Clark County Amateur Radio Club
New Member Information

Welcome

Welcome to the Clark County Amateur Radio Club (CCARC) and the exciting world of Amateur Radio. This document is intended as an overview of the many activities and options of the hobby.

The CCARC website (http://www.w7aia.org) is a wealth of Amateur Radio information. If you can't find your answer there, the Club has experts, called Elmers, that can answer your questions and start you down the right path. You can contact the Club via email at info@w7aia.org and it will be forwarded to the appropriate Club member for reply.

Amateur Radio

Amateur Radio is a hobby in which one person has the means of communicating with others. As a nationally recognized asset, amateur radio provides trained operators, technical specialists and emergency communications in time of need.

FCC Definition of Amateur Radio Service

"*The amateur and amateur-satellite services are for qualified persons of any age who are interested in radio technique solely with a personal aim and without pecuniary interest. These services present an opportunity for self-training, intercommunication, and technical investigations.*"

There are many modes of communications, such as CW (Morse code), phone (analog and digital) voice, slow scan TV, and numerous digital modes. Many hams talk only to other hams near them, while others talk to hams around the world. Whichever path you choose, Amateur Radio can be an educational, fun and exciting hobby.

Classes of Licenses

Technician – This is the entry level license. The Technician has access to all modes and frequencies above 50 MHz. and can also use voice on 10 meters from 28.300 MHz to 28.500 MHz with a power limit of 200 watts. CW privileges are also allowed on portions of the 80 meters, 40 meters and 15 meter bands.

General – A general class license can use all of the general class sub-bands from 1.8 MHz. and up.

Extra Class – This is the highest class of license. With this license you can use all of the HF bands from 1.8 MHz and up. You only have to stay in the part of the band that the mode you are using is allowed by the FCC.

Operating Techniques

There are many ways to use Amateur Radio today. All of the modes require a person to be aware and considerate of all the people that may be either listening to you or waiting to use the frequency. A good rule of thumb when start out is to listen 90% of the time and talk 10% of the time, whether you intend to transmit on a local 2-meter repeater or in the High Frequency (HF) bands. When transmitting on the HF bands, one must remember the whole world might be listening to what you say. Listen for some time before transmitting. The conditions of the HF bands are considerably different than on the VHF/UHF bands. You may be able to hear only one side of a conversation on the HF bands. Ask several times if the frequency is busy before calling "CQ" or calling another ham. Remember, you might be on the other side sometime, having a conversation with someone when another ham accidently interrupts your conversation. Be respectful to all others on the bands and treat them the same way you would like to be treated. Listening and adjusting to the established ways in amateur radio will allow a new ham to be accepted sooner. Remember, messages of a commercial nature are not allowed on amateur radio. Amateur radio may not be used to call a plumber to fix your pipes or call a commercial radio station to enter a contest.

If you want to join a conversation in progress, transmit your call sign between the other stations' transmissions. The station that transmits next should acknowledge you. Don't use the word "Break" as this word usually suggests an emergency. All stations are required to stand-by for those that have emergency traffic. This is true whether on HF, VHF or UHF. Hams refer to back and forth radio communications as "traffic".

If you have upgraded from the 11-meter (CB) band, leave the jargon behind. Many hams find CB "lingo" distasteful and scowl when it is used. There is no place on the ham bands where this "lingo" is acceptable. Talk plainly as if you are talking on the telephone.

Don't forget to announce your call sign every 10 minutes during a contact and at the end of each contact. Hams call the successful exchange between two radio stations a "contact".

Repeater Information and Operation

What Is A Repeater?

A repeater is a receiver/transmitter that listens for your transmission and re-transmits it. It is usually placed on a mountain top so it can cover more area. The advantage of height and power is to extend the range of your transmission. This is one way an operator can talk to another on the other side of the mountain. Without the repeater they would not be able to communicate. Of course, repeaters are not always needed to communicate on VHF or UHF. This is the preferred method for most hams when possible. Some hams make contact on a repeater before shifting to a simplex frequency

to finish their conversation. Repeaters listen on one frequency and transmit on another. The separation between these two frequencies is referred to as the offset.

