Watts News

Monthly Newsletter of the Olympia Amateur Radio Society

June 2017

Contents

Club Information Page

OARS Officers			
President	Bruce Montgomery	WA7BAM	259-9300
Vice President	Dennis Niles	WV7S	(808) 283-3208
Secretary	Rue Palmer	W7RUE	790-5633
Treasurer	Ed Fitzgerald	N7WW	491-2289
Member at Large	Art Taylor	KL7SK	578-0162
Key Contacts			
RFI Committee	Ghery Pettit	N6TPT	867-0756
Repeater Committee	Fred Baker	W7SIX	791-2444
Repeater Committee	Ken Dahl	K7TAG	534-9357
Club License Trustee	Duane Braford	WB7ROZ	412-1902
Information Net	Lee Chambers	KI7SS	951-2538
ARES Net	Tom Bohon	KE7EJJ	456-6260
Web Site	George Lanning	KB6LE	438-5797
Newsletter	George Lanning	KB6LE	438-5797
Classes	Lee Chambers	KI7SS	951-2538
License Exams	Klaus Neubert	AC7MG	280-2428
Equipment Custodian			

OARS Website: www.olyham.org

OARS Facebook Page: https://www.facebook.com/ARRLOARS/

License Exam Sessions

6:00 pm before each monthly OARS meeting
Walk-ins allowed
To apply contact Klaus Neubert 280-2428
oars-ve@comcast.net

In an effort to provide the best testing environment possible, the examiners request non-candidates remain outside for the duration of the exam session.

—Thank you.

Membership Application

❑ New ❑ Renewal

Date	
Call	
Name	
Address	
City, State	
Home Phone	
Cell Phone	
email	

Annual Dues: $ 50 single or family
Pay to Treasurer at any meeting, or mail to:

OARS
PO Box 2861
Olympia WA 98507

OARS Net Check-ins

The following stations checked in one or more times in May on the OARS General Information Net:

KI7SS *	KB7HPP	KI7FKQ	NX6W
AC7MG	KD7PLJ	KI7LXM	W6EGV
AD7KC	KD7SQU	KL7SK	W77BRR
AF7IO	KD7TQW	N6TPT	W7RUE
AG7BA	KF7KJI	N7GQP	WA7BAM
K3AL	KF7VWA	N7ITT	WA7SH
K7AU	KG7CCE	N7TLF	WA7SH
K7HTZ	KG7HBE	N7WW	WB7QEU
K7TAG	KG7VQP	NU7D	WC7I
KA7FRZ	KI7CQ	NW7J	WV7S

* Net Control Station

The net meets at 7:30 every Tuesday evening on the 3 linked OARS repeaters: 147.36, 224.46, and 441.40 MHZ. All Hams are invited to check in.

President's Message

Importance of Field Day

Memories of field days past are many and fond. Last years first contacts on 160 meters or the year before's scramble to drop antennas as a lightning storm approached come to mind. Before that I was new enough I enjoyed the coaching from experienced operators on how to be rude (so I thought) and announce our call sign into a pile up when others were already talking.

But Field Day is one of the most important and fun radio events each year. It demonstrates ham radio's science, skill and service to our communities. Field day also permits the largest demonstration of experimental antennas, portable equipment and alternative power sources of the year. Education by hands-on doing is unparalleled. It combines public service, emergency preparedness, community outreach, and technical skills all in a single event. Field Day has been an annual event since 1933, and remains the most popular event in ham radio.

Field Day is always a challenge but this year may be memorable. The solar cycle is at minimum and HF propagation has been spotty. Digital and CW may help but I've even seen those signals fade to nothing in seconds. We will need luck as well as the great collective skill and knowledge of our members.

Additionally, we need you! Setup will begin in earnest at 11 am Friday, June 23. The actual event begins at 11 am Saturday, June 24 and ends 11 am Sunday June 25. But the project is never done until it is cleaned up. The address is 8901 Rich Dr SE, but looking for the yellow house on the southwest corner of 89th and Rich Rd in East Olympia will get you there better than mapping programs.

Other musings:

The most recent QST announced the start of a new website: ElmerCQ.com You can sign up as an elmer and also go there to find help you need.

Such an important part of the amateur radio hobby — I wish I had thought of the idea.

