



## CHECK YOUR SWR

# Western Washington Repeater Association

PO BOX 1001, Silverdale, WA 98383-1001

VHF 146.620 MHz & UHF 442.650 MHz Repeaters (tone 103.5 Hz)

# 2005 NEWSLETTER

This newsletter is designed to provide the Membership with information in addition to functionally support and provide det administrative and technical aspects of our repeater system. If open space is available Members who desire to contribute articl amateur radio related subject matter, such as your field day experience, must contact Bob, KC7DRQ no later than June 30<sup>th</sup>

### Your WWRA Working Staff

Bob Williams	KC7DRQ	President	360 692 7098	<a href="mailto:wwra@telebyte.com">wwra@telebyte.com</a>
Drake Evans	KD7GAR	Vice President	360 479 6855	<a href="mailto:draevans@comcast.net">draevans@comcast.net</a>
Terry Christiansen	N7YZX	Secretary	360 876 6330	<a href="mailto:wwra@telebyte.com">wwra@telebyte.com</a>
Bill Hurd	N7YT	Treasurer & Ops	360 692 7101	<a href="mailto:n7yt@arri.net">n7yt@arri.net</a>
George Carr	N7GME	Chief Operator	360-876-6330	<a href="mailto:n7gme@arri.net">n7gme@arri.net</a>

### BOB, KC7DRQ PRESIDENT'S CORNER



**Curt, W7CLL** receives a certificate of appreciation for his presentation on the construction of J-pole antennae. Curt gave a very comprehensive presentation on this subject that covered just about any band you like. His presentation included 140, 220 and the 440 bands. If you missed this meeting then you can still find a copy of Curt's schematic on the WWRA website under the ARCHIVE & TECHNICAL button. We are most grateful to Curt for his sharing of this very popular antenna. Thanks Curt.

**THANK YOU:** The entire staff and I would like to acknowledge the time and money expended by **Mike, WA7NY** and his lovely wife for providing the refreshments at our general meeting. They refused a reimbursement from the WWRA so they essentially made a very generous donation to our association. Thank you.

**OUR LAST GENERAL MEETING:** If you were in attendance at our meeting you were part of a large group, over 55 members showed up, packed into a room at the Sylvan Way library that had been reduced in size by 1/3. We have had meetings at this location over the years and were very surprised to find out that it was still under construction when we arrived.

**OUR NEXT GENERAL MEETING:** In any case we are having our next meeting at a different location at the EAGLE'S NEST across the street from the Kitsap County Fairgrounds. Directions are the last page of this letter and can be found at our website at <http://ww7ra.org/Minutes/00NextWWRAGeneralMeeting.pdf>

**30-year WWRA Anniversary in 2006:** In 1976 a group of ambitious hams got together and founded the WWRA. See our website for the charter members, history and founding documents. In recognition of their efforts your current board of directors is working on marking this 30-year anniversary at the 2006 general membership meeting. It is not too early to start thinking about it and sending us your ideas. One of the things we plan on doing is tracking down all the **CHARTER MEMBERS** and sending them special invitations. It is commendable to note that four are still active members of the WWRA so we will be paying a special honor to these in particular and all the charter folks in general. So please let us know what you would like to see for this important milestone.

### MEMBERSHIP OWNED REPEATER SYSTEM:

#### Who do we expect to become WWRA supporters?

1. Any licensed amateur radio operator who uses the system on a frequent basis. In other words, we hear them on there at different times over a week or month chatting with their friends.
2. Any licensed amateur radio operator who relies on the repeater system to make contact with other stations at the time of his/her choosing.
3. Any licensed amateur radio operator who on occasion relies on and expects that the system will be up and working for his or her use so he/she can contact their friends for a QSO on the repeater or shifting to another frequency.

We welcome transit stations and stations who check out the repeaters in the local area however if they continue to use the WWRA system then we do expect them to become supporting members.



**Audit Committee** – We especially want to thank **Rob, KE7AMR** and **Mike, W7CO** [photo to left] for providing their time and effort into double-checking the administrative and material condition of our repeater system. You can hear their report at the next general membership meeting.

**DONATIONS:** Once in awhile we have been offered some money to help fix a repeater problem. At one of the general membership meetings members were asking if they could help more. We appreciate that but we don't feel comfortable taking money that way. What you could do is to pay for a membership two or three or as many years as you want in advance. That way it is properly documented and you are signed up for as many years as you desire. Thank you all who have made these type of offers.