What is Offset?

In order to listen and transmit at the same time, repeaters use two different frequencies. On the 2-meter ham band these frequencies are 600 kilohertz apart and on the 70cm band they are separated by 5 MHz. As a general rule, if the output frequency of the repeater is below 147 MHz then the input is 600 kilohertz lower. This is referred to as a minus (-) offset. If the output is above 147 MHz then the input is 600 kilohertz above. This is referred to as a plus (+) offset.

Here is an example of repeater frequency and offset:

The CCARC 2-meter repeater (W7AIA): repeater transmit frequency is 147.240 MHz and listens on 147.840 MHz. As an example, for the CCARC 2-meter repeater, you would set the receive frequency of your radio to 147.240 MHz, and you're transmit frequency to 147.840 MHz, at a plus (+) offset with a PL tone of 94.8. This allows your radio to receive the transmit frequency of the repeater.

Why Do Repeaters Use an Offset?

Most repeater installations use the same antenna for transmit and receive. Without an offset between receive and transmit the repeater would simply hear its own broadcast when it was transmitting on the same frequency. Even with the offset, the two frequencies are close enough that some isolation is required. Isolation is achieved by placing a device referred to as a duplexer, cavities, or cans into the coax lines. This is designed to pass a very narrow range of frequencies and reject others. The input duplexers are adjusted to pass only the input frequency and reject or "notch" all others out. The output duplexers are adjusted to pass only the output frequency. There is some loss to the system because the duplexers contain many parts such as adjusting rods, short coax lengths and connectors. However, the advantage of being able to use a single antenna outweighs the drawbacks.

CCARC Repeaters "W7AIA" Repeaters

> 6 Meter Repeater (Offset -1.700)
> 52.95- (tone 94.8) Yacolt
>
> 2 Meter Repeater (Offset +600kHz)
> 147.24+ (94.8) Livingston
>
> 1.25 Meter (220) Repeater (Offset -1.6MHz)
> 224.36- (94.8) Livingston
>
> 70 cm (440) Repeaters (Offset +5MHz)
> 443.125+ (94.8) Yacolt

443.825+ (94.8) C4FM Memorial Hospital
443.900+ (94.8) C4FM Larch
443.925+ (94.8) Livingston

23 cm Repeater (Offset -20MHz)
1292.50- (94.8) Livingston

CCARES Repeaters "K7CLL " Repeaters

Through the club repeater use policy, the Clark County ARES repeaters are also available for general amateur use when not being used by ARES.

1.25 Meter (220) Repeater (Offset -1.6MHz)
224.42- (94.8) Yacolt

70 cm (440) Repeaters (Offset +5MHz)
440.0125+ DSTAR Larch *(Gateway)*
442.9625+ DMR Larch *(on Brandmeister System)*

Repeater Etiquette

The first and most important rule is to always Listen First. It can be very frustrating when another operator "keys up" in the middle of another conversation. To enter an ongoing contact, wait for a pause in the conversation, simply announce your call sign and then wait for one of the other stations to acknowledge your call.

When you are using the repeater leave a couple of seconds between exchanges to allow other stations to join in or make a quick call. Most repeaters have a "Courtesy Beep" that will help in determining how long to pause. The courtesy beep serves two purposes, a repeater timeout function and as an opening that allows others to join in or make a call. Repeaters have a time out function that will shut down the transmitter if the repeater is held on for a preset length of time. This ensures that if someone's transmitter is stuck on for any reason, it won't hold the repeater's transmitter on indefinitely.

