

Walkie-talkies for Emergency Use



From **Emergency Plan Guide**

WALKIE-TALKIES FOR EMERGENCY USE

WHY YOU NEED WALKIE-TALKIES AT WORK

Unless your business has dedicated radio service, available to all staff members including administrative employees, we recommend that you take a serious look at a communications system based on inexpensive, easy-to-operate walkie-talkies.

WHAT ARE WALKIE-TALKIES?

Walkie-talkies are handheld, battery-powered portable radios that communicate using a single shared channel. Only one person can talk at a time – but that person can send a message to an entire group of people, all at once, as long as they are all on the same channel.

This makes walkie-talkies perfect for emergency situations!

WHY USE THEM IN AN EMERGENCY?

Communication is the life-blood of emergency operations, from a life-saving viewpoint as well as understanding the condition of your buildings, the status of operations, etc. You are going to want that information immediately.

If your phone system is out of service, cell phone circuits are likely going to be overloaded. Intercom systems will not work if electricity is shut down. There will be no practical or possible way to communicate efficiently with employee groups that are out of the reach of your voice.

Walkie-talkies make instant communication possible.

HOW DO WALKIE-TALKIES OPERATE?

Walkie talkies operate on internal batteries which means they are not impacted by general power outages. Batteries can be rechargeable. (In an emergency, if

power is out, your rechargeable batteries may need to be replaced with regular batteries.)

The signals can reach up to 1-2 miles (seldom farther), depending on what could block them: trees, metal frameworks, etc.

In most cases, the radios are inexpensive, sturdy and easy to operate with just a little practice.

They have multiple channels (numbered 1-22 for the most popular and lowest cost models. Some models offer multiple “privacy options” that you can select, to help eliminate interference. Other models offer LED lights, which can be used as flashlights. The one instruction basic to all? **“Push to talk.”** (And release the talk button when you’re finished talking!)

There are a number of options to consider. We’ve listed the main options at the end of this article, along with a number of models that we have used or tested. By and large, the more options, the higher the price.

HOW MIGHT WALKIE-TALKIES BE USED IN AN EMERGENCY?

Let’s look at some possible emergency scenarios.

Picture a small professional office with say, fewer than 50 employees, spread out in 10-15 offices in the same building. Disaster strikes. Ceilings collapse, doors swing and crash, file cabinets fall, blocking doors.

People are unable to exit their offices. You don’t know who is alive, injured or trapped. But, if employees have access to walkie-talkies, they can be helped, if only by getting updates on emergency services, etc.

Remember, only one person can talk at one time, but all can listen in. People have to understand how to take turns.

Let’s expand our example to a manufacturer with 300 or so employees on a multi-building campus. Given the obstruction of other buildings, power lines (even if down), trees and other physical terrain features, you may need more powerful models with more channels and features.

Since the channels are numbered, you can assign a particular channel to each department or location, and assign one or more channels to a command center that will help coordinate salvage and rescue operations. For example:

- Channel 1 is for Command (the owner or office manager or head of emergency preparedness)
- Channel 2 is for maintenance. Maintenance crew members would talk with each other on Channel 2, then switch to Channel 1 to report in.
- Channel 3 is for HR. Again, HR employees would communicate on their “own” channel, without having to listen to or interrupt maintenance. They could switch to Channel 1 to report in or to get news.

Obviously, all the channel assignments have to be laid out BEFORE the disaster.

SOME EXAMPLES OF SIMPLE WALKIE-TALKIES THAT WE HAVE USED OR TESTED



Joe first used hand-held radios in the military when conducting surveillance. Joe and I used CB radios on sports car rallies before cell phones came into use. And our neighborhood CERT teams have had walkie-talkies for over 17 years.

Sharing information with your team without having to look up a number, without having to dial, without having to connect –**simply by pushing and talking**– is incredibly efficient.

SIX QUESTIONS TO ANSWER BEFORE YOU BUY WALKIE-TALKIES

1-HOW FAR DO YOU EXPECT TO TRANSMIT?

Warning: Don't believe everything you read in sales literature!

Distances claimed by the manufacturers must be tested in a vacuum somewhere, with no buildings, no trees, no traffic, no dust and no interference of any kind! We look at these specs for comparison purposes, but don't believe them. When you're considering simple walkie-talkies, you're talking about messages traveling from less than a mile to maybe 3 miles until you've tested to find out what you get in your particular setting.