**RESIDENT EXPERTS:** If you have any questions about the repeater ask one of the CONTROL OPERATORS and not the "resident expert".

**Bob, KC7DRQ, WWRA President**

### VICE PRESIDENTS COMMENTS

**SUBMITTING IDEAS:** We are all ears. We recently had an individual wanting to install a packet station on the hill. A commendable idea however this project would require getting permission to install an additional transmitter on the hill. At the last general meeting I went through great pains to allow time for any Member to volunteer for any office including the OPERATIONS COMMITTEE. If you have an idea then that is the place to START.

**Drake, KD7GAR, WWRA Vice President**

## **CHECK YOUR SWR** **TERRY, N7YZX - SECRETARY'S MINUTES**

**THANK YOU:** We have an unusual group of supporters that do not live within range of the repeaters but use them in their daily travels nonetheless. I think it important to thank these individuals so I would like to once again recognize and thank the community of truckers. They are on mostly in the evenings and early morning hours. Rich, **KD7NVB** - William, **KD7RAW** - Adam, **KD7TQX** - Randy, **KD7UXY** - Blaine, **N7NJO** and is XYL, Evelyn, **KD7YZO** - long time Member Rick, **N7YQU** - Steve, **W7HDO** and his XYL Ruth, **KE7CZX** - Mike, **WA7YNY** - Brian, **KD7WKT** - John, **W5JJP**. One other point I would like to say is that there are some other truckers who use the 62 routinely and I would invite all who chat with these gentlemen to encourage them to help support the repeater also. I have personally sent invitations to these gents. Thank you all.

**WEBSITE:** <http://www.wv7ra.org> Make sure you have a copy of Acrobat reader program to read the attached files. Free download at the site. The maintenance of our website is labor intensive and is done for you, the WWRRA Membership. All information is dated so that you can easily tell what is new and how long it has been on there.

**QRZ:** <http://www.qrz.com/callsign/WW7RA?>

**WWRRA SOUVENIRS, MEMORABILIA & GIFTS** for sale on our website at <http://www.cafepress.com/wwra>. We were fortunate enough to enter into a good deal for the repeater. We did not have to invest a penny of the WWRRA's money into setting up this site. After the Café Press company gets their costs the WWRRA gets the profits sent directly to our Treasurer. So please go on the website and load up for christmas and birthdays so our repeater will be supported via this method of fund raising.

**RECRUITMENT of MEMBERS:** I have had this job for about 6 months and monitor the repeaters for call signs and continuous users as described above in his article "who do we expect to support the WWRRA repeaters" by Bob, **KC7DRQ**, our president. I was told to send requests to all of these type of users. Some have been very good and joined. If you regularly talk to a friend who is not a supporting Member keep in mind that your membership is for you. Unfortunately, we cannot afford "extended family" memberships for buddies. Please help.

**CODE CARDS:** The card you receive from the WWRRA is not a membership card but actually a **CODE CARDS**. The only reason for sending you a card at all is so that you will have a convenient way to carry the WWRRA codes around with you.

*Terry, N7YZX, WWRRA Secretary*

### **BILL, N7YT - TREASURERS REPORT**

**MEMBERSHIP RENEWALS:**

1. To help ease our administrative work we ask you to renew by 31 December annually.
2. Speed dials turned off 30 days after 1 January due date. So you have a 30-day grace period. Your last chance will be to renew at the meeting so if you don't make the meeting send them in. Reprogramming these numbers will not automatically give you the same number you previously held so if you have them programmed in your radios this will generate more work for you.

**DUES:** WWRRA dues are \$20 and are due on 1 January annually. If you use the repeater please become a Member. The WWRRA repeater is open to all. Member owned and with your financial support we are able to maintain a working repeater system. Thank you very much for your support.

*Bill, N7YT, WWRRA Treasurer*

### **GEORGE, N7GME - OPERATIONS COMMITTEE UPDATE**



At our last meeting we had a line of volunteers to help out on the ops committee. We got a lot of work done. We want to acknowledge Ed, **KD7YRW** [left] Kevin, **WQ1B** [right] for donating their time, talents and equipment to make our repeater system the best there is. Ed used his noise measurement equipment to do a sweep of both our VHF and UHF coaxes that run between the repeater transmitter/receiver and antennae. Kevin brought his ISO-T connection and demonstrated to us how to use our new Motorola Communications receiver to check for various anomalies and/or defects in our system. We thank both of these gentlemen for their time. Mike, **W7MKY** spent his own money and spent several hours to build a test harness for use with the Motorola test gear. Thanks Mike.



