



Portable Radio Fundamentals

Version 3.0



Affiliated Club

Thank you for volunteering as a member of the Eules Community Emergency Response Team.

Communications is a vital part of any emergency response. During time of disaster, traditional means of communications (ie. telephones, cell phones), may overloaded or not available. Radio communications does not depend upon vulnerable infrastructure to operate effectively.

There are several forms of radio communications available to the general public. Some of these require a license to operate. But others are available for use without a license.

The Eules CERT team has adopted the use of the Family Radio Service. Also known as FRS radios. These radios are inexpensive, simple to operate, and do not require an operators license.

The goal of this booklet is to help you use your portable radio more effectively during an emergency.

This booklet will cover the:

- Characteristics of the FRS radio
- Identify typical radio features and controls
- Use of correct radio operating procedures

The Eules CERT team have these radios available for use as needed.

The members of Amateur Radio Eules are available to answer questions and assist in selection of a radio if you choose to purchase one.

Thank you for your service to the Citizens of the City of Eules.

Radio Fundamentals

A 2-way radio is not like a “phone”

- You cannot hear anyone if YOU are talking!
- No one else can speak when you are talking
- If EVERYONE talks, NOBODY understands
- Which results in CHAOS and missed vital messages during time of emergency

Just like broadcast radio:

- Anyone tuned to your channel can hear what you are saying
- Calls are not private
- If you do not want someone to “hear it” do not “say it”

When do you use the Radio?

Only if you HAVE TO

- When/If
 - ◊ You are sending data to control or the teams assigned amateur radio operator
 - ◊ You are answering a call from control or the teams assigned amateur radio operator
 - ◊ Communicating within the team
- If they are not talking to you - “DON’T TALK”

When do you Speak

Speak ONLY if you have to

- **LISTEN** do not “talk over” others
- **WAIT** until others have finished
- **THINK** about what you will say
- **USE PLAIN LANGUAGE**
- **KEEP IT SHORT**

PPT - Push - Pause - Talk

- Wait a fraction of a second after pushing the “talk” button and before speaking
- This avoids “clipping” off the first syllable as the radio changes over from its receive state to transmit

PPT - PUSH - PAUSE - TALK

Standard Message Format

The “BASIC FOUR” Prowords

Everyone who uses a 2-way radio should learn and use these:

- **THIS IS** - Used to identify who is calling
- **OVER** - Means I have finished speaking and it is now your turn
- **GO AHEAD** means I am ready to copy your message
- **OUT** means I am finished and expect no reply

The station who INITIATES the call always TERMINATES the call.

Standard Message Format

“Hey You, this is Me”

The call	“ <u>Who you want</u> , THIS IS <u>You</u> OVER”
The answer	“THIS IS <u>Receiving person</u> , GO AHEAD
The response	“ <u>Message</u> OVER
The acknowledgement	“ <u>Message repeated</u> , ROGER, OUT

H.A.N.D.

To assist in emergency situations the following reporting format has been developed that follows the letters of the word HAND.

H – Have – What type of emergency do you Have? Is it a fire, accident with injury, medical emergency?

A – At – You are At location? An address or distance and direction from the nearest major intersection.

N – Need – What assistance do you Need? Fire and Rescue, Police Officer, or Ambulance?

D – Details – What Details will help responders?

Details are those things that responders need to know before arriving on the scene. For instance: if there is a fire, a fuel or chemical spill; if there are fumes; multiple victims, or other hazards for which they need to prepare? Is there a Hazardous Material Placard on a vehicle involved in an accident. The numbers tell the responders the nature of the

Radio Operating Etiquette

CLARIFY

REPEAT Critical Information

CONFIRM correct

- **WAIT** to be recognized before speaking
 - ◇ Do not relay information that must be copied until certain that you have the other's attention
- **ACKNOWLEDGE** transmissions to your
 - ◇ 'Control' then knows your are ready to continue with your assignment, releasing the frequency
 - ◇ This avoids having to repeat the message
- Answer questions directly; do not explain
- If more information is vital to ensure that your message is fully understood, then be brief
- Let 'Control' or the requestor ask for details
- ASK who a message is for if you do not know
- Let third parties speak directly to each other

Operation in a Noisy Environment

- Do not speak louder
 - ◇ If you speak louder than is needed for normal speech, the radio will distort your voice, reducing intelligibility
- Preventive Steps:
 - ◇ Use earphone or headset
 - ◇ Turn down volume
 - ◇ Shield microphone from the wind
 - ◇ Speak Across the microphone
 - ◇ Use a normal speaking voice

Using the Radio

Turning the Radio On and Off

1. Turn the knob clockwise to turn the radio on and counterclockwise to turn the radio off.
2. The radio chirps and the display briefly shows all feature icons available on the radio.

Setting a Channel

1. With the radio on, press the menu button. The current channel flashes.
2. Press the + or - menu adjustment key to select the channel.
3. Press the Talk button to save the channel setting.

Setting the Privacy Code

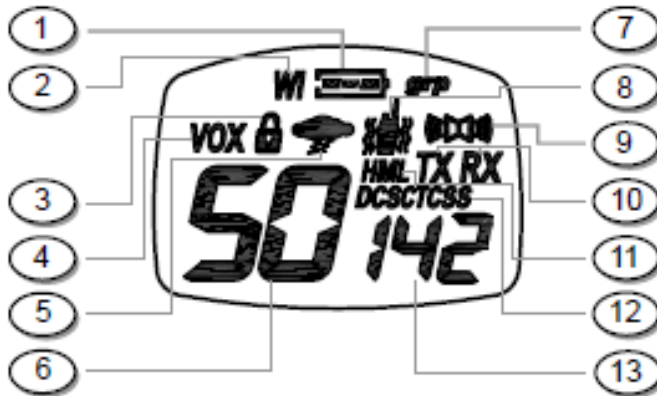
The Privacy Codes help minimize interference by providing you with a choice of code combinations.

