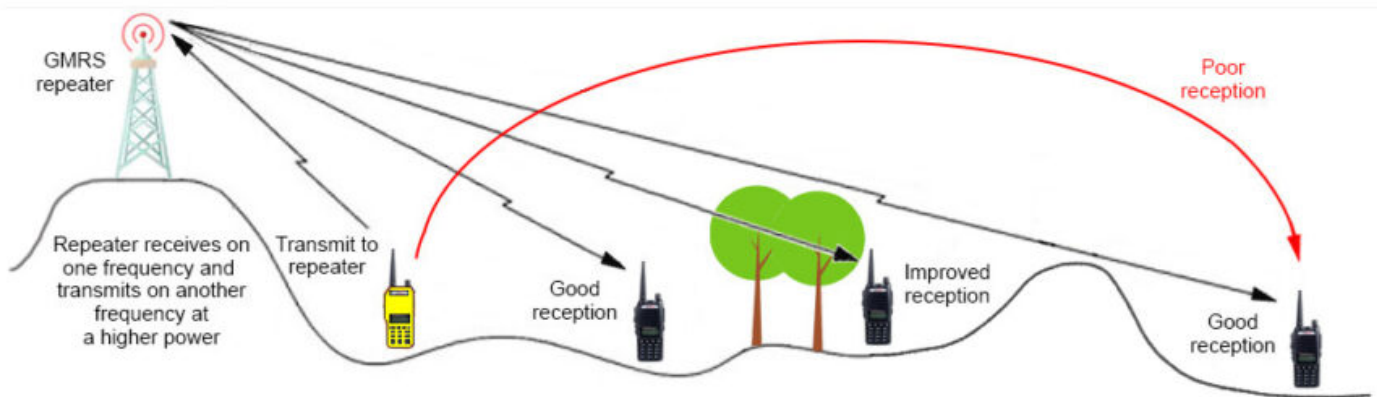


PARKRIDGE ESTATES

Emergency Radio Communications



"The most important component of staying safe during an emergency is the ability to give and receive information."

Emergency Radio Communications

GMRS or FRS Radio? How to Choose

What's the difference between **Family Radio Service (FRS)** band or the **General Mobile Radio Service (GMRS)**? The world of two-way radios is full of acronyms and they can start to feel kind of overwhelming if you aren't super familiar with the ins and outs of radio frequencies, citizen bands, and megahertz. So if you're trying to choose between a GMRS or FRS Midland radio and feel stumped, don't stress about it. We can break down the difference and help you decide which is the best type of radio for your needs.

What is FRS?

Family Radio Service (FRS) was developed for consumer use in no small part thanks to Radio Shack, who saw a need to define and preserve special radio frequencies for consumers that were separate from other bandwidths reserved for other types of communication.



While walkie talkies had grown more popular with civilians since World War II, by the 1990s there was also increasing competition for radio frequencies. In the 1970s, the popularity of CB radio meant there was more competition at lower frequencies with walkie talkies, which didn't have as powerful a signal. That's when the FCC moved walkie talkies up to 49 megahertz, to keep them from picking up conversations leaking from CB rigs. That was all well and good until the late 1980s and early 1990s, when once again competition from other wireless devices like baby monitors started to squeeze those lower frequencies walkie talkies had been operating on. Radio Shack suggested that the **FCC define frequencies between 462 and 467 MHz for recreational walkie talkie use**, which they have operated on ever since.

Essentially, anyone with a two-way radio can freely use FRS channels.

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How FRS differs from GMRS

General Mobile Radio Service (**GMRS**) radios, on the other hand, use specific frequencies within that same band designated for FRS radios. The difference is that GMRS radios have **designated channels within those frequencies that aren't available to FRS radios**. GMRS radios also require a license from the FCC to operate.

That's in part because they are more powerful. FRS walkie talkies can't be modified to amplify their signal to reach further distances. GMRS radios, however, can be modified to have a stronger, farther-ranging signal, at least up to 50 watts. That means that a GMRS radio can have all the same capabilities as an FRS radio in addition to special channels that FRS can't access, and the option to extend the range of the product.

What do they have in common? How do I choose?

Both FRS and GMRS radios use FM rather than AM. Typically, FM radio is used for music and broad regional coverage because it has less static. **GMRS radios are going to sound a little louder and clearer than FRS radios**. That's not going to be an issue for most people.



If you are a stickler for audio quality, the **GMRS will provide you an additional crispness and clarity**. That's because GMRS has more power to put behind its modulating frequency, which means less interference. If you plan to use your two-way radio more frequently, over a broader area, or in areas with more competition for a signal, you might want the greater flexibility and power a GMRS radio provides.

For those who **plan to use two way radios only infrequently**, in close range, or in outdoor scenarios that aren't particularly technical, an **FRS radio is just fine**. FRS two way radios are powerful enough to have a range of a mile or two (depending on the terrain) and will keep you in touch with your party in case of emergency.

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OK, I have a radio. Now What?

HOW TO TALK ON A REPEATER

Ok now, hang on – before you roll your eyes – maybe there are some people that really aren't sure how to use a repeater. I can assure you that at first, I didn't know how, and it kept me from ever really using my radios. Therefore, I provide this quick and dirty scenario-based “article” of sorts, with examples, to help ease the minds of any nervous or mic shy GMRS licensees.

BEFORE DOING ANYTHING ON A REPEATER

- **LISTEN FIRST.** Listen for a good 60 seconds to make sure you aren't going to key up on top of someone else.
- **ALWAYS IDENTIFY YOURSELF** on your first transmission. Also identify yourself once every 15 minutes while in conversation. Also identify yourself on your last transmission.
- **KEEP IT RESPECTFUL** and do not say anything that you wouldn't want half of the state to hear you say... because they can!

