, log them in by recording the time.
 - 19) Place a practice call to the team before it leaves the IC. This will verify that the equipment is functioning properly and procedures are understood.
 - 20) Ask the Team Radio Operator to check in once the team has reached its assigned location. Note this in the log.

LNC OPERATIONS – Outgoing Messages

- 21) Messages intended for Search and Rescue Teams are delivered to a Local Net Controller from the IC, in written form.
- 22) Review messages for the following:
 - ◆ Is a priority code assigned?
 - ◆ Is the team name of the recipient of the message specified?
 - ◆ Is the message clear and concise?
 - ◆ Is the message sufficiently specific and detailed to allow the recipient to know what action is required?
- 23) If the answer to any of the above questions is “no”, return the message to the originator, providing coaching as needed. (NOTE: For effective communications, the Local Net Controller should press for these standards to be met. However, **the Incident Commander has the final say on the content of any message.**)

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- 24) If multiple messages have been presented for transmission, arrange them in order of priority.
- 25) Assign the message a message number and log the message into Message Log. Message numbers consist of a prefix identifying the district, followed by a letter designating the search and rescue team and then a sequential number (e.g. "MISB0005" for the fifth message handled by local net control. The message was to (or from) the Mission San Jose's Bravo team).
- 26) Contact the team:
 - ◆ Listen to ensure the channel is clear.
 - ◆ Press *Push To Talk*, take a breath, then say "[district name-team name], [district name-team name], [district name] control" (e.g. "Niles Bravo, Niles Bravo, Niles Control").
 - ◆ Wait for the team to acknowledge and then read the message. Speak slowly, calmly and distinctly. Speak across, not directly into, the microphone.
 - ◆ If you have more messages, terminate the message with "More to follow". If this is the last or only message, end the message with "Over."
 - ◆ Wait for the team to acknowledge receipt of the message (e.g. "Niles control, we will report number of victims for transport".)
 - ◆ Proceed with next message (if any).
 - ◆ Terminate the transmission with "[district name] control, Out". If it has been more than 10 minutes since you gave your call sign, terminate the transmission with "[district name] control, [your call sign], Out".
- 27) Long messages should be broken into segments. At the end of each segment say "break", release *Push-to-Talk*, and allow higher priority traffic to break in. This also gives the Team Radio Operator an opportunity to catch up or request retransmission of unintelligible portions of the message.
- 28) Place message on the *completed outgoing message spike*.

LNC OPERATIONS – Incoming Messages

- 29) Search and Rescue teams will contact you with "[district name] Control, [team name]". (Note: a team may call you by saying "[team name]" only. Be alert for this shortened form of hail.
- 30) Respond with "[district name] control here, go ahead [team name]".

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- 31) Copy the message verbatim on to the message form.
- 32) Assign the message a message number and log the message into Message Log. Message numbers consist of a prefix identifying the district, followed by a letter designating the search and rescue team and then a sequential number (e.g. "MISB0005" for the fifth message handled by local net control. The message was to (or from) the Mission San Jose's Bravo team).
- 33) When the team indicates the message is complete:
 - ◆ Verify that all message elements are present. See below for a definition of message elements. (NOTE: Search and Rescue Team do *not* provide message numbers or time stamps. You will add these to the message.) If any message elements are missing, request clarification.
 - ◆ If you received a complete message and understood it, respond "Message number [message number], Roger".
 - ◆ If you did not understand any part of the message, respond with "Say again" and either "All after [the last part of the message you copied]", or "All before [first part of the message you copied]".
 - ◆ If there is anything that impedes your ability to deliver the message accurately, ask for clarification. Note that you do not need to understand the *content* of the message in order to relay it to the recipient accurately.
 - ◆ If the team indicated "more to follow", say "proceed with next message".
- 34) When all messages have been received, close with "[district name], control, out". If it has been more than 10 minutes since you gave your call sign, terminate the transmission with "[district name] control, [your call sign], Out".
- 35) If it is known that the message was in response to a message sent by the district, make the appropriate notation next to the sent message in the log.
- 36) Have the messages delivered to the IC.
- 37) Handle short inter-team messages your self. For longer communications, ask them to move to another channel and make contact directly. Remind them to return to the contact channel.
- 38) If you receive too much traffic at once, control the situation by having some Teams stand by. (E.g. "Centerville alpha, stand by.")

