

Midland GX1000 GMRS Radio Basics

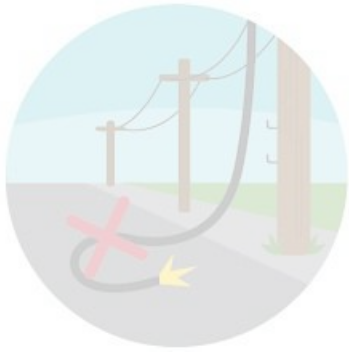
(Material borrowed from Midland Manual)

**South Tillamook County Emergency
Volunteer Corps (STCEVC)**

Building a climate of Resiliency in South County Tillamook Oregon

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There's an emergency!

What happened?
Will I be impacted?
How can I find out?



How do you receive information about emergencies?



And then!!

No Phone!

No Texting!

No Electricity!

No Internet!

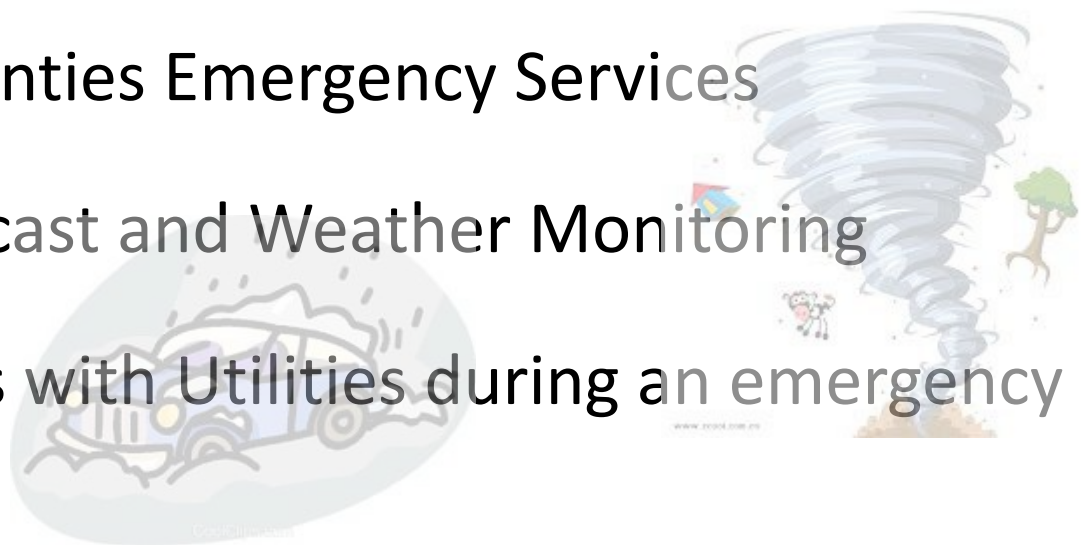
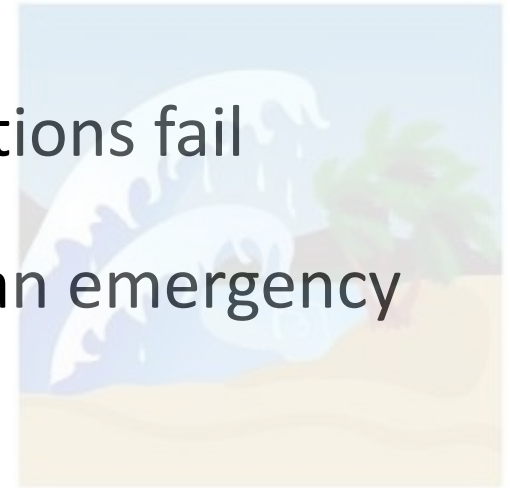
No Television!

When other methods fail, You can use your GMRS

RADIO for communications

Why have a GMRS Emergency Radio?