There are two main types of radios and the type you get helps determine your reach.

FRS (Family Radio Service) radios traditionally operated with a power of 1/2 watt (500 mw) but since 2017 have been “upgraded” to being able to operate at 2 watts. They work well for local transmissions and if you are starting your research, this is the place to do it!

GMRS (General Mobile Radio Service) devices can transmit at higher power levels (1 to 5 watts is typical) and can be modified with external antennas for much higher power. This higher power can expand your reach by as much as five times. Using GMRS does require an FCC license – get the details before buying .

Many existing radios combine both FRS and GMRS. With the FCC changes of 2017, these hybrid radios are slowly being phased out to be one or the other. (But the hybrids still work just fine!)

Tip: If there's a question about distances, buy ONE pair of radios and test in your own setting before you invest in multiples.

2-HOW MANY CHANNELS DO YOU REALLY NEED?

There are 22 mobile radio channels. Think about how you will set up your communications protocols before you make a final decision on how many channels you need. (Want ideas for how to set up a communications matrix for a neighborhood? [Request a copy of our neighborhood radio channels matrix here.](#))

If you absolutely need more information about the FCC, channels and power requirements, here is a reference that may be useful:

https://wiki.radioreference.com/index.php/FRS/GMRS_combined_channel_chart

Warning #2: *New low-cost walkie-talkies are coming on the market that can access many more than the standard 22 channels. However, many of these channels are restricted to official use, so purchasers of these radios may be buying more than they can actually use. And they must program their radios to be sure they use only the allowed channels. Be sure you know what you are buying.*

3-HOW HANDY ARE YOUR USERS?

Like other electronic gadgets, the smaller the device, the more functions each button needs to be able to perform. We have found that for “more mature” team members (i.e., anyone not born with a smart phone in their hand), slightly larger radios are a heck of a lot easier to use. In particular, we look for an obvious on-off switch, easy-to-adjust volume and channels, an easy-to-open battery compartment, and a sturdy case.

Users will need SOME training. And remember, in an emergency, everything will become much more difficult! Be sure to repeat training on a regular basis to be sure users are up to speed and batteries still work.

4-WHAT KINDS OF BATTERIES DO YOU NEED?

As you can imagine, radios come with a variety of power options. Some offer disposable, regular alkaline batteries, either AA or AAA. Some have rechargeable batteries and come with a plug-in charger stand. Some offer both options.



We prefer regular batteries over rechargeable batteries for emergency radios. In a real emergency, there will be no power, so as soon as the rechargeable battery is exhausted, you're out of luck (unless you have a solar charger).

We have also conducted repeated tests regarding alkaline battery reliability and life. An early test put Duracell at the top of the list; two years later, we found that Eveready batteries outperformed both Duracell and Costco's proprietary brand. Recently we tested another private label and found no real difference between it and the brand names.

So, as of this battery update (October, 2018), we suggest that you look for convenience and cost when purchasing batteries. Amazon has its own brand now, too – you can assume rapid turnover of that inventory and thus you're probably getting a "fresher" battery.

Caution: A battery may be labeled as having a "Ten Year Life," but if it's already 2 years old when you take it off the shelf . . .

New battery technology appears all the time; you may want to do your own tests.

5-ARE YOUR RADIOS COMPATIBLE WITH ONE ANOTHER?

We all heard the stories about how police and fire departments couldn't communicate during 9/11 because their emergency radios operated on different channels. Today, they've made progress but some even well-known brands still do not necessarily "talk" to others. If you're outfitting a number of teams with standard, inexpensive walkie-talkies, or replacing outdated devices, they will very probably work together. But check to be sure!

6-WHAT SORT OF WARRANTY COMES WITH THE RADIOS?

We have had good luck with our radios right out of the box. But every legitimate manufacturer will offer some sort of warranty. Check to be sure you know its features:

- Does it matter where you bought the radio? (a purchase through eBay, for example, may require a copy of the receipt)
- Does it matter if you are the original owner?
- How long does the warranty last?
- Who pays for shipping if the radio needs to be returned?

Be sure to check to see what conditions are NOT covered. Typically, that would include misuse or abuse of the item.

SOME OF THE RADIOS WE'VE USED AND/OR TESTED

These models have been reviewed and updated most recently as of February, 2019. If you click on the link, you'll go directly to Amazon, where you can check the current price and continue shopping. If you purchase through Amazon, EmergencyPlanGuide.org may get a commission. It doesn't affect how much you pay.