**ERROR 200 series REPEATER MESSAGES:** When you press your Push To Talk (PTT) button you are also pressing one of your DTMF buttons on the microphone. Your announcement sounds like this. **This is K9XYZ ERROR Two Zero Zero.**

**CONTROL OPERATORS:** Bill, N7YT-George, N7GME- and Joe, W7COM..

**MEMBERSHIP LOCAL & LONG DISTANCE SPEED DIALS:** Individual speed dials for Members will be issued only upon request from a Member. Send us an email at [wwra@telebyte.com](mailto:wwra@telebyte.com) or a postcard or just call anyone of the officers and we will respond. Some items to be aware of:

1. For years many of our fellow hams did not have access to the auto-patch because they lived out of the local Bremerton telephone exchange area. We have subsequently made this service available so these hams so they can have the same capability as the rest of us.
2. Although you can use it for any long distance within the U.S. you desire it was not conceived for you to call long distance and rag chew with your buddy about something that could easily done from your home phone line.
3. Carefully read the instructions we included with your code card.
4. If your buddy wants a speed dial we do not take requests from you for your buddy. Your buddy needs to contact us directly. Thank you.

**SITE VISITS:** We would love to show off our repeater site to you however we are restricted to WWRRA work only.

**COMMON AUTOPATCH MISTAKES:** When you have a four-digit SPEED DIAL you DO NOT NEED to bring up a the auto-patch dial tone, just press the four numbers and it will do it for you. The other common mistake is we hear lots of broken or bad signals from HT's or mobiles with bad SWR. Try using the keypad test utilizing the "72" code located on the back of your membership card. It will tell you whether the repeater is hearing your digits okay. Many of you get frustrated because the auto-patch does not seem to be working. In most situations it is your signal and procedures that are preventing you from having a successful connection. Frequently asked questions (FAQ) from many users are usually already in their possession. We go through an effort to ensure that instructions to operate the auto-patch are included with the speed dial and more often than not the recipients don't even bother to look them over closely and in many cases lose them outright.

**CALL SIGN IDENTIFICATION REMINDER:** Our repeaters have large coverage areas. Start your QSO's by first calling another station followed by your own callsign. That is the polite and proper way to use the WWRRA repeaters. Additionally the repeaters ID every 9.5 minutes to remain within FCC guidelines and as a reminder to us

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during long QSO's. A good way to operate is when you hear the repeater ID then you should quickly do it right after that then you are covered under the FCC regulations for station identification. Also when using the auto-patch please use the proper procedures outlined in the Ops Policy and ID the station you are calling through which is the WW7RA repeater and your own call sign. Additionally as a good operating policy all users should repeat the call signs of stations that they are having a QSO with. In response to a request from a long time Member for a few days this past summer I paid particular attention to users pronouncing their call signs. Some were barely understandable and in some cases if I did not know the user I would never have been able to decrypt the call sign. Once I asked a station for the call sign of a station they just signed off with and they could not even remember the call. Try to get in the habit of announcing the other station you are talking to. It is a good voice communications practice.

**APRS ... Accuracy, accuracy, accuracy...** Our ham hobby of **Automatic Position Reporting System (APRS)** has received another boost. This probably the best thing since our government got rid of Selective Availability (SA). Development of a new combination Global Positioning System (GPS)/ Wide Area Augmentation System (WAAS) / LOnG RAnge Navigation (Loran) system has been initiated by government studies that identified the need for a robust backup for the very popular and widely used GPS plus the need for enhanced navigation accuracy for the marine and aviation communities. Since 9/11 our space based satellite GPS has apparently been deemed vulnerable and the government wants to incorporate some reliable features of the old Loran system with GPS. Golly I said, I am glad I save stuff, but don't bother to drag your old Loran Charlie gear out of the box. The new Loran system will be much improved with new

