

Emergency Radio Communication Handbook

For
Stake Emergency Communication Specialist
[SECS]
Stake Emergency Communication Volunteers
[SECV]

Wards/Branch
[UNIT]
Unit Emergency Communication Specialist
[UECS]
Unit Emergency Communication Volunteers
[UECV]

COMMUNICATION OVERVIEW

Communication Chain

- Unit Area Member -to- Assigned Priesthood Member [High Priest or Elder]
- Assigned Priesthood Member -to- Elder's Quorum Presidency or High Priest's Group Leader
- Elder's Quorum Presidency or High Priest's Group Leader -to- Bishopric Member
- Bishopric Member -to- Stake Presidency Member.
- Stake Presidency Member -to- Stake Regional Welfare Specialist or Bishop Storehouse network.

Methods of communication priority

- Telephone. If you can't use your phone, the Stake's emergency 2-way radio plan goes into operation.
- 2-Way Radio-
 - UNIT [*See your Ward/Branch's communication plan*]
Any Method adequate, including but not limited to
FRS [Family Radio Service, NO license required]
CB [Citizens Band, NO license required]
MURS [Multi Use Radio Service, NO license required]
GMRS [General Mobile Radio Service, FCC license REQUIRED]
Amateur Radio "HAM" [FCC license REQUIRED]
 - STAKE
The Stake uses FCC licensed amateur radio operators [HAM] on the 2 Meter band (144 – 148 MHz) [note: areas outside the 2 Meter range, will receive special training so as to be in adequate communication with the Stake]
- Courier
 - If Phone and 2 Way Radio communications are not working, the member of the High Council assigned to each unit will coordinate the transfer of information from their unit to the Stake and vice-versa.

G.J. STAKE'S 2-WAY RADIO COMMUNICATION PLAN

During an emergency when the normal mode of communication is not working, [phones], the Grand Junction LDS Emergency Response Communication Net [LDS NET] will be called, (started/opened) under the direction of the Stake's Presiding Priesthood Authority.

Our chosen frequency is 147.420 MHz, we will be operating in Simplex mode. [Radio to Radio, we will not be utilizing any of the local repeater systems, during an emergency, most if not all will be occupied by other emergency communication traffic. ARES, RACES & Regional NETS]

The most important item during an emergency is that Priesthood Authority obtains timely and accurate information. Your responsibility as Stake or Unit Emergency Communication Specialist [SECS / UECS**], or as a Stake or Unit Emergency Communication Volunteer [SECV/UCSV**], is to ensure that this information is correctly and accurately "PASSED" until it arrives at its intended destination.

**** A SECS/UECS is one who is called through Priesthood authority and are REQUIARED to PARTICIPATE as part of that calling. A SECV/UECV is someone with the interest, equipment and training that allow him/her to participate whenever they like. If there is a vacancy or a missing SECS/UECS, a SECV/UCSV will be used in their stead.**

The Grand Junction LDS Emergency Response Communication Net [LDS NET]

Purpose of the NET:

- **Test Radio Equipment**
 - Who can I hear? Who can hear me?
 - Is my radio working correctly? Are the batteries charged?
 - Do I need to improve my antenna or change locations?
- **Gain Experience**
 - Learn how to use the radio equipment
 - Learn how to use or function as a relay
 - Learn how an emergency NET operates
 - Learn how to respond in an emergency – net protocols
- **Chance for general membership to become more involved [SECV/UCSV]**
 - Enables you to know who in your ward has a radio and knows how to use it. (Backups?)
 - Enables you to see what members and areas of your ward you can communicate with
 - Provides an opportunity for the general stake membership to get involved in ward, stake and community preparedness. [the more they participate, the more prepared they will become on their own]
- **Opportunity to pass information**
 - Use as a scheduled Emergency Radio Communications Meeting – give announcements and reminders regarding emergency preparedness and upcoming communications activities.

When/Where?