- Call for help when other communications fail
- Stay in touch with neighbors during an emergency
- Health and welfare checks
- Provide situation reports and request resources
- Monitor the Counties Emergency Services
- FM Radio Broadcast and Weather Monitoring
- Communications with Utilities during an emergency



Other Options

- Satellite
 - Satellite Telephone
 - Internet using Starlink (or Hughes Net)
- Become a Ham Operator
 - HF/UHF/VHF/EMail

Class Objectives

- Radio Basics
- Starting to Talk
- STCEVC Communications Approach
- STCEVC NETS
- Next Steps

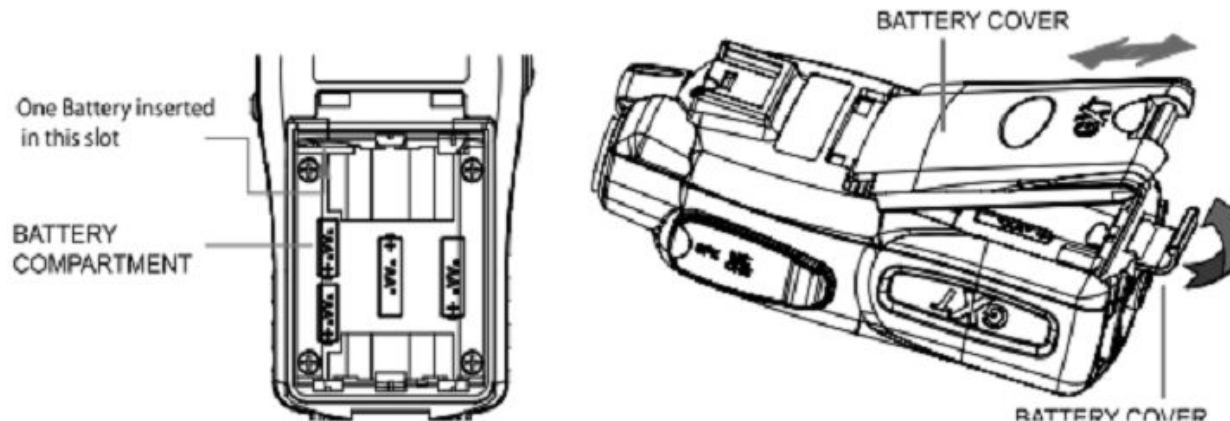
Battery Installation

BATTERY INSTALLATION

Your radio operates with either a NiMH battery pack or optional 4 AA alkaline batteries. The belt clip should be removed (see below) to ease installation or removal of the batteries.

To install the batteries:

1. With the back of the radio facing you, remove the belt clip (see diagram below) for easy access, then remove the Battery Cover by pulling down the Battery Cover Latch and lifting up the Battery Cover from the radio.
2. Insert 4 AA batteries observing the polarity as shown. Installing the batteries incorrectly will prevent the radio from operating or may damage the radio.
3. Return the Battery Cover by sliding it up on the radio and push up the Battery Cover Latch until it locks into place. Replace the belt clip, making sure it locks into place.



Charging the Battery Pack

Model GXT1000/1030/1040/1050/1191 Series



CHARGING THE BATTERY PACK

Your radio is equipped for using a rechargeable NiMH battery pack which can be recharged using a desktop charger. Initial charge time is 24 hours with a charge time of 12 hours thereafter. For maximum battery life, we recommend charging the battery pack when the low battery icon comes on. Remove the radios from the charger when the charge time expires.

To charge using a Desktop Charger:

1. Place the rechargeable battery packs in the radios.
2. Connect the AC adapter into an AC wall outlet.
3. Insert the AC adapter plug (or DC Cigarette Lighter adapter if charging in vehicle) into the desktop charger jack.
4. Place the units into the desktop charger slot and note that the LED indicator will be red, indicating the radio is charging.

In order to ensure that the battery pack is fully charged, it is recommended that the battery pack be charged for at least 12 hours with the radio turned OFF.



Midland GXT1000 Display

CONTROLS



11. TRANSMIT POWER LEVEL ICON – Indicates TX Power setting (H/M/L)

12. PRIVACY CODE ICON – Indicates Privacy Code setting (CTCSS/DCS).

13. PRIVACY CODE – Indicates Privacy Code selected by user (oF~38/oF~104). It can only be used on Ch 1-22.

14. POWER/VOLUME KNOB – Turn clockwise to turn the power on and increase the volume level. Turn counter-clockwise to decrease the volume level and turn the power off.

