

# Lake Oswego GMRS Repeater Netiquette

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In 2021, a General Mobile Radio Service (GMRS) repeater was activated in Lake Oswego by radio enthusiasts. The GMRS repeater will greatly extend the radio coverage area for GMRS repeater capable radios so radio stations can converse throughout most areas of Lake Oswego. The owner and operator of the repeater is allowing this repeater to be used by any GMRS licensed radio operators in the Lake Oswego community for emergency, training or casual purposes. In the event of an emergency, priority should be given to emergency traffic. The following provides some general guidelines for utilizing this resource.

## **GETTING ON AIR**

The first thing that a user will need is a GMRS radio license. This is a two-part process that you complete on the Federal Communication Commission (FCC) website via their Universal Licensing System (ULS). In order to get a GMRS license, you need to complete an application to receive a free FCC Registration Number (FRN). This is a unique identifier used in tracking all transactions with the FCC. Once you obtain your FRN, you can then complete the application to obtain your GMRS license. You can learn more about getting your GMRS license, including a step by step guide by visiting: <https://mygmrs.com/help/get-gmrs-license>

The second and most important item you need is a repeater capable GMRS radio. All GMRS radios are capable of 'simplex' mode or talking from radio-to-radio. In fact, GMRS radios share the same 22 channels as Family Radio Service (FRS) radios allowing users to communicate with each other if they are on the same channel/frequency and tone. However, you will need a repeater capable GMRS radio in order to utilize the local GMRS repeater. Some examples include but are not limited to the Radioddity GM-30, Wouxon KG-805G and BaoFeng UV-5G radios available through a variety of online retailers that range in price from \$40 to \$150 each.

Once you obtain your radio, it will need to be configured to the proper radio frequency and tone. The instruction manual should provide the directions on how to perform this. The Lake Oswego GMRS Repeater operates on 462.600 MHz, with a + 5 MHz offset and uses an input/output tone of 123.0 Hz. This means that the GMRS repeater equipped radio you use will transmit (Tx) out a communication message on the frequency 467.600 MHz. The repeater receives that transmission and rebroadcasts it to other radios back out at 462.600 MHz. In the GMRS channel frequency list this is identified as Repeater Channel 3 and sometimes listed as 17R or RPT-3 in radio channel lists. Some radios may automatically configure this offset.

The repeater output frequency of 462.600 MHz is also the same exact frequency shared with Channel 17 in the FRS/GMRS channels. That means that an FRS radio set to Channel 17 with no tone or with tone of 123.0 Hz (code 18) will *hear* the radio traffic being broadcasted by the repeater. Someone with an FRS radio will not be able to talk to other GMRS radio users operating on 17R though because the repeater channels use two different frequencies.

## **TESTING YOUR RADIO**

When your new GMRS repeater capable radio is programmed, find a good area outside, turn the radio on, set it to the LO GMRS Repeater channel and listen. This is a new repeater and currently there is not a lot of radio traffic so you may not hear anyone talking right away. You will only hear something if someone is talking or when the repeater transmits its call sign every 15 minutes. There however may be other people listening/monitoring.

If you don't hear anyone talking on the GMRS Repeater channel;

- 1) Press your radio's PTT button, pause for 1 to 2 seconds and say:  
"This is [GMRS Call Sign] testing repeater access."
- 2) Pause a second and then release the PTT button
- 3) If you hear a 'beep' after releasing the PTT button, this indicates that your radio opened up the repeater and connected.

Pressing the PTT button and releasing the button to open the repeater is referred to as a 'kerchunk.' The practice of 'kerchunking' a radio repeater is extremely discouraged; so please don't just kerchunk without identifying yourself using your GMRS call sign.

- 4) Wait about 15 seconds. This will allow anyone who may be monitoring the channel some time to get their radio and respond. If you do not hear anything, wait a short time period and repeat steps 1 and 2.
- 5) If you again still do not hear any responses, leave your radio on and wait. The repeater will make a radio broadcast every 15 minutes in order to identify itself in accordance with FCC requirements. You should at least hear this message broadcasted allowing you to confirm your radio is programmed to receive radio transmissions.
- 6) If you don't hear the recurring broadcast, you may need to move to a different area to verify your radio is properly programmed.

If someone replies back, you can simply use plain conversation to talk. There are no special radio codes or terms you are required to use, other than providing your FCC assigned GMRS call sign every 15 minutes during the conversation or at the end of a brief transmission when you are done talking. It is also good practice to use the ITU alphabet when saying your radio call sign or introducing yourself to another radio user.