Grand Junction Stake Emergency Radio Communications Net

- 1st Sunday of each month
- **6:45 pm** on **147.420** MHz simplex FM
- If that frequency is busy, we will move up .005 MHz at a time [147.425 / 147.430 / [skipping 147.435, West Stake's frequency] / 147.44] until a clear channel is found. 147.56 max

Grand Junction West Stake Emergency Radio Communications Net

- **[Participating as a “Visitor” will give you more experience]**
- Every Sunday [a call for G.J. Stake check-ins will be made]
- **8:00 pm** on 147.435 MHz simplex FM

A list of other local nets and frequencies can be found at

<http://www.arrl.org/arrl-net-directory-search>

Who should participate?

All called Stake and Unit Emergency Communication Specialists [SECS / UECS]

Stake and Unit Emergency Communication Volunteers [SECV / UECV]

[Invite anyone who is interested in getting licensed to join you and use your equipment under your license.]

Who can participate?

Any person [member or nonmember] within radio communication range who wishes to participate – Visitors Welcome

We encourage all to take the opportunity to either monitor [listen] or participate [broadcast]. If you know someone who wishes to participate and they are NEW to radio NETs, please provide them with enough training that they will be able to follow the appropriate check-in protocols when NET control is calling for visitor check-ins.

How often should I participate?

Called SECS/UECS's should participate as often as the net is held. Participation in other community NETs are strongly encouraged [See www reference above]. We understand that family comes first and that sometimes you just can't participate.

Called Ward ECS that cannot participate, need to ask someone to:

Check-in for you;

Get any announcements for you;

Listen to see who from your ward participated

and **report back** to you as soon as possible any announcements made.

[Remember this whole exercise is to be able to provide emergency radio communication at any time, day or night, rain or shine, 24-7, when the need arises, someone needs to be "On Duty" always.]

Net Procedures

10 minutes before NET - All Stations should be on Frequency awaiting Net start

– Net Begins

- Net Control Station officially **opens** the net
[note: Monthly Practice NETS operate with approval of Stake Priesthood Authority]
- **Check-ins** [see Communication Protocol below]
Follow NET CONTROL's INSTRUCTIONS
 - NET control may ask "Any Relays" – Please report any broadcasts that you heard that NET control did not acknowledge
 - Traffic/Announcements/business- pertaining **only** to current check-in will be given at this time
(Information passed on the radio is called "Traffic")
- **General Traffic/Announcements**
 - This will include announcements for everyone
- **General Comments & Questions for Net**
 - This is the time to ask questions, clarify procedures, ask for radio checks or test power setting with your new stuff or experimental antenna
 - This is also a good time to tell about an interesting radio experience you have participated in recently (exercises, events, or anything that might be of interest)
- **"Last Call for any Late or Missed Check-ins"**
 - NET control may ask "Any Relays" – Please report any broadcasts that you heard that NET control did not acknowledge

– Net Ends

- Net Control Station officially **closes** the net
 - Members are encouraged to stay on frequency and chat with each other.

Communication Protocol

Check-In Protocol:

- If Net Control does a "Role call" check in, answer when your FCC call sign is called.
For "open" check in give your FCC call sign using ITU Phonetics, (see below) and unit name.
- If you have been asked to sub for someone
 - Respond to their call sign during "roll call" and let NET Control know your FCC call sign.
 - For "open" check in let NET Control know that you are subbing for _____

- For practice NETs make any comments you would like here*
For Emergency activated NETs, Report – Declare “Traffic” or “No Traffic” (information to be passed) if you declare “Traffic”, NET CONTROL will request “Send Traffic” when they are ready to receive [If you declare “No Traffic” end your transmission with your call sign] [If you have long “Traffic”, give your call sign every 10 minutes as required and end your transmission with your call sign]

* **General Comments should be saved for the “general comments / questions” portion of NET unless NET Control is operating a less formal NET. – The procedure to be acknowledged and given time to speak is to give your call sign and wait to be recognized by NET control. If they do not respond within a reasonable amount of time your signal may not have been heard, try again.**

(NOTE: radio operators are NOT to create the content of emergency messages and are NOT to transmit messages that have not been approved by the appropriate Priesthood leader.)