15. PTT Button – Press and hold to transmit voice communication.

16. CALL/LOCK Button – Press to send a CALL ALERT signal. Press and hold to turn KEY LOCK on/off.

17. UP ▲ and DOWN ▼ / SOS SIREN Buttons – Make adjustments in MENU mode. Press and hold the DOWN button for 5 seconds to activate the SOS Siren function.

18. SPEAKER – Built-in speaker.

19. ANTENNA

20. EXTERNAL SPEAKER/MIC JACK

21. MENU/WX SCAN Button – Press to access Menu mode. Press and hold for 5 seconds to activate the NOAA Weather Scan function.

22. MONITOR/SCAN Button – Press to enter SCAN mode. Press and hold to enter MONITOR mode.

23. MIC – Built-in microphone.

Midland GXT1000 Display

Model GXT1000/1030/1040/1050/1191 Series



LCD DISPLAY



- 1. BATTERY METER** – Indicates the battery level.
- 2. WHISPER ICON** – Indicates when the Whisper feature is on.
- 3. KEY LOCK ICON** – Indicates KEY LOCK mode is on.
- 4. VOX ICON** – Indicates when VOX mode is active.
- 5. NOAA WEATHER (WX) BAND ICON** – Indicates when the radio is in Weather Band mode.
- 6. CHANNEL NUMBER** – Changes from 1–50 on GMRS band (1–10 on WX band).
- 7. GROUP MODE ICON** – Indicates when the Group Mode is on.
- 8. VIBRATE ALERT ICON** – Indicates when the Vibrate-Alert feature is on.
- 9. SOS SIREN ICON** – Indicates the SOS Siren is on.
- 10. TRANSMIT (TX) / RECEIVE (RX) ICON** – Indicates radio is transmitting (TX) a signal, or radio is receiving (RX) a transmission.
- 11. TRANSMIT POWER LEVEL ICON** – Indicates TX Power setting (H/M/L)
- 12. PRIVACY CODE ICON** – Indicates Privacy Code setting (CTCSS/DCS).
- 13. PRIVACY CODE** – Indicates Privacy Code selected by user (oF~38/oF~104). It can only be used on Ch 1~22.



CONTROLS



Power On/Off and Volume

Rotate the POWER/VOLUME knob clockwise to turn the radio on and increase the volume level. Rotate the control counter-clockwise to reduce the volume level and to turn the radio off. During Power On, the radio will beep 2 times with different tones, the LCD will display all icons for 1 second and the LCD display will indicate the last channel selected.

GMRS CHANNEL SELECTION

- Press the MENU button once, and then the UP/DOWN buttons to select one of the 50 channels.
- To confirm the selection, press the PTT button or press the MENU button again to move to the next feature setting.

Transmitting and Receiving a Call

1. For maximum clarity, hold the radio 2 to 3 inches from your mouth.
2. Press and hold the PTT button and speak in a normal voice into the microphone. The TX icon will appear continuously on the LCD display while transmitting.
3. To receive a call, release the PTT button. The RX icon will appear on the display when your radio is receiving a transmission.

ABOUT RANGE

Your GXT Series radios are designed to give you maximum range under optimum conditions

TRANSMIT (TX) POWER LEVEL SELECTION

- Your radio has 3 power level settings.
- To select the power level on channels 1~7, 15~33 and 38~50, press the MENU button until a “Pr” icon will appear blinking on the display.
- Then press the UP/DOWN buttons to select TRANSMIT POWER LEVEL icon, “H” for high, “M” for medium, and “L” for low power.
- To confirm, press the PTT button or press the MENU button again to move to the next feature setting.
- When the Battery Meter drops to 1 bar , the TX Power will automatically switch from Hi(H) or Med(M) to Lo(L) level.