## **USING THE REPEATER**

When you have tested your radio and confirmed that it can connect and open up the repeater, please feel free to use it for testing or casual purposes. Remember the repeater is always 'on' and listening. Start by turning your radio on and listening to the repeater channel. If there is no conversation currently taking place and you would like to solicit a conversation with anyone monitoring, you can announce your presence on the repeater by stating;

“This is [GMRS Call Sign] listening.”

Using this method will alert anyone else monitoring the repeater that you are on-air and available to talk. Those monitoring will have the option at this point to reply back to begin a conversation or not. Sometimes that receiving station wasn't ready to copy down your GMRS call sign or may not have heard it completely. An appropriate reply could be along the lines of:

“Radio station calling, this is [name & their GMRS call sign] answering. I did not copy your call sign. Please come back.”

At this point, the two radio stations can simply engage in normal casual conversation. It's good practice to respond back with your name and call sign. Conversation topics can include asking what type of radio they are using, what general location they may be located in, the type of radio they are using (handheld, mobile, brand, etc.), signal clarity or any other topic you may think of.

### Calling a Station

If you know another radio user is monitoring and/or you are trying to contact a specific radio station, you should announce;

“[GMRS Call Sign of station being called] this is [your GMRS call sign]”

If you do not get a reply after a couple of calls, announce:

“[Your GMRS call sign] is clear”

This alerts anyone else using or who wants to use the repeater that you are releasing it for others to use. Should someone answer you, follow up by including your first name, call sign and if necessary, you can provide it phonetically.

“This is Jay, ABCD123 [pause]; Juliet Alpha Yankee with call sign Alpha Bravo Charlie Delta 1 2 3”

### Joining an Active Discussion

If you do hear radio traffic, please wait for a pause between transmissions before announcing your call sign. It is suggested to listen to the radio traffic and determine whether there is an active radio net taking place or whether it is just a simple round table discussion. If radio traffic appears to be a directed radio net, at some point Net Control will either pause, identify him/herself and ask if there is anyone else wanting to join the net. Depending on the Net Control and the purpose for the net, they may provide instructions on when and how to join such as providing your name, call sign and repeating your call sign using the phonetic alphabet.

In the event that the ongoing radio traffic is just a general discussion and you want to contact another station not in the current conversation for a quick message, you can ask to make a call. Simply wait for a pause in the communication and announce:

“[GMRS call sign] with a call.”

You can make the call when the parties using the repeater turn the repeater over to you. If you contact the party you are seeking and share your message, turn the repeater back to the person who turned it over to you, thanking them for letting you in. If you do not get a response from the party you are seeking, turn the repeater back over to the person who turned it over to you and thank them for the opportunity.

### **GENERAL REPEATER ETIQUETTE**

- Don't be afraid to get on the air; nothing you could do can cause problems.
- Mistakes will occur, whether it's mispronunciation or inadvertently transmit into an ongoing conversation. The best way to handle this is to apologize for the error if you forget any of the steps above.
- Licensed GMRS radio users are required to announce their callsign at least once every 15 minutes during a series of transmissions over 15 minutes or following a single or series of transmissions. With practice, this will become second nature.
- Multiple family members using the same GMRS radio license will each still need to state the GMRS license callsign at minimum. No need to include '*This is* WABC123,' just work the 'WABC123' into the end of the transmission.
- Even when frequencies and tone are available, it is common courtesy to request permission from radio owners to use their repeaters. You can view a map of GMRS repeaters, create an account and request access to a variety of repeaters online at [www.mygmrs.com](http://www.mygmrs.com) . Having an account allows you to view repeater details and keep records of your requests.
- Phonetics can be used for clarification of your callsign, name or other syllables that may sound similar. You may also want to have a ITU Phonetic Alphabet handy in case someone has trouble receiving other radio traffic that may need clarification.
- If you are part of a lengthy discussion, be sure to leave pauses or short breaks for others to interrupt with a request.
- When you're finished with your communications, give your call sign one last time followed by the word "clear." That informs others that they may begin their conversations.
- The repeater is not a Citizen's Band (CB) radio and '10' codes should not be used. Avoid using CB 'handles' in place of your name or call sign.
- While coverage is good, there still may be locations where it won't work well based on your radio power, antenna and terrain. You may hear a beep and be able to open the repeater but a weak signal may not hold the repeater open during your transmission. In these situations, your transmission may be scratchy or intermittent. In this case, move to a different location-- a few feet or a few blocks away and you may solve the poor reception problem.