During an actual emergency we will switch to “Tactical Call Signs” after check-ins, This will be your unit name. [6th ward, Mount Garfield,] see #5 & 6 below. Contact NET Control using your unit name and end transmission with your call sign. You may also just give your call sign as a response to information/instructions given to you, as an acknowledgment that you “Understood”/“Affirmative”. Buildings & locations that do not have a communication station will be covered by anyone available as directed by Net Control.

Communication Rules

FIRST THREE RULES OF RADIO COMMUNICATIONS:

1. LISTEN
2. LISTEN
3. LISTEN

OFFICIAL EMERGENCY NET RULES:

1. All traffic [messages] are to be approved by your presiding Priesthood authority and must be in written form for transmission
All traffic received must be recorded to written form
[Unless your priesthood authority is present and heard the transmission for himself]
2. Pay Attention to Net Control’s Instructions
3. Follow All Directions From Net Control
4. Be Patient When Calling Net Control
5. After Check-in, Call with Tactical Call Signs (1st Ward, 3rd Ward)
6. Use your FCC call sign every **10 min.** and to **end the conversation** (To Be Legal)
7. Pay Attention to Net Traffic - Don’t Miss A Call / Announcement / Message
8. Keep Transmissions as Short as possible
9. Use the Word “BREAK” Only For Emergency Traffic, [see #15 below]
10. Use the Word “INFO” if you have information that may help the current problem
11. Advise Net Control when leaving and returning to the NET or when you are replaced by another operator.

NET Control, Where Are You?

It is possible that there will be a time when the assigned NET control operator will not be available. Equipment failure, being called away to fulfill other responsibilities or just being affected during an emergency or incident, are just a few examples of what could go wrong. NET control will need to be the station with the strongest and clearest signal that can reach all or most of the stations. This will have to be worked out at the time this situation occurrence. See “GJ Stake Emergency Response Plan, Appendix B - FCC Licensed” located at the end of this manual, for possible candidates. [Look for someone with “BASE” capability to start]

THE DO’S and DON’Ts OF PUBLIC SERVICE COMMUNICATIONS

1. Think Before Transmitting
2. Key Your Mike (pause) Then Speak [hold your mic 3-6 inches away from and to the side of your mouth, speak across it not into it]
3. Use ITC Phonetics (see below)
4. Say Numbers Properly (see below)
5. Speak Slowly and Distinctly - Annunciate
6. Be Concise in reading / sending & receiving / writing Traffic
7. Use Proper Pro-Words:
 - a. **Affirmative** = Yes, **Negative** = No
 - b. **Copy** or **Afirm** [affirmative] = Understood / Acknowledgment
[or just use your call sign to end the conversation]
 - c. **Say Again** = Please Repeat
 - d. **Confirm** = I am not sure I got it right, Is this correct?
8. Don’t Use Unnecessary Words or Jargon
9. Don’t Yell or Speak Too Loudly
10. Don’t Use “10-Codes” (10-4, 10-20, etc.)
11. Don’t Use “Q-Codes” (QSO, QRP, etc.)
12. Repeat Instructions For Clarification of Message Received
13. Give Proper Signal Reports (see below)
14. Indicate Audio vs. RF When Giving a Report (see below)
15. During an actual emergency when you have high priority traffic that needs Immediate attention, use the word “BREAK” 3 times. i.e. ”BREAK, BREAK, BREAK”. This will alert NET control of your urgency. This also applies to “INFO”, But only needs to be used once.