IF YOU WANT TO KNOW IF YOUR RADIO CAN REACH THE REPEATER

- Identify yourself by your call sign, followed by “testing”, “radio check”, or similar. You will hear the repeaters courtesy “beep” informing you that the repeater heard your transmission.
- You might also hear another user respond and tell you whether you came through clear or not. If this is the case, please thank them for confirming your radio check. This is not only courteous, but also lets the other person know that you can hear them as well.
- **DO NOT** simply key up for half a second and wait for the “beep”. This is called “kerchunking” and is technically in violation of FCC regulations as transmission without identification

Ex: “KK6VIM, radio check”

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Emergency Radio Communications

IF YOU WANT TO SEE IF ANYONE WANTS TO CHAT

- Just identify yourself. This announces your presence, and if someone is listening and they hear you, they might respond if they also want to chat. If you are driving, you can also say “mobile” which lets anyone listening know that you are moving around and signal strength may fluctuate. Likewise if you are walking around with a handheld radio you could say “portable”.

Ex: “WA6TYQ, mobile”

IF YOU WANT TO “CALL” FOR SOMEONE

- Say the call sign of the person you are calling, followed by your call sign

EX: “WA6TYQ, this is KK6VIM. Martin, are you on today?”

IF MORE THAN 1 PERSON REGULARLY USES YOUR CALLSIGN

- GMRS allows one call sign to cover multiple family members. If you have multiple people that use your call sign (like my family), it can get confusing.
- I suggest you use unique identifiers, or “unit numbers”, in addition to your call sign. These numbers can be whatever you want.

Ex: “WA6TYQ, A100. A103, do you copy?”

IF YOU HAVE AN EMERGENCY

- Alert anyone listening that you have emergency traffic
- Continue with your emergency transmission

Ex: “Emergency, emergency, emergency, this is KK6VIM with emergency traffic”

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How to Use a two-way radio in an emergency

Two-way radios are the ideal communication device in an emergency for several reasons. They have a push-to-talk functionality for instant communication, they are much faster than cell phones or landlines and they are also extremely easy to use – just the push of a button can transmit your message to an entire group of people on the same frequency. Not to mention two-way radios are durable and can withstand very harsh environmental conditions like heavy rain and dust.

In case there's ever an emergency situation when verbal communication wouldn't be opportune, two-way radios can also send and receive text messages for quick and discreet communication. Lastly, the fact that two-way radios don't rely on cell phone networks is a huge benefit in widespread emergencies, where reception may be congested or even stop altogether when overloaded with calls.



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Emergency Radio Communications

5 OF THE BEST TWO-WAY RADIO EMERGENCY COMMUNICATION PRACTICES

1

Know the Ins & Outs of your Radio

In order to be prepared to use your two-way radio during an emergency, you need to understand exactly how it functions. Take some time to familiarize yourself with your device. If necessary, ask your employer for training on two-way radio usage so you can be better equipped to take advantage of all your device's features.



2

Take Part in an Emergency Drill

If you run an organization or establishment, having a drill for your employees to be better prepared in an emergency is a very beneficial idea. This way they will be able to put what they've learned about their radio into practice. The drill may reveal they still need more instruction and training on how to handle an emergency scenario.



3

Communicate Briefly

When you're communicating with a two-way radio in an emergency, remember the saying "less is more." In a critical situation, brief is better when it comes to talking. Be sure to get the necessary details across in the least amount of time.



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Emergency Radio Communications

5 OF THE BEST TWO-WAY RADIO EMERGENCY COMMUNICATION PRACTICES

4

Repeat When Necessary

Especially if you are on the receiving end of a critical transmission, repeating the information you receive back to your contact is extremely important. Upon receiving significant details from your contact, you should always repeat the information back to make sure you've heard them correctly.



5

Use the Emergency Alert Button If Necessary

Some radios come with a programmable, emergency alert button that helps sound the alarm in an emergency. Typically, it is a big orange button either on the side of a radio by the push to talk button, or on the top of the radio. A radio dealer can custom program the button to activate an alert and alarm that will be heard by the necessary personnel to respond to emergencies. With these five best practices in use, you will be able to communicate smoothly and effectively with a two-way radio in an emergency. As you can see, two-way radios are ideal communication devices for emergency situations. With a little training and use of the right strategies, two-way radios can be utilized effectively to maintain order and to save lives in an emergency.



EMERGENCY PREPAREDNESS

GMRS EMERGENCY NETWORK - OAKLAND (GENOAK)



GENOAK is an emergency 2-way radio communications network for Oakland and nearby communities, utilizing the General Mobile Radio Service (GMRS)

www.genoak.org

In the event of a large-scale disaster (earthquake, wild-fire or flood for example), individuals, communities, groups and CERT teams in and around Oakland may need to depend on information and assistance from others. However, cellular, Internet and landline phone communications may be overloaded or disrupted.

During this time, the GENOAK 2-way radio network can provide an alternate means for voice communications to enable communities to connect and report on threats and incidents, provide status updates, share resources, mobilize volunteers and coordinate needed assistance, among other tasks.

In addition, critical messages may be able to be relayed to authorities via GENOAK and the Amateur/Ham emergency radio network. And important information can be delivered back to GENOAK 2-way radio operators.

INTERESTED IN PARTICIPATING?

GENOAK holds a regular **on-air get-together** called a "check-in net." The purpose of this net is to allow GENOAK operators to become familiar with the use of their radio and to develop good radio communications skills.

The GENOAK check-in net takes place on the first Tuesday of each month at 19:00 (7:00pm) Pacific Time

To learn more about how to participate in the GENOAK net or to be a Net Control Operator, visit www.genoak.org/check-in

GMRS
Emergency
Network -
Oakland



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