When a ham is talking and releases the push to talk (PTT) switch on their radio, the controller in the repeater detects the loss of carrier and resets the time-out timer. When the timer is reset, the repeater sends out the courtesy beep. By waiting to transmit until after the beep, you can be sure that you paused a suitable length of time after the "hang time". The length of hang time will vary from repeater to repeater but the average is about 2 or 3 seconds. It's not necessary to wait for the "hang time" to drop before keying up again, but you should make sure that you hear the courtesy beep before going ahead.

Note: If you don't wait for the courtesy beep and allow the time-out timer to reset, or run on longer than the timer is set for, you will time-out the repeater. The repeater will not function until you allow the timer to reset.

Basic Repeater Traffic Priorities:

1. Emergency and Priority Traffic
2. Emergency Communications such as CCARES/RACES & Search and Rescue
3. System Testing and Maintenance
4. Fixed Stations

Remember, nothing is private on a repeater. If you have something of a private nature to talk about, both parties need to use the telephone. Before you leave on vacations, DO NOT announce your intentions over the air. You never know who is listening to your conversation and is waiting for you to leave town.

In cases of emergency, hams should use the word "BREAK" between exchanges if the repeater is being used. By using the word "BREAK", you should be heard by the people using the repeater.

Above all, Be courteous, Kind and Helpful. This is a great hobby and everybody who uses the repeaters are human and should be treated the way you would like to be treated.

Here are Ten Steps for Repeater Operating Techniques:

1. **FIND** a repeater using the repeater directory. Avoid "Kerchunking".
2. **LISTEN** Familiarize yourself with its operating procedures.
3. **TRANSMIT** "(your call-sign) Monitoring" is all that is needed to attract someone's attention. Don't call CQ on repeaters
4. To **JOIN** a conversation in progress, transmit your call-sign between transmissions. Don't use the word "BREAK" unless it's an emergency.
5. **BE COURTEOUS** Acknowledge all stations wishing to use the repeater. Invite him or her to join in or make a short call to another station that may be monitoring the frequency
6. **PAUSE** between transmissions to allow others to join in. Wait for the "Courtesy Beep"
7. **BREVITY** Keep transmission short. This permits more people to use the repeater.
8. Always **IDENTIFY** at the end of each series of transmissions or every 10 minutes. You do not need to transmit any other stations call-sign. Just yours.
9. Use **SIMPLEX** whenever possible. Adhere to the band plan
10. **SUPPORT** your local repeater groups.

Repeaters are NOT A PUBLIC DOMAIN. Repeaters are installed by individuals or a group to support a particular purpose or activity and for the common interest of their owners. When you operate on them, you are actually operating through someone else's duly licensed and coordinated station.

Volunteers maintain repeaters and they do not get paid for this job. It would be a nice gesture to say thanks and tell them you appreciate their efforts. Above all, don't call one of these members and demand they fix a repeater that is not working. They more than likely know about the problem. The club's repeater equipment is supported by donations to the club's repeater fund.

Elmers

In Amateur Radio the definition of an "Elmer" is a person who is willing to help somebody else, a guide or mentor.

This help may consist of some or all of the following:

1. A demonstration of his ham station
2. Introducing literature pertaining to Amateur Radio to an interested person.
3. Helping a fellow ham choose the proper equipment and explain how it works.
4. Helping an interested person learn Morse Code, amateur electronic theory and applying for a new license.
5. Assisting with antenna support construction projects.
6. Teaching new hams how to work DX and what Contesting is all about.

How does a new ham get this help? Maybe you have a friend or neighbor that is a ham. Ask that person the questions you are thinking about. If not, you might want to turn to the Clark County Amateur Radio Club. There are many hams (Elmers) in the club that are willing to help you out. Club members help each other all the time with many kinds of projects.

Digital Radio

Digital voice

Digital voice modes encode speech into a data stream before transmitting it.

- APCO-25 (P25)
- D-STAR (Digital Voice - DV)
- C4FM (Yaesu's "System Fusion")
- DMR (Digital Voice with group and internet connectivity)

Morse code

Morse code is still used by amateurs. Operators may either key the code manually and decode by ear or they may use computers to send and receive the code.