Miscellaneous

- **Monitor** Pressing and holding the MONITOR button for 1 second will let you hear noise so you can adjust the volume level of the radio when not receiving a signal. Press and hold the MONITOR button for 1 second again to get out of MONITOR mode.
- **SCAN** Your radio can scan all 50 channels for activity. To enter, quickly press the SCAN button. Repeat the same procedure to exit. Your radio will rapidly scan each of the 50 channels and stop on any active channel.
-

NOAA Weather Scan

- **Your radio also has a NOAA WEATHER SCAN function, to enable the user to scan all 10 channels of the NOAA WEATHER RADIO.**
- **To turn the NOAA WEATHER SCAN on, press and hold the MENU button for 5 seconds while in GMRS mode.**
- **The radio will go to WX Band mode and start scanning all 10 channels and stop on any active channel.**
- **When the channel becomes inactive for 10 seconds the radio will resume scanning.**
- **To turn the NOAA WEATHER RADIO off, Press the PTT button. The current GMRS radio setting will be displayed and the icon will go off.**

Manually Setting NOAA Channel

- **To stop the NOAA WEATHER (WX) SCAN and set the channel manually on the WX Band,**
 - **Press the MENU button during NOAA WEATHER (WX) SCAN.**
 - **The radio will stop scanning and the display will show the current WX Band channel setting and the icon.**
 - **While in WX Band mode press the UP/DOWN buttons to select one of the 10 NOAA WEATHER (WX) BAND channels.**
 - **To confirm, press the PTT button or press the MENU button to move to the next feature setting.**
- **To turn the NOAA WEATHER RADIO off,**
 - **Press the PTT button. The current GMRS radio setting will be displayed and the icon will go off.**

NOAA Weather Alert

- Your radio has a NOAA WEATHER ALERT function, to enable you to automatically receive weather alerts from designated NOAA stations.
- The NOAA WEATHER (WX) ALERT is automatically on during NOAA WEATHER SCAN mode

NOAA WEATHER (WX) FREQUENCY CHART

CH. No CH. Freq. CH. No CH. Freq.

1 162.550

6 162.500

2 162.400

7 162.525



Mount Hebo

Cape Meares



3 162.475

8 161.650

Neahkahnie



4 162.425

9 161.775

5 162.450

10 163.275

* Channel 8, 9 and 10 are designated Canadian Marine Frequencies

Additional Functionality

- **CALL ALERT** - Your radio can transmit a call alert for a fixed length of time.
- **SOS SIREN** - The icon will appear on the display, the radio will send out a loud siren sound and the display will flash
- **KEYPAD LOCK** To avoid accidentally changing the radio settings, press the LOCK button for 2 seconds.
- **DISPLAY ILLUMINATION** During Power on, the display illumination will activate for approx. 5 seconds. The display illumination can also be activated when the MENU, MON/SCAN, or s\t buttons are pressed.
- **DUAL WATCH FUNCTION** Your radio has a DUAL WATCH function, to enable user to scan 2 channels for any activity. The first channel will be the current channel setting and the second channel will be the selected channel on the MENU.

Additional Functionality

- **WHISPER FUNCTION** Your radio has a WHISPER function, to enable the user to transmit a high sound level even if he is whispering on the microphone.
- **EXTERNAL SPEAKER/MICROPHONE JACK** Your radio can be used with an optional external speaker/microphone or headset, freeing your hands for other tasks.

Troubleshooting

- Keypad not working
 - KEYPAD LOCK To avoid accidentally changing the radio settings, press the LOCK button for 2 seconds.
- Not Hearing What You Expected? Are You On the Right Channel?
 - Check display to make sure that you are on the Active Channel you want to be on.
- Lost or Confused
 - Turn the radio off and back on again if you get lost or confused, the display isn't showing what you expect, or you think you've missed a step. This will get you back to "Square One" and you can start over.

Starting to Talk

Having a Good Signal

- In our area, radio signals are blocked by lots of trees and hills
- For improved communication you can try
 - Keep antenna vertical
 - Find the highest point available
 - Move away from metal objects
 - Go outside/Get out of your car
 - Move a few feet in different directions
 - Difficult locations may need more power and an external antenna

Your Communications

THIS IS A RADIO, NOT A CELL PHONE!

