

HAM Radio, Amateur Radio

Just about everyone has heard of “shortwave radio” and “HAM”s. Many people just listen. No license is required to listen, and many people do listen on “shortwave radio” bands on a regular basis. Anyone can listen on shortwave bands to the BBC twenty-four hours a day seven days a week. Some do!

Some just eavesdrop on conversations on “shortwave” just to know they can. They know there is some “magic” there, but decide they don't want to take time to understand how to use the transmit capability for themselves. In an emergency, HAMs (a term used to represent all Amateur Radio Service operators) get communications working quickly and effectively. One famous example is 9/11. When the north tower fell, the multiuse radio tower with multiple antennas came down with it. This tower enabled the communications of many local authorities. HAMs took what they already had, placed it strategically, and within hours had communications operational. Some of the HAMs served weeks until the government and other entities could restore their own communications.

Who are these guys, these “HAM”s and how do they do it?

I'd be lying to you if I told you to buy your favorite radio and begin talking on it tomorrow. It just doesn't work that way. You have to know something. Sure, you can look at various “shortwave listening” (SWL) radios, pick one you like, and tune to the frequency you like and listen all you want. But if you want to communicate, have a say in a conversation, serve up some information you have that maybe no one else in the conversation has, then you have to learn some things about physics, natural phenomena, and who listens on what frequencies. You have lots of options, but you won't be effective if you don't understand a few things.

I invite you to learn a little right here, right now. Not so much so you can choose a piece of equipment and buy it on-line today, but rather so you can see the range of what is out there and where your needs and the needs of your community fit. Buckle your seatbelt, this is going to be a fast ride!

The objective of any HAM is to communicate.

Look for what your needs are.

Look at what your community needs are.

Then decide what makes sense for YOUR Committee of Safety, not mine.

Equipment

Repeaters - I don't want to start here. But that seems to be the buzz word everyone hears. Repeaters are highly tuned pieces of radio equipment that listen on one frequency and transmit whatever they “hear” on another. The most common are 2 meter (144-148MHz “VHF”) and 440-450MHz (“UHF”), but there are many others.

Example: Through a repeater, I once had a conversation, with three different people at the same time. One was in Pueblo. One was in Fort Collins. One was near Limon. All of us were in Colorado. I was riding my bicycle at the time using my little handheld transceiver (HT) on low power. Everyone was talking and listening using FM quality communications and were just as understandable as your local FM broadcast radio that many of you listen to every day. That is the advantage of a repeater!

Handheld Transceiver (HT) - A small radio you can hold in your hand. You can pick up a Family

Radio service “walkie-talkie” for \$50 just about anywhere. You don't need a license to use it and you can begin talking on it today. But to really be effective, you need to move up a notch to HAM gear.

BAOFENG BF-F8HP (UV-5R 3rd Gen) is a cheap HT for 2m & 440 MHz for under \$100. I'm not knocking them, but for the money, they give you some capability. If you are on a limited budget, this one is only about \$65 for the basic unit.

Shortwave Listening (SWL) Radio – If all you do is want to listen, get a late model with a digital display that will tell you what frequency you are on. I picked up an old dial SWL radio at a garage sale once for \$5. Really fun, but the dial only gave me an idea of what frequency I was listening to. The technology has improved so much since then! Get something that looks and feels good to you and has a place to attach an outside antenna. Up to a point, the more random wire you have hanging outside, the better your reception and the more frequencies you'll enjoy listen to.

High Frequency (HF) HAM rigs – A whole 'nuther ball game. When radio was first beginning to be used, very few people understood what radio really was. Your AM broadcast radio became popular in the 1920s. Wow! Here was a medium you could use to reach a wide region. People just needed to buy an “AM Radio Receiver” to listen to everything that was being broadcast. It worked, and President Roosevelt used that technology quite effectively in his “Fireside Chats” to get his message out.

There is no single brand of HAM gear that provides the “best” communications over long distances. MANY do. Pick the one that suits YOUR needs and the needs of your Community best. HOW?

