SPAR Society For The Preservation Of Amateur Radio

WELCOME To Amateur Radio!!!

So You Passed the Test?

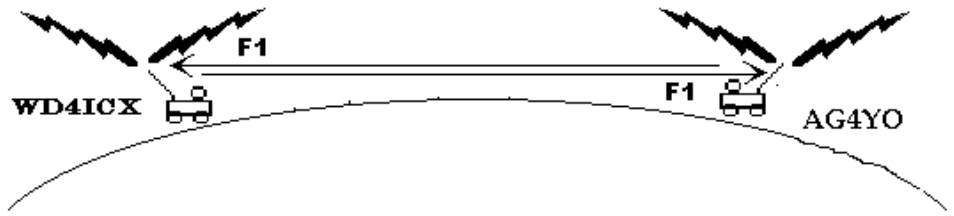
Congratulations! You are now a new member of one of the oldest and most respected hobbies in the world. But now that the test is over, what to do?? Well, you need to get on the air and start enjoying the hobby! This pamphlet will give you some "starter" ideas about how to do that. This information is not sponsored by any group or organization, and not affiliated with any club or company.

Technician Class

If you recently passed the Technician Class License test, you'll want to get on the air on frequencies above 50Mhz. The most popular frequencies for new Technicians are the 2M band. Most 2M traffic uses frequency modulation (FM) although you are licensed to use many modes. But since the goal of this pamphlet is to get you on the air, we'll concentrate on 2M FM.

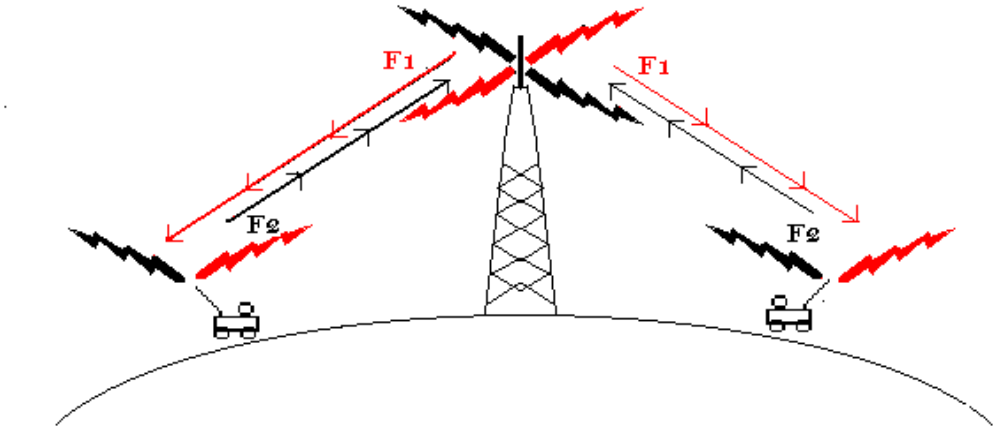
On 2M FM, transmissions normally travel almost by "line of sight". There are exceptions to every rule, but if you want to use 2M, chances are you will communicate directly with another Amateur (normally called simplex), or via a device called a repeater that amplifies your signal and increases your range.

A simplex radio system (see figure) works fine for large, open, flat areas. In cities, suburban areas, and mountainous regions however buildings and hills may block radio



signals thereby reducing the radio systems' effectiveness.

Repeater systems provide a solution to this problem. When using a repeater, all stations listen on frequency F1 and transmit on F2. Every message that is transmitted on F2 is simultaneously retransmitted on F1 by the repeater as shown below.



So, How Do I Get on 2M??

First you need a radio. The good news is that 2M equipment is plentiful and fairly cheap. You can find a 2M radio (rig) for around $140 new. Used rigs can be found for under $100. So where do you look??

These are a few places that specialize in selling Ham Radio gear. You can also search on the Internet. R&L Electronics has a “used” equipment program whereby they check out and sell used gear and give you a 90 day warranty. If you have access to the internet, check out their websites.