Continuous wave (CW)

Modulated continuous wave (MCW) is most often used by repeaters for identification.

Image

- Image modes consist of sending either video or still images.
- Amateur television, also known as Fast Scan television (ATV)
- Slow-scan television (SSTV) • Facsimile

Text and Data

Most amateur digital modes are transmitted by inserting audio directly into the radio or into the microphone input of a radio and using an analog scheme, such as amplitude modulation (AM), frequency modulation (FM), or single-sideband modulation (SSB). They include but are not limited to:

- Amateur teleprinting over radio (AMTOR)
- D-STAR (Digital Data - DD) a high speed (128 kbit/s), data-only mode.
- Hellschreiber, also referred to as either Feld-Hell, or Hell
- Discrete multi-tone modulation modes such as Multi Tone 63 (MT63)
- Multiple frequency-shift keying (MFSK) modes such as
    - FT8, FSK441, JT6M, JT65 and Olivia MFSK
- Packet radio (AX.25)
- PACTOR 1, 2 or 3
- Phase-shift keying:

    - 31 baud binary phase shift keying: PSK31
    - 31 baud quadrature phase shift keying: QPSK31

    - 63 baud binary phase shift keying: PSK63
    - 63 baud quadrature phase shift keying: QPSK63

- Radioteletype (RTTY)

Combining Amateur Radio and the Internet

There are several Internet-based Amateur Radio applications using VoIP. Two of these are the Internet Radio Linking Project (IRLP) and Echolink. Both of these protocols are supported in the local area.

In effect, IRLP allows the linking of amateur radio repeaters to the Internet on a worldwide basis. Utilizing a series of control tones, an Amateur can "bring-up" any one (or more) of the hundreds of other IRLP enabled repeaters throughout the world. In

addition, "reflectors" exist which may be thought of as full-time party lines, which include many international participants at any particular moment.

The EchoLink® system allows licensed Amateur Radio stations to communicate with one another over the Internet, using streaming-audio technology. The program allows worldwide connections to be made between stations, or from computer to station, greatly enhancing Amateur Radio's communications capabilities. There are more than 200,000 validated users worldwide — in 151 of the world's 193 nations — with about 6,000 online at any given time.

As with all Amateur Radio modes, there are both technical and procedural aspects that need to be learned prior to beginning operations. Interested Amateurs are encouraged to join the CCARC Packet/Digital Group. To contact the group, go to www.w7aia.org and click on the Digital Group link on the left side of the page.

Packet Radio

A system that uses a computer to send out packets of information (in the AX.25 protocol) via Amateur Radio. Amateur radio, through packet radio, offers a similar capability as the Internet. The these systems utilize a network of amateur radio stations, connected using free radio waves, to transmit and receive digital information.

These radio networks provide:

1. Packet Bulletin Board Systems (BBS) to store and relay personal messages and bulletins; keyboard-to-keyboard connection for direct chat between amateur stations.
2. Mailbox (MBX) capability, often embedded in the TNC.
3. Access to the global Winlink system.
4. DX Packet Cluster systems to announce band openings and DX stations heard on HF bands.
5. RACES/ARES/NTS and Emergency Communications for life and safety messages.
6. Networking and computer file transfer.
7. Satellite Communications for worldwide station-to-station links.

Locally, the CCARC has a Digital Group which is started as a Packet Radio (and Winlink) group but it includes PSK31 and the other digital modes. It is an informal group with regular attendees often looking at, and possibly implementing, newer technology such as HamWan (HAM radio Wide Area Network), High Speed Multimedia Mesh (HSMM-Mesh), DSTAR, C4FM, and more as they become available. For more information on the CCARC Digital Group go to www.w7aia.org and click on the Digital Group on the left side of the page.