- Conversations are BROADCAST to anyone listening on the channel
- Do not transmit private or sensitive info!
- Use your CallSign to minimize privacy risks

Be Courteous & Concise

- **Be brief and to the point**
Plan what you want to say
- **Only one person can talk at a time**
If the light is **Green**, someone else is talking.
Green = Stop
- **Leave a few seconds between transmissions**
Someone may need to “Break In”

CallSigns

- What is a CallSign?
 - They identify the radio user while maintaining an acceptable level of anonymity
- Different CallSigns used by SCEVC members
 - SCEVC GMRS CallSigns
 - FirstName, First initial of LastName
 - CERT CallSigns:
 - Tactical call sign used at the time of an incident
 - NET Control CallSign
 - HAM Call Sign, or FCC GMRS License Number

Starting to Talk

- **Listen** (wait for a break in talking, light is off)
- **Press PTT**
- **Take a Breath** (allow radio link to complete)
- **Talk approximately 1 to 2 inches from the Microphone**
- **“Hey You, It’s Me”**
 - Say name of person you are calling (**“Hey You”**)
 - Say your name (**“It’s Me”**)
- Say **“Out”** when ending a conversation
- **Release PTT & Listen**

EXERCISE 1: A Simple Conversation

Set channel to GMRS 06, Channel 006

Instructor leading a Radio NET: JohnQ, This is Net Control. Are you checking in Tonight?

GMRS Communicator: Net Control, this is JohnQ. Yes I am checking in.

Instructor: JohnQ, this is Net Control. I copy your check in. Thanks. Out.