REMEMBER:

Your responsibility as a radio operator is to provide Priesthood Leadership with clear communications during an emergency. Practice using your radio equipment as if it were an emergency, [participate in NETS]. Become familiar with your radio’s controls and settings long before you need to use them in a real-world situation when lives may depend upon you. [be able to access important functions with your eyes closed]. Always make sure that you have your emergency “jump box” [see below] maintained and accessible at a moment’s notice. When possible, have a duplicate set of equipment and supplies in your vehicle at all times. Remember - your life, and/or the lives of others may depend upon it.

What to do BEFORE it is an ACTUAL EMERGENCY

Maintain equipment

- Recharge batteries at least monthly [Do not leave them on the charger, read your owner's manual]
A good schedule would be to do it days before our scheduled NET
Remove charged batteries from the equipment, most new HT radios draw power when not on.
- Replace any broken or questionable parts or compounds immediately
- Test all new or modified equipment ASAP [That is what NETs are for]

Practice

- Participate in as many on air opportunities as possible [community NETS]
- Use your radio and know its limitations. [Location and weather affect its performance.]
 - HTs - Be comfortable having it on and with you at all times, like your cell phone.
 - Mobile – Provide a way for it to be used not just in a vehicle, but in a building or anywhere

Training

- Attend training provided by the Stake or your Unit
- It is advisable to join a local radio club and participate in their meetings / training / activities

What to do when it COULD BECOME an ACTUAL EMERGENCY

Since we are here to provide communication during times when the phone systems are not working, there will be NO PHONE CALL TO TELL YOU TO GET ON THE RADIO.

You will need to be ON AIR, listing and ready to spring into action when you hear the NET ACTIVATED.

The following situations or conditions merit immediate action:

[Occurrences may only be your neighborhood. Others may not be aware]

- **Power, Water Gas Outage**
- **Phone, land line or cell not working**
- **Radio / TV stations off air** [power outage, wind, flood, fire, sabotage]
- **Unusual situations** [Planes, Trains, Lights, Sounds, Water, Shaking, Wind]
- **Severe Weather or Warnings** [Speaks for itself]
- **Unusual communication activity on Government frequencies**
- **Unusual emergency vehicle activity / sirens**

Note: when the power is off, heat in the winter and A/C in the summer does not work. Some older members and families with young children may not be capable or equipped to deal with this potential life-threatening situation if it continues for many hours or days. Consult your Unit's emergency plan for the proper method of informing your Priesthood Authority of this possible Emergency Condition within your units' boundary.

Immediate action to be taken:

Monitor the Stakes chosen frequency [Locate it if it has moved due to interference]

Make contact with your “FRIENDS” [See if anyone else is on frequency]

Announce that you are monitoring [Standing by and listening]

Wait for the NET to be officially opened under the direction of the Stake’s Presiding Priesthood Authority.
[Any communications at this time should be brief or have pauses long enough to allow someone to “Break In”. i.e NET Control.]

When you are satisfied the situation no longer warrants your immediate attention, tell your “Friends” you are 73 [Best regards] and sign off / Stand down

When the NET is activated, Check-in as instructed in “Net Procedures” above.

Notify your Unit’s Presiding Priesthood authority that the Stake’s Emergency Radio Communication Plan has been activated.

Under his direction the UECS [or substitute UECV] activates the Unit’s Emergency Communication’s Plan.

The bases of communication procedure is to help direct the movement of resources to the needs, under the direction of **those with responsibility and the mantle of leadership.**

BASIC DEPLOYMENT EQUIPMENT CHECKLIST (Jump Box)

