I haven’t written. Blame Amateur Radio.



I haven’t updated this blog as much as I like. You can see that my last update was related to my new amateur radio, or HAM, hobby. Getting the basic Technician License to operate on amateur radio frequencies is not difficult, but does require study. What exactly is amateur radio?

Non-licensed radios

There are several radio services that the FCC allows you to use “by rule.” What that means is that you can used these services without a license so long as you comply with FCC regulations outlined in 47 CFR. These are broken up into “parts,” such as Part 95. Part 95 of the regulations covers the radio services we will discuss. It also covers General Mobile Radio Service (GMRS) which is a licensed service.

The best known of the unlicensed services is Citizens Band (CB) radio. Another is Family Radio Service (FRS) which are those little handheld radios you buy at the big box stores. These radios generally come packaged with GMRS frequencies. You are not supposed to use that GMRS channels unless you have a license. The instructions warn you of that, but who reads instructions? There is also a little known service called Multi-Use Radio Service or MURS.

Each of these services are broken up into “channels.” You do not have to concern yourself with frequencies, but you can find them on the Internet at the FCC web site. You just have to make sure the transmitting and receiving radios are on the same channel. Transmitting and receiving on the same frequency is called SIMPLEX in the amateur radio service.

These services are limited in power to no more than five-

watts. That might get you one or two miles. With any of these you can add an external antenna which will extend your range depending on how high you can get it up. There is a limit as to how high you can put your antenna up.

Consult the regulations prior to using any of these services.

GENERAL MOBILE RADIO SERVICE

We covered this service above. As of this writing, the Federal Communications Commission requires you to obtain a license to use this band of radio frequencies. There is a move by the FCC to remove this requirement, but if they do they had better send me back my $90. That is the current price of a GMRS license.

I won't hold my breath.

AMATEUR RADIO

Amateur radio is different that any of the above services. To begin with, it is the oldest. It started when radio first became popular in the early 1900s. It is covered by its own section in 47 C.F.R. known as Part 97. And the license only costs $15.

The purpose of amateur radio, according to §97.1, is:

> *The rules and regulations in this part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:*
>
> *(a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.*
> *(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.*
> *(c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the*

communication and technical phases of the art.
(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.
(e) Continuation and extension of the amateur's unique ability to enhance international goodwill.

The answer to one of the questions on the test is "Advancing skills in the technical and communication phases of the radio art."

Once you get a license the real education in this radio art begins. You will have to shop radios, antennas and other equipment. You can get as expensive or as cheap as you want. Most people get just get a license so they can operate one of those cheap Baofengaled radios that are being dumped on the market through repeaters.

Repeaters are, basically, specialized radios set up throughout the U.S. on mountaintops and other high places to extend the range of your communication. Unlike SIMPLEX we discussed earlier, these operate in DUPLEX mode. That means they receive on one frequency, but transmit on another. I won't get too involved since this is a basic discussion.

The point is that with amateur radio you can communicate internationally, so long as the country you are communicating with has not complained to the International Telecommunications Union (ITU).

Another aspect of amateur radio is emergency communications. The FCC has set up a group called RACES while the ARRL has established ARES. Both provide emergency communications when all else fails. NOAA, the national weather service, has established SKYWARN where trained weather spotters report unusual weather conditions. You do not have to be a Ham to join SKYWARN, by the way. You can report on the Internet or telephone.

AMATEUR RADIO CLUBS

There are a myriad of amateur radio clubs on the local and national level. The American Radio Relay League (ARRL) is the biggest in the U.S. and operates on a national level. There are clubs to support the repeater systems in your area. There are clubs where local Hams get together and exchange information.

You do not have to belong to any club to obtain a license nor are you required to join thereafter. They are just a good idea.

My time is currently taken up with getting a good system up and putting together emergency field systems. I have obtained the Extra license (the highest level) and become certified as an ARRL VEC volunteer examiner. I am trying to help others in the area obtain their licenses.

Of course I had to set up my Ham web site and continue with my reporter work. So for now I'll just say "73s."

That's Ham speak for good bye and have a good day.