STCEVC Communications Approach

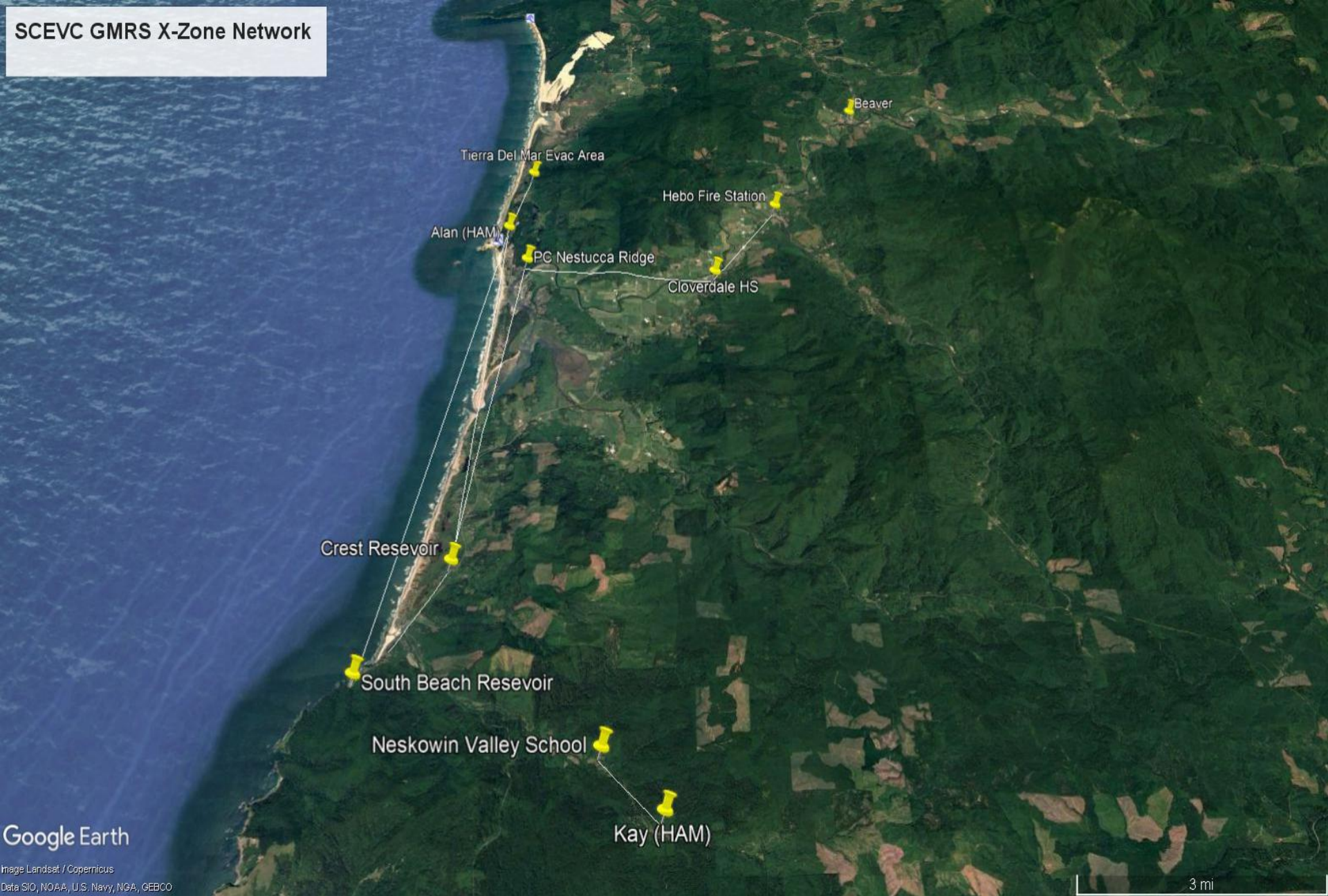
STCEVC Approach

- STCEVC Communications supports residents within the Nestucca Rural Fire Protection District
- Because of its size, we have broken the District up into Geographic areas called zones
- Within a zone, communications is supported by a network of GMRS communicators
- Across zones and out of area communications are coordinated by Ham operators, using Ham Radios

GMRS Radios

- Within a Zone, GMRS radios are used to form a community communications network
- Each Zone is assigned a primary and secondary channel
- Each Zone is managed by a Net Control
- Testing is required to ensure communications work from your location
- <https://southtillamookcountyevc.org/communications-zones/>