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- 39) Handle the highest precedence traffic first (e.g. requests for medical assistant may interrupt a status report).

Message Elements

Every message should include the following elements:

ELEMENT

MEANING

<i>ELEMENT</i>	<i>MEANING</i>
Timestamp	Date and time message was relayed, if logging
Message #	Unique, serialized number assigned to each message, if logging (e.g. ARDA0005)
Recipient	Tactical identifier of message destination
Originator	Tactical identifier of message source
Location	Physical address or description of identifiable nearby landmarks
Precedence	Is this an Emergency, Priority, or Routine message?
Message	Short, clear, to the point information

EXAMPLE: “Niles Control, this is Niles Bravo at the corner of Mission and Walnut. Reporting all buildings have been searched. Request return to IC for relief, over”

Reminders

- DO state questions in a positive form
- DO handle only authentic messages
- DO make sure messages are clear, complete, concise and deliverable
- DO allow third parties to break in and speak in turn
- DO use a second rig if no one else is available and you need to monitor another frequency
- DO shield your microphone from wind
- DO NOT spread rumors: Use good judgement on the accuracy of your information
- DO NOT congest the channel: Listen, Formulate, PTT, talk briefly, release mike
- DO NOT “channel surf”: You won’t be available to the Net when needed

Operational Guidelines for Local Net Controllers

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- DO NOT modify messages as given. Focus on the message elements.
- DO NOT act like a radio announcer. Remain calm and professional.
- DO NOT use a VOX or lockable mike

Operational Guidelines for Local Net Controllers

Revised 9/26/2000

CERT Comm, Fremont, CA.

Notes:

Operational Guidelines for Team Radio Operator

Revised 9/26/2000

CERT Comm, Fremont, CA.

RESPONSIBILITIES

As the Team Radio Operator (TRO) you will:

- ◆ Report to the Search and Rescue Team Leader.
- ◆ Relay messages between the Team Leader and Incident Command (IC) through the Local Net Controller.

STEP BY STEP PROCEDURES

Getting Organized

1. The IC will organize Search and Rescue Teams and assign a Team Leader.
2. Each Team will be assigned a team identifier by the IC. The Local Net Controller or Communications Commander will assign contact channels for radio communications.
3. The Communications Commander may have assigned a Team Radio Operator to the team. If not, the Team Leader is the default Team Radio Operator. The Leader may delegate this responsibility to another member of the team.
4. The Team Radio Operator may assign tactical identifiers for their Team Members that also have radios.
5. Place a practice call to the Local Net Controller before leaving the IC. This will verify that your equipment is functioning properly
6. Contact Local Net Control once you have reached your assigned location.

Tactical Call Signs and Frequency Assignments

A tactical identifier indicates the function of the person, not their name, location or agency (e.g. – “Niles Control” is the Incident Commander at Niles. “Niles Bravo” is a Niles Search and Rescue Team.).

<i>FUNCTION</i>	<i>EXAMPLE</i>	<i>ACTUAL</i>
District IC	Niles Control	
CERT Team	Niles Bravo	
Primary Contact Channel	145.700MHz. (ham Simplex)	

Operational Guidelines for Team Radio Operator

Revised 9/26/2000

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Reminders:

1. Always monitor the contact channel.
2. Respond promptly when called.
3. Acknowledge received information.
4. Keep it short and clear.
5. Direct all communications to the Local Net Control.

Example: IC Contacts Team

1. CERT Teams must always be listening on the contact channel.
2. The IC calls the Team with “Niles Delta, Niles Delta, Niles Control”.
3. Niles Delta answers “Niles Delta here”.
4. The IC then conducts their traffic.
5. When the message is complete, they will say “over”
6. Acknowledge receipt of the message and ask for clarification, if needed.
7. When done, they will say “Niles Control, out”.
8. Respond “Niles Delta, out.” If it has been more than 10 minutes since you gave your call sign, instead respond “Niles Delta, [your call sign], out.”