Automatic Position Reporting System (APRS)

APRS, first introduced by Bob Bruninga, WB4APR, in 1990, is a specialized subset of the packet radio concept. It has been developed as a tactical tool to allow the tracking and display of position and status information of both fixed and moving assets. For example, in a civic parade, it can show the position (and speed) of the lead car, the Mayor's vehicle, Aid and Fire units, the last vehicle, etc. In a Search and Rescue situation, it can show the Incident Command location, individual search team positions and the area that they have covered, containment points, etc. These locations and status information then can be transmitted and superimposed on city, street or topographic maps and displayed on multiple computer screens.

APRS differs from traditional packet in several important ways:

1. APRS uses an unconnected protocol; it is not error-free.
2. APRS activities are primarily local in nature.
3. APRS sometimes uses "digipeaters" to augment local coverage.
4. APRS can use the internet to allow remote viewing of local conditions.
5. APRS traffic is limited to position (GPS) status and very short messages.
6. APRS has a special category for weather reporting stations.
7. APRS (in the USA) shares one National frequency (144.390 MHz simplex).

While the APRS concepts are beautifully simple, the application of APRS concepts to local situations can be beautifully complex. That complexity can be fascination and any licensed Amateur can participate. For more information about Digital Radio, visit the following websites:

www.qsl.net www.nwaprs.org www.irlp.net www.arrl.org www.w7aia.org

Tuning Your Radio

One thing that is very irritating to hams is someone tuning or testing their radio on the air. Using a dummy load is the proper way to tune up or test your radio or amplifier equipment, since is uses a non-radiating resistor to dissipate the transmitters power. When tuning up on the air, your transmitter emits a tone that can cause interference on the band.

DXing and Contesting

The DX bug often bites the new ham quickly while operating on 10 meter CW. Lots of rare and exciting contacts can be made on this band as well as all the other HF bands. Many contacts can be made with modest power and humble antennas. Be mindful of changes in propagation and sunspot activity. One day you might not be able to communicate with fellow hams in the U.S. The next day you will be able to communicate with hams all over the world. Well-learned patience and operating skills are huge advantages and required when working DX successfully.

Spending most of your time listening makes you a successful DXer. When listening for a DX station, one should start at one end of the listening range and slowly tune through the range looking for a DX station. Depending on conditions, this may take a considerable amount of time. Listen for a signal hiding behind a stronger signal. Many DX stations are not able to afford the expensive equipment we use. They may be using very low power and small wire antennas. Their reduced signals are often hard to find. To make it easier for us to hear the DX station, the DX station may work split. This means this person will transmit on one frequency and listen to several different frequencies. His listen frequencies are those of his choosing and usually 5 - 10 KHz above his transmit frequency. Listening carefully to what the DX station says will help you to determine where he is listening. If you call on his frequency and he is working split, you will cause interference on his transmit frequency. This in turn makes others irritated and then results in 'on the air' conflicts.

Most DXers collect cards from the stations they work. This is called QSLing and the cards received from a DX station will confirm that you have worked that station. Awards are given for working over 100 different countries. Many other awards are available for those that are interested. DX websites include: www.qrz.com www.dxc.ve7cc.net/

Contesting is the act of making as many contacts with other amateurs as possible during a given period of time via Amateur Radio. Contesting is the challenge of competing against other amateurs, whether here or all over the world. There are many kinds of contests from Field Day to the ARRL International DX contest. Field Day is a competition among amateurs of the U.S. and Canada. It is aimed at sharpening our skills for operating and setting up equipment in times of need. The CCARC participates in this contest every year in late June. Other contests such as CQ Worldwide, ARRL International DX, and CQ WPX contest are competitions between the world and U.S. Hams. Some hams build contest stations where they have many hams operating during the contest. Some enjoy just contesting from their own station and by themselves. Some contesters are very serious about their hobby and others just contest to have fun. Points are made, scores are given, and trophies are won after the contest is over. There are many DXers and Contesters in Clark County that are active and available to help those that may be interested. If you are interested, contact the Clark County Amateur Radio Club.

