The Elmer's Corner: Some Online Resources
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Access to the Internet brings a lot of good things and some bad things, just like anything else in life. Advances in technology have given us a lot of useful tools, but some advances we could have lived without. Email is great; spam is a bane on society. Having cable and satellite options for TV is great; moving to all-digital TV for local services is a problem for a lot of people. Fuel-injection is great in cars; computers in cars has made it next to impossible to work on them yourself. You get the idea.

Being a computer guy from way back, I still think computers are a good thing, and the Internet a really useful tool for learning and for sharing information. I do not like all the opportunity it brings to pry into people's lives, and I think privacy in our world is basically non-existent. The old saying in life is that you have to take the bad with the good, and nowhere is that more true than with the Internet!

However, I think the rewards far outweigh the negatives, at least for our hobby. Radio sites of all stripes can provide a wealth of information, as well as the opportunity to share discoveries and opportunities in near real-time.

While there is no substitute for hands-on learning guided by someone with a lot of experience, I must admit much of what I have learned about radio has come from the written word, either by books or by online resources. When I have a question about almost anything I can type something into *Google*® and within moments I have more information than I could possibly imagine.

Not all of that information is good, however, so I try to compare findings and seek out knowledgeable sources wherever possible. Even sites such as *eBay*® can be a learning experience, especially if you are new to the radio hobby. With thousands of items for sale every day, many with good descriptions of specific features and characteristics, there is a wealth of information in these ads which has helped me further my knowledge of amateur radio and related areas of interest.

Online Resources

Online resources may be divided into several categories. First, there are the "how-to" sites such as how to build an antenna, how to build a radio, or how to use equipment and software or related topics. Second, there are information sites such as *Radio Reference*, *AC6V.Com*, and

the *DXZONE* just to name a few. These sites have pages upon pages of information related to scanning, amateur radio, antennas, propagation, and to the radio hobby in general.

Finally, there are message boards for sharing information among users, such as personal experiences with various radios, various reception tips and tricks, and "Elmer" sites which offer advice and mentoring in amateur radio. There are more sites than anyone could possibly visit, so there is a lot of overlap between sites, with each offering more or less information on a given topic. There is no "one size fits all" kind of site, but with a little effort you will find useful sites for your particular needs fairly easily.

One messaging site I will mention here is *Yahoo Groups. Yahoo Groups* is an online resource where literally thousands of discussion groups exist for almost any interest and/or equipment related to a given hobby. I am on about 70 lists dealing with topics from shortwave radio, ultralight radios for AM DX, scanning, amateur radio equipment, solar/weather conditions, military/aviation frequencies, and general radio lists just to name a few. (We have one just for the Newcomers and Elmers Net—if you are a Newcomer or Elmer, consider joining!)

While messaging (in forums) is the primary use of the service, each group usually has a "Files" section as well which often contains useful tips, shortcuts, or programs to enhance the user experience. If you join a particularly active list, I recommend receiving daily digests of the emails rather than individual emails, else you will spend a lot of time hitting the "delete" key! Most of the groups I belong to I have either set to daily digests or to only visit but not send me emails – that way I can go when I am looking for particular information, without getting deluged with emails each day.

Two cautions: make sure the group you join is moderated and that there are clear indications that spam is not permitted. While some spam does get through, the best groups work really hard to keep it out as much as possible, and one of the best ways to do this is to have a moderated list. Also, always try to keep in mind just because someone says they had good luck doing some radical modification to their equipment or their software, that's no guarantee it will work for you in your situation. Try to verify information wherever possible regardless of where you get it—that's just good internet sense all around!

Finding Repeaters
When we are talking about amateur radio frequencies for VHF/UHF mobiles or HTs we are basically looking at 10-meter, 6-meter, 2-meter, 220 MHz, 440 MHz, 900 MHz, and 1.2 GHz. While there are radios with even wider coverage, these are the most common and the most useful since HF frequencies below 10 meters usually require an antenna size which is prohibitive for handheld use. Knowing where to find usable frequencies is 90% of the battle when monitoring amateur signals, so a publication like the ARRL's *Repeater Directory* is a great resource. It's main limitation as a paper publication is that it will need to be updated every few years.