- Radio Equipment [with all the necessary extras, wire, connectors, etc.]
- Power Cords AC and DC with Power Pole™ Ends
All Stake Ham operators are encouraged to adopt 15 or 30 amp “Power Pole”™ wire connectors [<http://www.powerwerx.com>] as their standard way of powering equipment. This will help to ensure quick and easy installation and substitution of radios, power supplies, batteries, and other equipment between operators when necessary.
- Extra Battery(s) -if applicable [It is recommended that you obtain back-up power for all your equipment]
- Extra Antenna -if applicable for your location [as required for mobile units to be operated away from a vehicle]
- Earphone (Maintains Confidentiality, extends battery life, reduces distracting noise for others)
- Pens and Pencils/sharpener
- Paper or Notepads and REQUIRED FORMS [see attached forms]
- Printed Copy of This Manual.
- Copy of Your FCC Radio License
- Adequate lighting / Flashlight With Extra Batteries [you may be required to operate in the dark]
- Water, Food and Snacks For Short-Term Deployment [24 hrs] [tent?]
- Clothing Appropriate for ALL Weather Conditions [4 separate seasonal bags prepared, then grab the appropriate one(s)]
- Personal 72-Hour Kit For Longer-Term Deployments

Please report any errors, oversights or unclear instructions you may find in this manual.

ITU phonetics with the correct pronunciation:

[International Telecommunications Union]

A--Alfa "AL-FAH"
B--Bravo "BRAH-VOH"
C--Charlie "CHAR-LEE" or "SHAR-LEE"
D--Delta "DELL-TAH"
E--Echo "ECK-OH"
F--Foxtrot "FOKS-TROT"
G--Golf "GOLF"
H--Hotel "HOH-TELL"
I--India "IN-DEE-AH"
J--Julieta "JEW-LEE-ETT"
K--Kilo "KEE-LOH"
L--Lima "LEE-MAH"
M--Mike "MIKE"
N--November "NO-VEM-BER"
O--Oscar "OSS-CAH"
P--Papa "PAH-PAH"
Q--Quebec "KEH-BECK"
R--Romeo "ROW-ME-OH"
S--Sierra "SEE-AIR-RAH"
T--Tango "TANG-GO"
U--Uniform "YOU-NEE-FORM"
V--Victor "VIK-TAH"
W--Whiskey "WISS-KEY"
X--X-ray "ECKS-RAY"
Y--Yankee "YANG-KEY"
Z--Zulu "ZOO-LOO"

Numbers pronunciation:

0 - "ZEE-RO"
1 - "WUN"
2 - "TOO"
3 - "TH-UH-REE" or "TREE"
4 - "FOW-ER"
5 - "FI-IV" or "FIFE"
6 - "SIX"
7 - "SEV-EN"
8 - "ATE" or "A-IT"
9 - "NIN-ER"

[When voice communications were being used to supplement Morse code communications, the number five was being confused with the number nine, especially under adverse receiving conditions, so the military adapted a number system for voice which was: zero one two tree fower fife six seven eight niner. Sometimes fiver was used to force the intelligibility.]

DECIMAL = "DAY-SEE-MAL"

NOTE:

1 - To distinguish "Z" from "C" on phone, it is common practice to say "zed" (an old British phonetic) for "Z", especially when saying a call sign. "Zed" is shorter (one syllable vs. two for "zulu".) However, in formal traffic, the ITU: "ZULU" is more correct and proper.

2 – We will be using "COPY" or "AFIRM" [affirmative] as opposed to "Roger" so Roger does not think we keep calling him. "ROGER" (an early phonetic) is still used for "received" (equivalent of sending "R" in Morse) - It does NOT mean "yes" or "affirmative". It only means: "I have received your message completely."

How to Report Signal Strength

The first number refers to signal strength. The second number refers to the understandability or clearness of the voice to your ear. Loud and Clear would be reported as 5 BY 5.

Strength

5 = LOUD
4 = GOOD
3 = WEAK
2 = VERY WEAK
1 = FADING

Readability

5 = Clear
4 = Readable
3 = Missing Parts
2 = Distorted
1 = Strong Interference

The omission of comment on signal strength and readability is understood to indicate that reception is loud and clear [5 by 5]. If reception is other than loud and clear it must be described with the prowords from above.

Copy = I have received your last transmission with understanding.

Radio Check = What is my signal strength and Readability, i.e., how do you hear me? Respond with the Signal Strength report above.