DX and Contesting Terms

Dupe - In contesting: a duplicate contact on the same band
DX - Long Distance
DXCC - The ARRL DX Century Club awards program (See www.arrl.org)
DXPedition - A temporary operation from a location that seldom sees Amateur Radio activity EME - Earth-Moon-Earth or Moon bounce
Meteor Scatter - Communication by bouncing signals off the ionized trails of meteors
OM - Old Man - referring to a male operator of any age
Pileup - A chaotic situation that occurs when many stations are calling a station simultaneously

Shack - A room where Amateurs keep their radio equipment
Vertical Antenna - An Omni-directional antenna
XYL - Ex Young Lady - refers to a married female
YL - Young Lady - refers to a Young Lady or unmarried female
Yagi - A beam or directional antenna, usually rotatable and multi elements
73 - Best Regards

Rag Chewing

Rag Chewing, the art of carrying on an interesting conversation with other hams. This aspect of our hobby has been honed into a fine art by hams. Most of them probably assemble on 75- meter phone, but they can be found on most bands. Subjects are limitless, but traditionally hams avoid politics and religion, except those that are interested in starting conflicts. Many rag-chewers gather in groups (net), taking turns with their assertions and opinions. Much can be learned from listening to and taking part in these chats. Opinions on the quality of various amateur products, methods of antenna construction and performance, new electronic data, weather info, and DX opportunities can be very useful information. Even DX'ers can be found rag chewing now and then. Many hams set schedules with each other to rag-chew.

Try to resist the temptation to editorialize. Nothing sounds worse then someone who has all the answers, regardless of the question.

Conflicts

If you ever become involved in or hear an "on the air" conflict or argument, keep your comments to yourself. Making comments, even if you are correct, just drags you into the conflict. There are a few hams that get into a conflict on purpose and want nothing more than to involve you. This is a game with them, something like those people that create viruses to be placed on the Internet. Do not insert your opinion about somebody's bad conduct. It only adds to the problem. Ignoring them is the best policy. If they don't have someone to argue with, the argument is over!

Some new hams slip into their old, comfortable terminology from the CB radio. I have heard other hams berate someone for using terms such as "standing by on the side" or "10-4". Hams do not use the 10-code, but no one is served by making somebody feel foolish on the air. Hams should lead by example and not by "dragging others over the coals" on the air.

Listen to other hams on the radio and don't be afraid to ask questions. By listening you can avoid conflicts. Most hams remember all to well what it was like to press that PTT switch for the first time. We are all human.

Emergency Communications ARES/RACES

Clark County ARES/RACES is a volunteer organization of FCC licensed Amateur Radio Operators whose major purpose is to provide county-wide emergency communications. This is a dual organization. It can operate as Amateur Radio Emergency Services (ARES) or as Radio Amateur Civil Emergency Services (RACES). Which role the organization takes depends upon the particular emergency or disaster situation.

ARES provides emergency communications for non-governmental organizations (public and private) and local governmental agencies in times of "non-declared" emergencies or disasters. Operation is governed by this ARES/RACES plan, which is interfaced with the Clark County Comprehensive Emergency Management Plan and the Washington State RACES Plan. A secondary purpose of ARES is to provide non-emergency, public service, communications for county agencies or other qualified organizations at the discretion of ARES officers.

RACES on the other hand, provides emergency communications for governmental agencies only, during officially "declared" emergencies or disasters (usually declared at the county, state or federal level). Operation is governed by the ARES/RACES plan, the Clark County Comprehensive Emergency Management Plan and the Washington State Radio Amateur Civil Emergency Service (RACES) Plan.