HRO Winter Springs	407-214-4994
Cheap Ham	732-716-1600
R&L Electronics	800-221-7735

The leading “brands” today are Icom (pronounced “eye-com”), Kenwood, and Yaesu (pronounced “yea-sue”) and are made in Japan. Since these companies have been around for many years, there is also much used equipment for these brands.

Portable or Mobile?

Depending on where you live, you will probably want either a mobile (i.e. car mounted) radio or a portable. If you live in an area covered by a nearby repeater, a portable radio will probably work just fine. You may also use a car mount type radio with a 12 volt DC power supply indoors as a “Base Station” if you desire.

Local communities covered by repeaters for portable operation are listed on the last page.

Antennas?

Antennas for mobile radios come in all sizes and shapes. Some use magnetic mounts for easy removal and operation without putting holes in your vehicle. These antennas sell for $20 to $120 dollars. Base station antennas sell for between $35 and $400.

Especially for the 2M band and higher frequencies, antennas tend to be small and easy to construct out of simple materials. Besides the commercially available antennas, you may want to try to build your own “homebrew” antennas. Common homebrew antennas that work quite well include the ¼ wave ground plane vertical, the J-pole, and the common dipole antenna. Just remember that for repeater work, you’ll normally want a vertically oriented antenna for best performance. A web search should turn up quite a number of designs and construction hints.

Repeaters you say?

Once you get your rig (radio), you’ll want to get on the air. There are several local repeaters that welcome new Amateurs below. Repeaters are FREE, there is no charge to use them, but there are rules. Repeaters are actually owned by other Amateurs or clubs and have the power to ban Amateurs from using the repeater if the FCC rules are not followed.

Refer to your rig’s instruction manual for programming info. Since repeaters transmit and receive (your rig too) on different frequencies, most repeaters used a standard “offset” of 600kHz. Depending on where in the band the frequency falls, the offset may be positive or negative. The good news is that most modern rigs take care of programming this offset for you. You simply program in the repeater’s transmit frequency in your radio and the radio does the rest.

Since frequencies are limited, repeaters may use something called “tone squelch” (PL, Channel Guard, etc.). Your radio transmits a “sub audible” tone that tells the repeater it’s OK to key up and rebroadcast your signal. Your instruction manual will tell you how to

program in this tone. The last page in this document will have a list of local repeaters and their tone squelch number.

Rules of The Road

Once you are able to get on a repeater, jump on in! How? After listening to ensure nobody else is using the repeater, just key the mike and announce your call letters. If anyone else is on, they will usually come right back to you. Don't hesitate to ask if there are any "special rules" for the repeater.

The general rules of the road are simple. Always listen for awhile before you talk to ensure you aren't barging in on another conversation, pause periodically in your conversation to see if anyone else wants to use the repeater, use good judgment on topics of conversation, and don't be a repeater hog.

In the course of your time as an Amateur, you will meet some real "characters". They may talk about inappropriate things on the air, they may push the limits on language, they may be "know-it-alls", and they may simply be ill mannered and rude. The time tested advice is to ignore them and don't talk to them. It's unfortunate that the distinguished history of Amateur Radio is missing in a few people, just don't let it be missing in you.

Elmering

In Amateur Radio, an "Elmer" is an adviser, teacher, helper, and friend who is willing to take the time to show you the ropes. "Elmering" is a time-honored tradition in Ham Radio. The most successful Amateurs usually had good Elmers and weren't too proud to take advice.

There are always the operators out there who think they know everything and won't accept help and constructive criticism. Don't be one! Swallow your pride and listen to the advice of your Elmer. Soon you will be Elmering others. It's our tradition!! Plus it's fun too! The last page in this brochure will contain names of "Elmers" you can call for advice.

Also, don't be afraid to ask your examiners for their contact info. The Volunteer Examiners who gave me my Amateur test are considered to be friends and Elmers to me. I seek them out at events to chat and am always glad to return their kindness. Likewise they show genuine interest in my progress as an Amateur.

Clubs

Another great way to meet other hams is by joining an Amateur Radio Club. There are usually local Amateur Radio clubs in or near every community. In most cases, examiners bring information on local clubs and the ARRL (American Radio Relay League) to distribute to new Amateurs. Local Amateur Radio Clubs (ARC) are listed on the last page of this brochure.