The best online resource I had come across for finding repeaters in the area is: http://www.artscipub.com/repeaters/. This is a free service with a subscription option, and it is very easy to use. You can search in multiple ways, including zip code, state, and distance from your location. Repeater directories usually list both input and output frequencies for a repeater, so make sure you are getting the right frequency programmed in for receive—unless you are really close to the source you will usually not hear anything coming in on the transmit side of things.

Like many public service channels, amateur repeaters often use a PL/CTCSS tone which may be set to avoid repeater overlap in high volume areas. While some radios automatically search for and identify a CTCSS code, it helps to know which code is in use for a particular repeater when programming it in. It's easy to forget this step and without the code you may not hear a lot on a given repeater.

There are also Repeater apps for phones and tablets, and these can be good resources as well.

Weather And Emergency Services
In the midst of winter's blast this month (Feb.), a mention about weather-spotting (SKYWARN) and ARES/RACES participation is certainly in order. I will talk about these groups more in a future article, but be aware both SKYWARN and Amateur Radio Emergency Services/Radio Amateur Civil Emergency Service (ARES/RACES) hold nets, training exercises, and other on-air events which may be monitored or participated in by members. (For those who may not know, "nets" in amateur radio parlance refers to on-air meetings of ham operators, usually centered around a particular topic or common interest.)

SKYWARN has a page for looking up affiliated clubs and repeaters (http://www.skywarn.org/skywarnlinks.htm), as well as a number of good resources for learning how to become a weather spotter.

You can also do a *Google* search for your local SKYWARN group by searching for a nearby city, such as "SKYWARN Cincinnati." Local ARES/RACES groups also hold regular nets, and these can be educational just from the standpoint of learning what to do during an emergency. Typical topics include emergency preparedness, backup power, and disaster relief.

A good way to find out about local on-air events in amateur radio is to search for clubs in the area. A good resource for this is the *ARRL* website (*Amateur Radio Relay League*) where they have a search page for finding clubs by state, zip code, or keyword. The web address is: http://www.arrl.org/find-a-club. This can help you find emergency services groups which hold training exercises and can alert you to potential weather issues or hazardous conditions.

Antennas

Antennas may or may not already be on your list of interests, but if you intend to explore amateur radio you will eventually want to improve your listening opportunities by going beyond the included rubber duck or mobile antenna. There are a number of great antenna resources online, including sites which review antenna types, list plans for building (or "home-brewing") your own antenna, and which discuss antenna and RF theory. Antennas can get as complicated as you want, and it is a sub-field of the hobby with truly limitless possibilities. The perfect antenna has yet to be built, so there is always room for more experimentation.

While I will talk about antennas for various amateur bands more fully in future columns, here are a few antenna resources which you may find helpful as you start the process of becoming an expert(!):

Antenna Basics:

http://www.astrosurf.com/luxorion/qsl-antennas-basics.htm
http://www.electronics-tutorials.com/antennas/antenna-basics.htm
http://ac6v.com/antprojects.htm

Antenna Design:

http://www.hamuniverse.com/
http://www.dxzone.com/catalog/Antennas/

Antenna Software
http://ac6v.com/antsoftware.htm

All of these sites have multiple pages of information which should be quite helpful. One additional site I will mention is an online magazine *AntenneX* (http://www.antennex.com/), which is geared specifically to all aspects of antenna design and theory with both free and paid subscriber sections. In the interests of full disclosure, I write regular monthly columns for this publication, but don't let that keep you away (smile!). There is a wealth of information in the free areas, so I am in no way "shelling" for them—I discovered it early on as I was learning about antennas and found it worthwhile, so I pass it along only for that reason.

Wrap-Up
Well, that's all for this time around. I hope you find some of these resources useful, and feel free to email me if you find sites you think are particularly useful to others—I'll post some of them in a future column. I have only scratched the surface of what is available on the Internet, and whatever the downsides of the Internet, our hobby would be a lot poorer without it!

Until next time, here's hoping you grab all the good signals in life!

Cheers and 73,
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