1. With the radio on, press the menu button. The current code flashes.
2. Press the + or - menu adjustment key to select the code.
3. Press the Talk button to save the code setting.

Talking and Listening

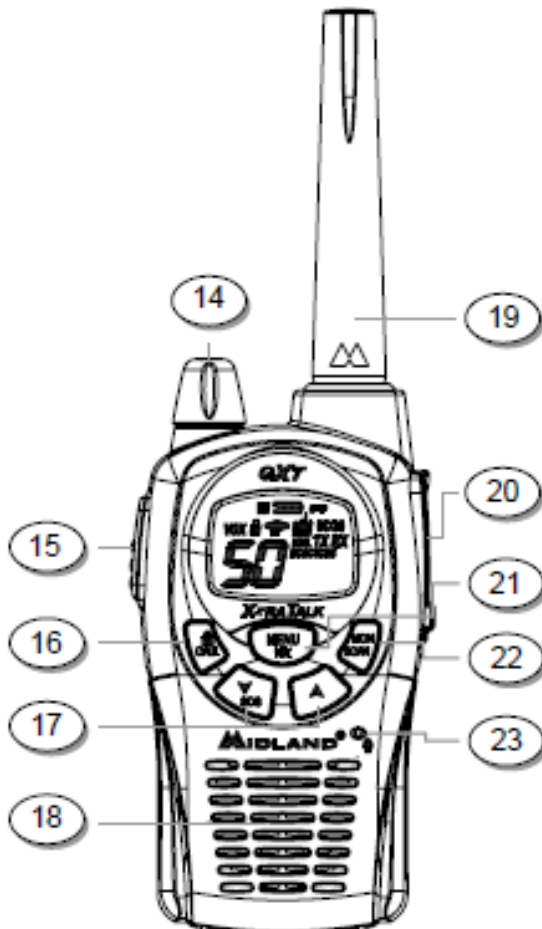
1. To communicate, all radios in your group must be set to the same channel and privacy code.
2. To Talk, press and hold the talk button, Hold the radio 2 to 3 inches away from your mouth.
3. When you are finished talking, release the talk button to listen.

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 1~42 on GMRS/FRS 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



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 ▼ Button** – Make adjustments in MENU mode. Press and hold the UP 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.

INCIDENT RADIO COMMUNICATIONS PLAN (ICS 205)

1. Incident Name: EULESS CERT TEAM		2. Date/Time Prepared: Date: Time:				3. Operational Period Date From: Time From:				Date To: Time To:	
4. Basic Radio Channel Use:											
Zone GRP	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/NAC	TX Freq N or W	TX Tone/NAC	Mode (A, D, or M)	Remarks	
	1	CERT Command	Neighborhood Watch		462.5625	136.5			A		
	2	CERT Command	Team Leaders to Command		462.5875	136.5			A		
	3	CERT Command	Planning Section		462.6125	136.5			A		
	4	CERT Command	Logistics Section		462.6375	136.5			A		
	5	CERT Command	Admin Section		462.6625	136.5			A		
	6	CERT Command	Team Leader to Public Safety		462.6875	136.5			A		
	7	CERT Command	Safety Officer		462.7125	136.5			A		
5. Special Instructions:											
6. Prepared by (Communications Unit Leader):								Name:		Signature:	
ICS 205								Date/Time:		IAP Page	

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	8	CERT Command	CERT OPS		467.5625	136.5			A	Cert Operations Inter-Team Communications	
	9	Team Comms	RED Team		467.5875	136.5			A		
	10	Team Comms	GREEN Team		467.6125	136.5			A		
	11	Team Comms	WHITE Team		467.6375	136.5			A		
	12	Team Comms	ORANGE Team		467.6625	136.5			A		
	13	Team Comms	BLUE Team		467.6875	136.5			A		
	14	Team Comms	BROWN Team		467.7125	136.5			A		

5. Special Instructions:

6. Prepared by (Communications Unit Leader):	Name:	Signature:
ICS 205	IAP Page	Date/Time:

Phonetic Alphabet

ITU					Police/Fire			
A	ALPHA	N	NOVEMBER		A	ADAM	N	NORA
B	BRAVO	O	OSCAR		B	BOY	O	OCEAN
C	CHARLIE	P	PAPA		C	CHARLES	P	PAUL
D	DELTA	Q	QUEBEC		D	DAVID	Q	QUEEN
E	ECHO	R	ROMEO		E	EDWARD	R	ROBERT
F	FOXTROT	S	SIERRA		F	FRANK	S	SAM
G	GOLF	T	TANGO		G	GEORGE	T	TOM
H	HOTEL	U	UNIFORM		H	HENRY	U	UNION
I	INDIA	V	VICTOR		I	IDA	V	VICTOR
J	JULIET	W	WHISKEY		J	JOHN	W	WILLIAM
K	KILO	X	XRAY		K	KING	X	XRAY
L	LIMA	Y	YANKEE		L	LINCOLN	Y	YOUNG
M	MIKE	Z	ZULU		M	MARY	Z	ZEBRA

NOTES

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