But do take the time to shop. At the most recent update of this report, I found prices for the SAME radio varying by as much as \$16!



Basic functionality for your emergency team

Let's start with one of the most popular and least expensive radios. This is the [Uniden 16-Mile 22 Channel Battery FRS/GMRS Two-Way Radio Pair - Black \(GMR1635-2\)](#)

It has both FRS/GMRS with 22 channels. The price is for a pair; each comes with three AAA batteries and a belt clip. There is a power-saving feature, but no privacy features. One additional feature: a “roger beep” that lets listeners know you’ve finished speaking.

For general use, I'd recommend this one.



Bigger and tougher

This is a Motorola that I like. For one reason, with a white face so it's a lot easier to keep track of than a black radio!

[Motorola T260TP Talkabout Radio, 3 Pack](#)

The body of this radio is nearly twice the size of the Uniden, and chunky. With a bigger price tag, you get more: twice the range (theoretically – Go back and read the comments about RANGE!) good weather proofing, and NOAA weather channels. There's a channel scanning feature and a meter that tells how much battery power you have left.

This radio operates on a rechargeable NiMH battery or with AA batteries.



Another proven brand

We've used Midland radios for our team, too. This one is the [Midland LXT600VP3 36-Channel GMRS with 30-Mile Range, NOAA Weather Alert, Rechargeable Batteries and Charger](#)

It offers even more channels (an extra 14), plus 121 security options. (121?) Power comes from three AAA batteries or rechargeable power pack. It also has a totally silent mode, plus a voice-activated option which might be important in emergency situations where you need both hands. Comes in yellow as well as black!



Want still more choices?

As you can see by the photo, this Midland package includes the radios and also charging stations, earphones for silent operation, and a charging plug for a vehicle dashboard. Compared to the models above, it has longer range (caution, as always), more channels and more privacy options, and more emergency/safety feature including the usual weather alerts and also an SOS siren signal.

It has a much longer list of features, but I think its HI/MED/LO power settings would be very valuable, letting you adjust transmit power and thus conserve battery life.

[Midland GXT1000VP4 36-Mile 50-Channel FRS/GMRS Two-Way Radio \(Pair\) \(Black/Silver\)](#)



Radio with GPS -- another level altogether

I include this top-of-the-line model for comparison. This Garmin radio offers something unique that hunters, hikers and survivalists look for -- a GPS feature. If keeping track of team or family members is something you would value, check this out.

[Garmin Rino 755t, Rugged Handheld 2-Way Radio/GPS Navigator with Camera and Preloaded TOPO Mapping](#)

(The picture isn't very good. When you get to Amazon, move your cursor over the image to be able to see the details on the face of the radio.)

GPS enabled hand-held radios are considerably pricier than the simple FRS/GMRS models we've been talking about. But the technology is pretty astounding.

As you would expect, this radio has all the usual weather-related and emergency features. You can see animated radar

on its screen! It can send out emergency signals that show/tell exactly where you are located. As for a compass, the radio has what they describe as a "3-axis tilt-compensated electronic compass with accelerometer and barometric altimeter sensors." (!)

The radio also has a camera (probably as good as or better than your iPhone) and, what's notable, pre-loaded topographical maps. (Other GPS enabled radios may have a base map installed, but you will have to purchase and download additional maps.)

Prices on radios with GPS start around \$300 and go up from there. Check out accessories for these radios, too -- cases, Bluetooth, etc. Again, these are for dedicated and committed hand-held radio users. You know who you are!

P.S. A number of the CERT teams we are in touch with are using the BaoFeng two-way radios. We own the [BaoFeng BF-F8HP \(UV-5R 3rd Gen\) 8-Watt Dual Band Two-Way Radio \(136-174Mhz VHF & 400-520Mhz UHF\) Includes Full Kit](#) and are evaluating it now for some members of our own team, but it's clear that this is a radio for accomplished, not just casual, users. Watch for more on this topic!

This report has been taken from our website, where we regularly update our reviews of emergency equipment. Feel free to check there for new suggestions on walkie-talkies, and also for reviews of emergency AM/FM radios and emergency lighting. And please let us know if you have updates from your own experience.

<https://EmergencyPlanGuide.org> – See “REVIEWS”