Well, let's visit that for a moment. Why does one person drive a Chevy and another a Ford or a Subaru? Why does one person drive a sports car and another drives a pickup truck? How did each of those people decide which car to buy, keep, and use? First, they established their need. Then they looked for which cars might actually fulfill those needs. Next they decided which features and options they felt would aid their intended use. Finally, and all along, they looked at cost. Along the way, they learned something about radios versus antennas, power output, frequency selections, front panel arrangement, mode availability, and a hundred other things specific to each person and each radio.

One can focus on the bands they need for communications, the power necessary to effectively communicate, the distances that will be covered, and the mobility of the equipment. If the buyer of a car can't tell the difference between a pickup truck and a sports car, they are likely to make many wrong choices in their purchase. Similarly, the buyer of a radio, especially one that is capable of not only receiving but will transmit also, needs to know a few things about radio characteristics and their own needs of communications.

Is my theme beginning to come through yet? You can go out and buy the slickest HAM radio gear and you might be able to talk on it. Heck, you might even strike up a conversation using it. You might even discern that you need a 2m HT for local communications and an HF rig to talk long distances. GREAT! But will you really be satisfying your needs or the needs of the community?

Ham Gear Brands - Some famous brands? Motorola. But once you start learning, you'll quickly find all the others. Some other brands are Icom, Yeasu, Kenwood, and others. They are more expensive, but they offer, in my opinion, a better product. The old adage, “You get what you pay for” and “let the buyer beware” comes to mind.

Ham Radio Course/Instructions

So how does one become a HAM? The License Test – Some facts about the the Technician test:

The test is only 35 multiple choice questions.

You only have to get 26 questions correct on the test to pass it.

ALL the possible questions, are in the back of the ARRL book I link to below.

ALL the correct answers are in that same book, linked below.

That's it!

So if you want to try to just read the questions and answers and then take the test, please feel free to do so. But you'll be a more well-rounded HAM if you have someone to talk to about it all, like the HAMs in your local area.

How does someone get started? Elmers! An elmer is a HAM who mentors other HAMs or someone who is just interested in learning more. By far, the most effective way to get into HAM radio is to find someone or some group that is willing to help you learn. Maybe a local club is in your area. I'll put some links at the bottom as to places you can look to find HAMs that will help.

Let me just say something here, every HAM I know has been through what you might be facing. They know the struggle to learn because they have been there. Most are anxious to help others learn their hobby. If for no other reason, it gives them more people to talk to on the radio! Don't be afraid, but reach out to your local HAMs.

As an adjunct, I would like to offer everyone a free course on the internet using skype, conference calls, the web, or any other available technology to teach the basics of HAM radio and the Amateur Radio Service. I will include tie-ins to the NLA and the specific needs that Committees of Safety anywhere might need.

The course will follow the book “ARRL Ham Radio License Manual 3rd Edition”. You can purchase the book anywhere you like, but for your convenience, here's a link with more information on the book where you can buy it directly

[ARRL Ham Radio License Manual 3rd Edition](#)

Can you get your license without the book? Certainly! But you will have to find your own study material wherever you can. There are sites on the internet. Some charge money, some don't. Go for it!

Can you get your license without a class? Certainly! But you will need a friend or some other facility to answer questions as you learn and you will need a reason to study every night.

When? Most local clubs start a new class on a regular basis. Check with the club, a HAM you might know, or up on the internet.

I will be starting a class using the book linked above and answering questions. The first class will begin Wednesday, 10 Aug 16 at 2100 Eastern Daylight Time (9:00PM EDT for anyone that has issue with the “2100” part.) The class will run weekly, every week, with rare exceptions. We will discuss, among other things, how to find a local Volunteer Examiner (VE) testing session you can attend and earn your

license by passing the test.

The class begins 10 Aug 16 promptly at 2100 that night. It will continue to run weekly as long as I or another HAM are able or until a better course is found. The class will still run if no one shows up and I just talk for an hour. We'll try to get it recorded, but that may not help people with specific questions. I'm buying my book today so I will be ready to keep the class in context as we all learn.

I hope you can make it! You'll have fun while you learn a valuable skill to use in case of disaster or in your efforts to restore the common law and the Constitution.

See you there!
Terry, KI0RE

PS. You can look up that callsign, KI0RE, on the net and find out things about me. That callsign is unique over the entire planet. So if you find it mentioned anywhere, it means Terry Moore, "me".

Terry Moore, KI0RE, only one HAM.