SCEVC GMRS X-Zone Network



Google Earth

Image Landsat / Copernicus
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

3 mi

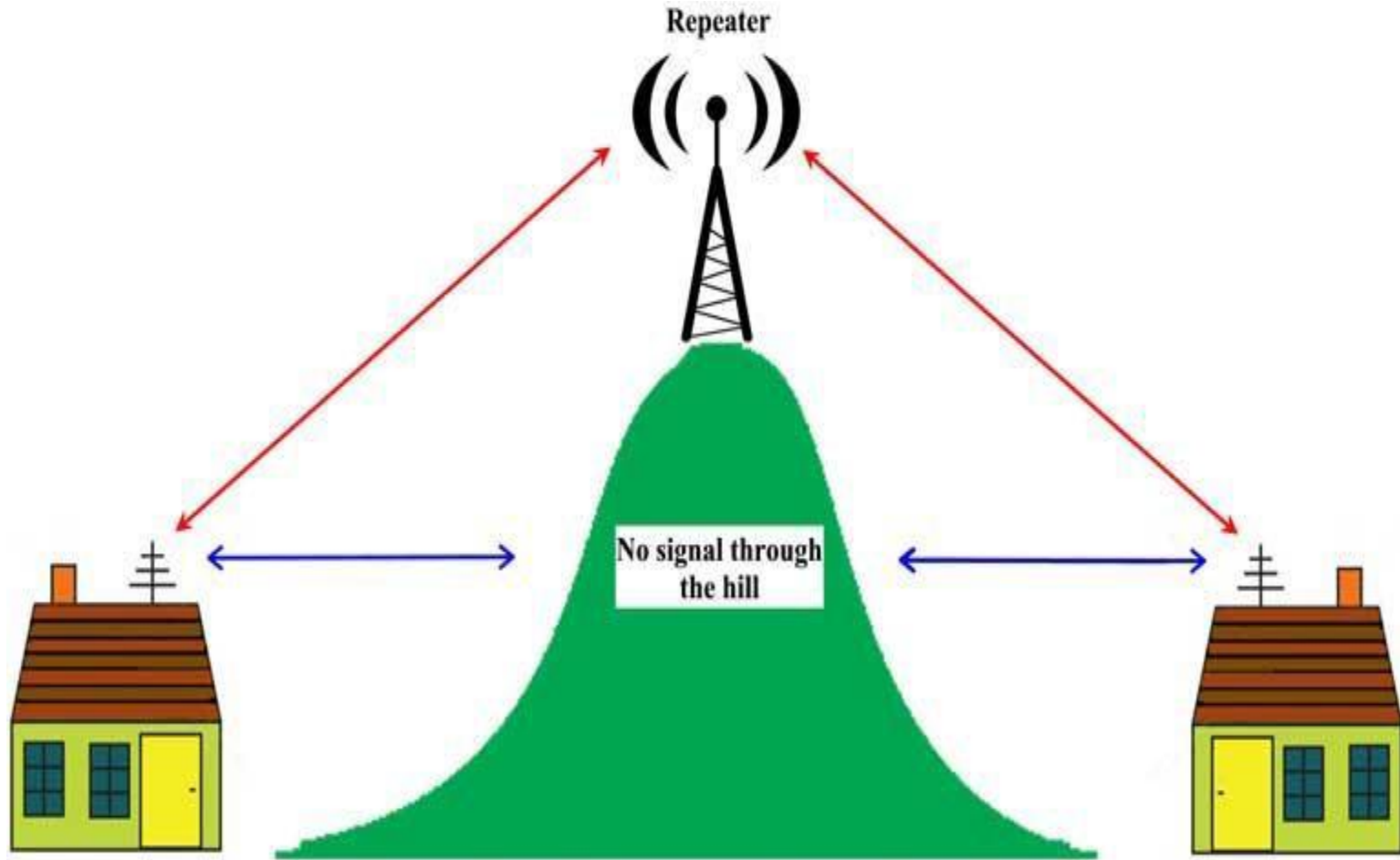
STCEVC Zones and Channels

Zones	Primary GMRS Radio Channel	Secondary GMRS Radio Channel
1 (Slab Creek)	018	022
2 (Neskowin)	015	021
3 (Pacific City)	016	020
4 (Tierra Del Mar)	017	019
5 (Cloverdale)	019	018
6 (Hebo)	020	017
7 (Beaver)	021	016
Sand Lake	022	015
Blaine	018	022

Ham Operators

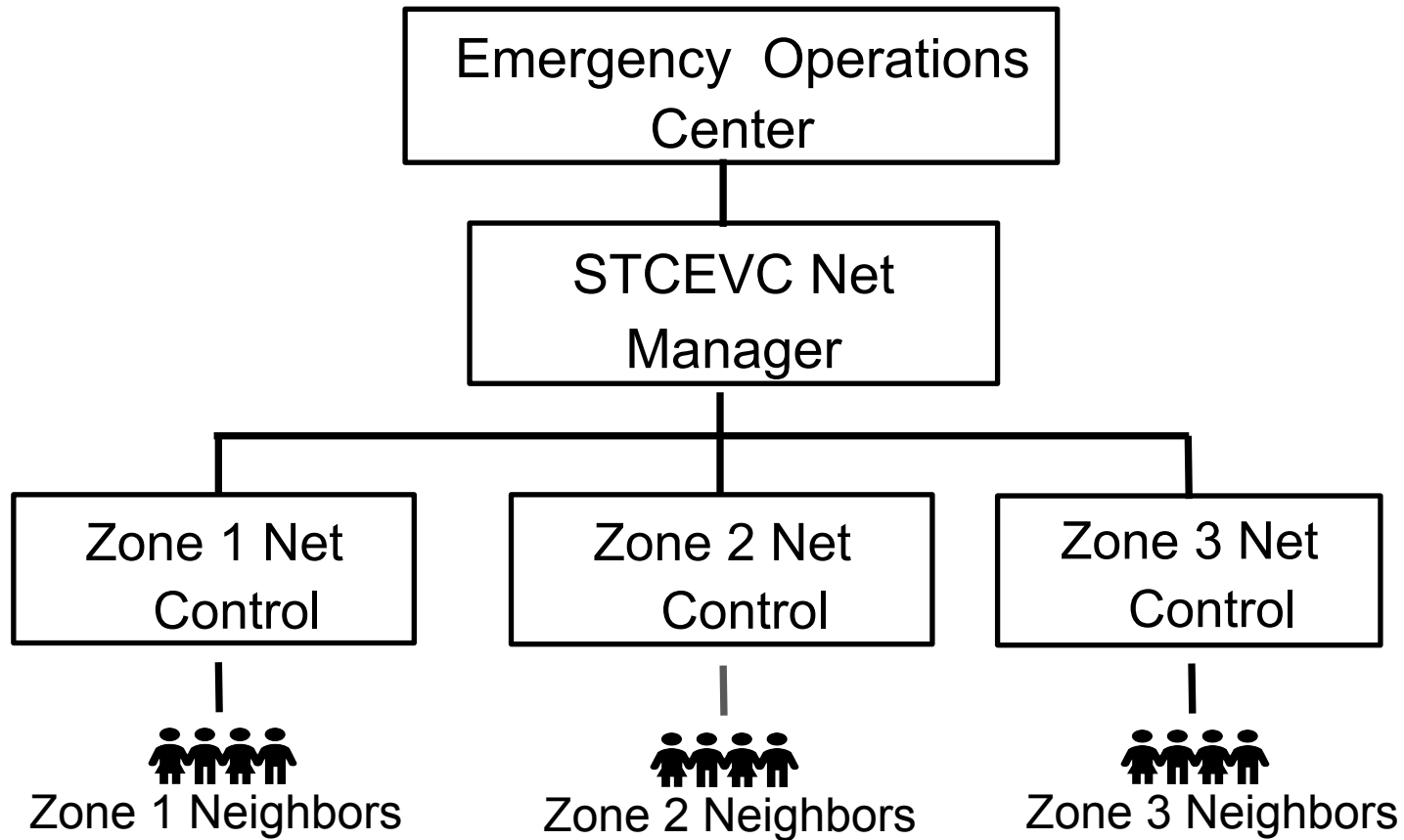
- HAM Operators are tested and licensed by the FCC. They can utilize Repeaters to increase the distance of local communications, and use more powerful equipment for Out of Area communications.
- STCEVC Hams assist with:
 - Developing an auxiliary communication strategy for South County
 - Coordinate Out of Area communications and communication within and across Zones
 - Provide help communicating with the Counties Emergency Operations Centers, Schools and Utilities