transmitter equipment, improvement in overall timing accuracy for all transmitters and the development of highly improved Loran receiver technology including combining it with GPS and your old gear will probably not be compatible. Bummer, but oh well technology moves on. The position information derived from Loran signals depends on the accuracy of signal timing among the transmitters and local terrain-induced effects of on signal propagation. The timing problem that heretofore limited ultimate accuracy has been eliminated in the new system in which all stations are precisely synchronized to Greenwich Mean Time (GMT). The local terrain induced issues can be reduced or eliminated by identifying these local reception performance problems and compensated for by use of terrain modeling as was accomplished during tests in Tampa Bay when distortion effects of the Sunshine Skyway Bridge were identified and compensated for. Since GPS and Loran systems



operate on widely different frequencies they provide a complimentary solution to the need for uninterrupted navigation data. The relative strength of the Loran signals makes it very difficult to jam. Combining the two navigation systems provides an always-on solution. This new system will provide accuracy comparable with DGPS and probably even better than WAAS. Remember that Differential GPS (DGPS) is land based, operated by the USCG, and is highly accurate if you are close to a transmitter and Wide Area Augmentation System (WAAS), operated by the FAA, is space based [DISPLAYED IN PICTURE AT LEFT is indicating USING WAAS] and since the birds are in low orbit near the horizon they may not always be seen in hilly terrain. Both DGPS and WAAS were placed in operation to further refine the accuracy of the overall Global Positioning System. Remember the new GPS/WAAS/Loran system is designed to provide robust redundancy. The new system has some added benefits to the end users making it worth the additional investment.

Specifically, Loran penetrates into areas where wide area sky coverage may otherwise be limited by geography and foliage. Like around here. Secondly, this new GPS/WAAS/Loran system will give us heading to less than a degree of accuracy while stationary. Currently in order to get heading with GPS you need to move from point A to point B for the GPS receiver computer chip to figure out what heading your on. Not with the GPS/Loran receiver. Additionally, the need for the familiar long "E" field 6-foot Loran whip will be reduced down to an "H" field antenna improving the Loran receiver's immunity to the electrical static produced by lightning storms. The Loran antenna will be similar to the current dome like GPS antennae allowing both antennae under one dome. No complicated user controls for the Loran receiver as Loran signals from thousands of miles away will contribute to the accuracy of the position data extracted by the receivers. And finally the end user will have a GPS/WAAS/Loran receiver only as complicated GPS now in use with added benefits. This new enhancement is what the SAR communities have really expected ever since GPS first came out some 15+ years ago. We could discuss accuracy here but it will be better than 8 feet now obtained by WAAS or DGPS configured receivers. It is anticipated the first units will be in three pieces but follow-on units will be two, receiver and small dome antenna.

So the government is looking to make the system more robust and at the same time it is providing us with these extra features. For us in western Washington it is a win-win because we are in a coastal area where Loran will be maintained. Even in eastern Washington Loran is strong due to a Loran Master station located at George providing coverage for the Hanford Reach on the Columbia River. For APRS users all we have to do is ensure that we have a good SWR match since we share a single simplex frequency. From the look of local APRS tracks many APRS users think because they get into a repeater they are automatically transmitting good APRS signals. This is not always the case. Check your SWR, as you could be one step away from having an electronically properly operating station.

**MALICIOUS INTERFERENCE** If we ever have interference the following is what you should do when that idiot gets on our repeater.

1. DO NOT talk to him/her.
2. DO NOT acknowledge this type of behavior in any way.
3. DO NOT make comments to your ham buddies during your QSO about him/her or reference a hint of interference in any way.
4. DO NOT acknowledge if he interferes with your QSO just sign off normally giving absolutely no recognition to him/her. Normally, his/her signal is down in the mud and most QSO's can continue without interruption. You will hear him/her when you unkey.

*Anything you do in the way of an acknowledgment will merely provide the perpetrator with encouragement.*

**WORKLOAD UPDATE:** Programming our controller is just like programming a DOS computer. One string at a time. Just insert a disc and the software loads itself. Nothing could be farther from the truth. Our controller requires many hours of reading the manual and punching in lines of programming strings and hopefully having it work. We then make corrections as necessary. After we achieve success in one set of programming modules we save it in case we have a major malfunction. Bill and I have worked on this equipment for the past 5 years and have found out that nothing ever falls into place the first time. So far this year we have taken measurements as indicated above, overhauled the VHF amplifier, installed a new VHF amplifier, replaced the CPU in a TNC, and installed more lightning protection on the Digipeater and some other work. We thank you for your patience and continued financial support.

*George, N7GME-WWRA Chief Operator*