Example: Team Contacts IC

1. The IC will always be listening on the contact channel.
2. Formulate your transmission. Keep messages short and to the point.
3. Listen to make sure the channel is clear
4. Press *Push-to-Talk*, take a breath, and then speak slowly and distinctly.
5. Call the IC with “Niles Control, Niles Control, Niles Delta”.
6. Niles IC answers “Niles Control here, go ahead Niles Delta.”
7. Team conducts its traffic.
8. The IC will acknowledge receipt with “Roger” or ask for clarification.
9. When done, say “Niles Delta, out”.
10. IC will respond “Niles Control, out.”

Use Correct Words

Over = I'm done, go ahead and respond

Roger = I heard you and understand the message

Affirmative / Negative = I agree / disagree

Say Again All Before / After ... = Please repeat everything said before / after ...

Correction = I made a mistake, will repeat from the last correct word

Break = I am taking a short pause to let you catch up recording my long message

Operational Guidelines for Team Radio Operator

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More to Follow = There will be more information later regarding this message

Out = I am ending this conversation

Phonetic Alphabet

A – Alpha	B – Bravo	C – Charlie
D – Delta	E – Echo	F – Foxtrot
G – Golf	H – Hotel	I – India
J – Juliet	K – Kilo	L – Lima
M – Mike	N – November	O – Oscar
P – Papa	Q – Quebec	R – Romeo
S – Sierra	T – Tango	U – Uniform
V – Victor	W – Whiskey	X – Xray
Y – Yankee	Z – Zulu	/ - Stroke

Troubleshooting Communications Problems

- Check your battery's condition (keep spares handy).
- Check that your PTT (Push-to-Talk) button is not stuck in transmit mode (will not receive, but runs down the battery).
- Check that you are on the right channel (as assigned by Local Net Control).
- Disengage any 'privacy codes' (PL, CTCSS or DCS) on your radio. Otherwise you might not hear incoming calls.
- Face the direction of your IC when communicating (avoid body blockage).
- Get to clear, high ground (line of sight to your IC) and avoid any metal obstacles, if necessary.
- Keep the microphone about 4-6 inches from your mouth, and to one side.
- Keep the microphone out of any strong breezes (prevent wind noise).
- If the contact channel is busy, wait a minute.

Operational Guidelines for Team Radio Operator

Revised 9/26/2000

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Notes:

CERT Comm Standard Forms Message Pad

Revised 9/26/2000

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NRO / LNC MESSAGE PAD

MSG# _____

DATE _____

TIME _____

FROM _____

TO _____

LOCATION of Incident _____

Message Precedence

Emergency

Priority

Welfare

Routine

FIRE? ___ INJURIES? ___ TRAPPED? ___

SITUATION _____

REQUEST _____

DETAILS _____

CERT Comm Standard Forms Duty Roster

Revised 9/26/2000

CERT Comm., Fremont, CA.

DISTRICT IC OPERATOR SCHEDULE DATE _____

TIME	CC	NRO	LNC	LNC	TRO	TRO

Resource Checklist

District Container Radio Equipment and Supplies

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- Copies of Radio Communication SOP's
- 2 Tables
- 6 Chairs
- 2 J-poles
- 3 Masts + guide wires(NRO, LNC, packet)
- 2 50ft coax
- 4 Desk lights
- 100 ft extension cord
- 2 power strips
- 120VAC to 12VDC converter
- Forms
- Pencils and pens
- Fremont/Union City Maps
- Plastic tubs with top (storing forms)
- Notebook computer
- Duct tape
- Tarps
- Wagon
- Gas can and siphon
- Generator
- 2 District radios (NRO and LNC)
- TNC
- Message spikes
- FRS radios
- AM/FM radio
- Magnifying lens

Resource Checklist

Radio Operator Equipment and Supplies

Revised 9/26/2000

CERT Comm., Fremont, CA.