What's a Repeater?



Communication only possible by bouncing the signal through the repeater

Zone Communication Rollup



STCEVC NETS

What Is a NET?

- A group of radio users on the same channel exchanging information
- A system for managing radio communication to avoid chaos

What is Net Control?

- An individual on a Net who controls/ facilitates all communication on the Net
- A Gatekeeper - All communication on a Net must be directed through Net Control

Our Challenges

- We have many zones to coordinate
- We lack a communications presence in some zones
- During an emergency, we will have many people trying to communicate at the same time
- Talking slowly and clearly so we transmit accurate information
- Being prepared

STCEVC Monthly Net

- Occurs the 2nd Wednesday of the month, at 6:00 PM
- Focused on communications readiness and training
- Tune to your zone channel
- Net Control will call out for attendees
- Once checked into the Net, wait for further instructions from Net Control

Note: Not every Zone has a Net Control

Checking in to an Emergency Net

- Tune to your zone channel & listen
- Attempt to contact the Net
 - Net Control, this is (CallSign), Over
 - “Net Control this is (CallSign) checking in, Over”
- If no reply at first, keep trying!
- Once checked into the Net, you would wait for further instructions
- Let Net Control know when you leave

If You Have Information for the Net:

1. Listen for a Pause

Wait until no one is talking (no light)

2. Identify Yourself to Net Control

“Net Control, this is (CallSign) with traffic, over”

3. Net Control Acknowledges You

“Go ahead (CallSign), over”

If Net Control doesn't acknowledge you, you weren't heard. Try again!

4. Give Your Information

Next Steps

Next Steps

- GMRS Communications Testing
 - Identify who can you communicate with
- Identify your Net Control
 - They can provide assistance
- Participate in the monthly GMRS Community Radio Net
 - 2'nd Wednesday of each month at 6:00 PM
- Ham radio operators are very important to our emergency communication strategy. We encourage you to obtain your Ham License.
- Join the South County Communications Committee

GMRS Licensing

The FCC has clarified that a license is required to use radios on the GMRS frequencies.

STCEVC recommends that all GMRS Radio users obtain a License

A GMRS license

- Is good for ten years
- Is valid for the licensee's immediate family
- Cost is \$35.
- No exam is required
- Instructions are posted to STCEVC Website
 - <https://southtillamookcountyevc.org/gmrs-radio/>

Accessories

- External Mike/Speaker Baofeng BF-S112 Two Way Radio Speaker or others are available
- Radio Batteries
 - BL-8L 3600 MAH Extended Battery
 - UV-82 AAA Battery Pack
 - UV-82 Battery Eliminator (Adaptor for
- Generator or Solar Panels for running or recharging your radio accessories