The purpose of this plan is to provide guidance, establish responsibility, and ensure coordinated operations between Clark County Emergency Management Officials and the ARES/RACES organization during times when there are extraordinary threats to the safety of life and/or property. Maximum benefits from the ARES/RACES organizations having emergency responsibilities to include the ARES/RACES organization in local emergency plans and programs.

To learn more about the Clark County ARES/RACES group go to their web site at www.ccareswa.org .

Direction Finding

Direction finding: the art of locating a radio signal. Different uses for this art include recreational hunts, competitive hunts and transmitter locating (serious when needed). It has been used to find an errant transmitting device, people purposely causing interference, searching for downed aircraft and just fun. While a special antenna and an attenuator unit, which lowers the received power will be useful there are simple methods that can be used for recreational hunts.

Other Systems

There are many other ways to participate in amateur radio; Radio Teletype, Slow-scan TV, Satellite, CW, and Moon bounce to name a few. If you are interested in any or all of these just contact the CCARC and we will help you get started.

Public Service Event Communications

"Public Service Event" is a term coined by radio operators that refers to activities where the public is in attendance as observers and/or participants. They include sporting events such as marathons, bikeathons, boat races, walkathons, and parades to name a few. These are all affairs of a preplanned, non-emergency nature. Hams are, of course, well known for their communications support of relief agencies in disaster and post-disaster situations. They also provide a plethora of communication services on a "preventive medicine" basis to the public during special events and put on Amateur Radio demonstrations and displays, beneficial to Amateur Radio's public image.

Special events are normally help for the enjoyment of the public and often draw large crowds. They provide golden public relations opportunities for radio amateur who provide support communications on a complimentary basis. They make our activities visible to non-amateurs. They sharpen our operating skills, and help justify our existence. Besides, operating special events is just plain fun!

Volunteers are the lifeblood of special events communication support. Their abilities and accomplishments determine the ultimate success or failure of our group's work. How amateur radio volunteers are accepted depends on their establishing a track record of competent performance in important activities. It begins with convincing officials that amateurs offer a cost-effective substitute for functions previously paid for by the taxpayer. Local radio amateurs also must demonstrate that they are organized, disciplined and reliable and have a sincere interest in public service events.

Clark County Amateur Radio Club (CCARC)

The CCARC is a non-profit organization made up of Amateur (Ham) Radio Operators and others interested in the many aspects of radio communications. Originally established as the Vancouver Radio Club in June 1930, it became the Clark County Amateur Radio Club on May 1, 1951.

Public Service is a major part of our club activities, and with the exception of WW II, (1941 – 1945), the CCARC has been very active in the local community. Through volunteers, we provide communications for many local events. By providing these communications, we contribute to the safety of the participants. Local organizations contact the CCARC and invite us to participate.

Many of the CCARC members also participate in the Clark County ARES/RACES organization. They work alongside of public service agencies, both local and state, to provide communications when the established systems fail.

Another service the CCARC provides to support Clark County disaster situational awareness is the EYEWARN program. This program is open to all hams in Clark County. The information gathered is provided to the Clark Regional Emergency Services Agency (CRESA - our local EOC) or other requesting official. There is no

membership requirement to participate in the EYEWARN nets; it is open to all licensed hams. For more information on the EYEWARN program, visit www.eyewarn.net .

CCARC Meeting Times and Location

We invite you to join us at our monthly meetings, normally held the first Friday of the month. A social get together starts at 6:30 PM with the meeting from 7:00 PM – 9:00 PM.

We meet at;

Salmon Creek American Legion
14011 NE 20th Avenue
Vancouver, Washington

CCARC Membership and Contact Information

Clark County Amateur Radio Club

P.O. Box 1424 Vancouver, Washington 98668

CCARC Hotline: 360-989-9268

Email: info@w7aia.org

Membership

General Adult Membership $15.00/Year

Student (under 18) and Senior (60+) $12.00/Year

Family Group Membership $20.00/Year

With membership you will receive our monthly newsletter

"The Rocking Chair Copy"

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