In addition to the standard CERT Go-Pack contents, a radio operator's Go-Pack should include the following:

- VHF (2-meter) HT with spare batteries (for 72 hours of operation) & charger
- Cigarette lighter adapters or inverter
- Copy of HT manual
- VHF magnetic mount, or other portable, antenna with coax cable and connectors
- Earphone or mike/phone combo
- Copy of radio license
- Change pouch with \$5 in quarters
- Message pad
- Notebook, pens, and pencils
- Small radio repair tools
- Assorted connectors & adapters. A minimum set would be:
 - UHF (PL259) "barrel" (female-female)
 - BNC "barrel" (female-female)
 - BNC male to UHF (PL259) female
 - SMA male to BNC female
- Current ARRL Repeater Directory
- Rolls of duct and electrical tape
- Miniature tape recorder for messages

Reference

Standard Phrases & Designators

Revised 9/26/2000

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WORDS & PHRASES (“PROWORDS”)

Word or Phase	Meaning
Affirmative	Yes, or I agree
All after...	The part of the message following your phrase, as in “say again all after...”
All before...	The part of the message preceding your phrase, as in “say again all before...”
Break	Use when relaying long messages to allow recipient to catch up
Correct	That is correct or true
Correction	I made a mistake, then continue message from last correct word
More to follow	There is more traffic following this message
Negative	No, or I disagree
Out	End of transmission, no response required
Over	End of transmission, response requested
Roger	I have received and understood your message
Say again	Repeat all or part of your last message

Reference

Standard Phrases & Designators

Revised 9/26/2000

CERT Comm. Group, Fremont, CA.

TACTICAL DESIGNATORS

Function	Syntax	Example
City-wide Net Control	Net Control	ARES Net Control
Communications Commander (CC)	“[district] CC”	Niles CC
The District Network Radio Operator (NRO)	“[district] IC”	Niles IC
Local Network Controller (LNC)	“[district] Control”	Niles Control
Team Radio Operator (TRO)	“[district] [A-Z]”	Niles Bravo
Fire Department Field Operations Center	FOC[dept]	FOCFIRE
Police Department Field Operations Center	FOC[dept]	FOCPD

MESSAGE NUMBERS

District /Tactical Call	Message Prefix
Ardenwood	ARDxxxx (e.g. ARD0006)
Alvarado	ALVxxxx
Centerville	CENxxxx
Decoto	DECxxxx
Irvington	IRVxxxx
Mission San Jose	MISxxxx
Niles	NILxxxx
Warm Springs	WARxxxx

Reference

Standard Phrases & Designators

Revised 9/26/2000

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PHONETIC ALPHABET

A – Alpha	B – Bravo	C – Charlie
D – Delta	E – Echo	F – Foxtrot
G – Golf	H – Hotel	I – India
J – Juliet	K – Kilo	L – Lima
M – Mike	N – November	O – Oscar
P – Papa	Q – Quebec	R – Romeo
S – Sierra	T – Tango	U – Uniform
V – Victor	W – Whiskey	X – Xray
Y – Yankee	Z – Zulu	/ - Stroke

MESSAGE PRECEDENCE

EMERGENCY	Urgent messages involving danger to life or limb. Handled FIRST.
PRIORITY	Messages involving danger to property, and other time sensitive messages. Handled after Emergency messages
WELFARE	An inquiry into the health and welfare of an individual, or a response to such an inquiry. Handled only after all Emergency and Priority messages have cleared.
ROUTINE	Any message not fitting the other categories. Handled last or not at all if circuits are busy with higher precedence traffic.

Reference Standard Phrases & Designators

Revised 9/26/2000

CERT Comm. Group, Fremont, CA.

Notes:

Reference

Recommendations for Family Service Radios for CERT Activities

Revised 9/26/2000

CERT Comm. Group, Fremont, CA.

- Full 14 channel capability (maximum flexibility)
- Standard alkaline batteries (NOT rechargeable)
- Rugged or rubberized case
- Solid, fixed antenna (NOT folding)
- Priority channel capability (set it to the primary contact channel to keep in touch)
- Lighted display (optional, but consumes battery life. Better to use your flashlight)
- Scan capability NOT RECOMMENDED (distracts you from the contact channel)
- Tone code capability NOT RECOMMENDED (limits what you can hear)