Besides "clubs" there are various "associations" such as the ARRL that enhance your operating experience. The ARRL helps protect our rights as licensed Amateur Radio operators in Washington and membership includes a subscription to QST Magazine. You can get more info from 147120.org and https://groups.io/g/Orlando147120Repeater Join the mailing list and you will have access to hams who can help and give advise.

Another group that supports traditional values and technical excellence is The Society for the Preservation of Amateur Radio or SPAR. For more information, see our website at http://www.spar-hams.com . SPAR offers Elmering help to new Amateurs.

Upgrading

Many other Amateurs may begin to ask you if you intend to upgrade your license. Upgrading to the General Class license offers operating privileges on frequencies below 30mHz. These frequencies are known to most amateurs as "HF" which is short for high frequency. While some entry class operators never see the need to upgrade given the many interesting modes available, many want to talk to amateurs in other countries and across the US.

The Technician class license offers privileges on 6 meters that (when band conditions permit) allow you to talk all over the world. As you study for an "upgrade" you'll learn about "maximum usable frequency" or MUF. It refers to identifying which frequencies are good for long-range communications based on time of day and propagation. HF privileges allow you to operate on frequencies where you are always able to find propagation to some interesting place, which is the reason many people upgrade to General.

The ARRL offers study guides for upgrading to General Class and some free course material can also be found on the internet.

Operating “Lingo”

Your Elmer can help you with learning the proper operating jargon. Many Amateurs who came into the ranks from the Citizen’s Radio Service (CB) bring their slang and terms with them. You should know that for the most part, Amateurs frown on the use of CB language or terms on Amateur Radio. The best advice getting started is to speak in plain English until you learn the proper “lingo” of Ham Radio.

General Attitude

One word on attitude. It is well to remember you’re entering a hobby/service where some Amateurs have been on the air for 70 years. You’ll be successful if you are patient and accept constructive criticism when given. Most Amateurs accept and welcome newcomers into the family and are willing to help you. If you have the attitude that you’re willing to listen and learn, you’ll be accepted much faster then if you exhibit a “know-it-all” attitude. Remember that in order to get respect, you must give respect.

Passing a test for any class of license is not a destination but a beginning. The test ensures that you know the minimum necessary to qualify for that class license. Most Amateurs spend their entire lives learning new things about the Amateur Radio Service. Just remember that the "ticket" does not make you an expert! It gives you the right to continue to participate and learn. With the proper attitude, soon you'll be hanging with the best of them. And you'll discover the true pleasure of being a real part of the Amateur family. Welcome aboard!!

Conclusion:

Don’t get frustrated with ham radio, ask help in several ways, 1) On Air, 2) Email, and 3) live meetings. If you are having trouble programming a radio you are not alone, even those who have been hams many years struggle with programming radios. Have an issue with an antenna or radio please use the resources listed at the end of this hand out to get help.

I do have a meet and eat the first and third Saturday of the month at 5pm at Keller's BBQ in Lake Mary all are welcome to join us. There are several nets on the local repeaters, and they are a great way to get to know the local hams.

The website www.147120.org has many resources so take a look and have fun with ham radio.

The 147.120 repeater is a community of Hams who love the hobby and are active in making ham radio fun. It is not a club, but a community. LMARS and WestVARS are local clubs that are active in the area.

Local Information

Communities covered by a close repeater:

Orlando, Sanford, Longwood, Oviedo, Mount Dora, Apopka, Bithlo, Winter Park, Deltona, Orange City, Lake Mary, Cleremont, Montverde

Local Repeater list:

147.120 Longwood
147.285 Lmars, Winter Springs
147.095 Altamonte Springs
147.165 Oviedo
147.255 Leesburg
146.760 Orlando
147.315 Deland
146.895 Eustis

List of local Elmers:

Tom KD4WOV kd4wov@earthlink.net

Email me for a List of Elmers

List of Local ARCs

147.120 Community https://www.147120.org
LMARS https://www.lmars.org
WestVARES https://westvares.org