Contest information is available at http://www.hornucopia.com/contestcal/ with links to the contests home page.

Contribute to this newsletter. If you have an expertise or friendly radio related story, consider writing and send it to George, KB6LE@ARRL.net.

Invitation to present the education program at an OARS meeting: If you have a topic others might be interested in, consider presenting it to the group. Powerpoint presentations can work as can physical demonstrations that can be projected on the wall. Or bring in radios, antennas, experiments that have worked or failed. How-to demonstrations such as soldering would be invaluable.

Show us your station presentation at an OARS meeting. From boat anchors to the most modern equipment would show the variety of ways to enjoy our hobby. Topics could range from general station layout, invisible antennas, managing the wire mess or anything you think could show a unique approach to problem solving.

73

Bruce, WA7BAM

Treasurer's Report

As of May 1, 2017

GENERAL FUND (checking account)

Previous balance	$ 2,188.82
Income	250.00
Expenses	510.00
Ending balance	1,928.82

REPEATER / PACKET FUND (savings account)

Previous balance	$ 1,052.74
Income	0.00
Expenses	0.00
Ending balance	1,052.74

— Ed Fitzgerald, N7WW, Treasurer

Grounding and Bonding for the Radio Amateur Now Available

04/11/2017

Grounding and Bonding for the Radio Amateur by Ward Silver, N0AX, is now available from ARRL. Proper station grounding is important! Build your ham radio station with effective grounding and bonding techniques for electrical safety, lightning protection, and RF management.

Grounding and Bonding for the Radio Amateur shows you how to make sure your station follows current standards for lightning protection and communication systems, not to mention the National Electrical Code. You'll learn effective grounding and bonding techniques for stations in a house, condo, or apartment, for portable and temporary situations, and for towers and outdoor antennas.

Grounding and Bonding for the Radio Amateur is available from the **ARRL Store** or your **ARRL Dealer**. (ARRL Item no. 0659), ISBN: 978-62595-0659, $25.95 retail, special ARRL Member Price $22.95). Call 860-594-0355 or, toll-free in the US, 888-277-5289. It is also available as an **e-book** for the Amazon Kindle.

ARRL Field Day Site Locator is Live for 2017, Public Service Announcements Available

05/02/2017

ARRL Field Day is June 24-25. The **Field Day site locator** is now up and running, and, to date, around 400 sites already are in the database. To find a Field Day site near you, type in your town and state in the "Location or Call Sign" box at the upper left. Listings also are available by state or Canadian province. To add a site, visit the **Add Field Day Station** page.

The 2017 Field Day public service announcements (PSAs) for event publicity are now available in audio or video formats. There are two versions of each — "**national**" (generic) and **local** MP3 audio spots, and **generic** and **local** MP4 video spots. The local versions have room at the end for clubs to add a tag that includes contact information. Each spot is 29 seconds.

Please **notify** the ARRL Public Relations Department, if you are able to place these PSAs for radio, TV, or cable system airtime. See May *QST*, page 93, for the Field Day announcement.

— ... —

Revised June Ceremony

A bit too much TV perhaps?

A grandmother overheard her 5-year-old granddaughter "playing wedding."

The wedding vows went like this:

"You have the right to remain silent, anything you say may be held against you, You have the right to have an attorney present. You may kiss the bride."

— ... —

LOTW – the gift that keeps on giving

The ARRL's Logbook of the World is a great example of the changes I have seen as a Ham first licensed 55 years ago as WV6RIL. The program allows you to upload your log to a secure server that matches your contacts or "QSOs" with others who have done the same. Think of it as a digital QSL card. But unlike hard copy cards (which you may still want) LOTW offers virtual and often instant gratification. Here's one example. Say you log a juicy DX contact but due to poor conditions you are unsure if the other op got your call right. LOTW will confirm the contact as soon as the other station uploads his (or her) logs, often within days if not hours after the contact;

not months or even years before a printed QSL card might show up in the mail. LOTW confirmations or “QSLs” may be used for DXCC credit if like me you’re into that sort of thing. The only cost is membership in the ARRL.

Use of LOTW is growing, especially contacts using digital modes such as JT-65. Now when I check LOTW every few days I will find QSLs for most of my recent contacts as well as a few from long ago when I was active as KH6XT. This month, for example, I received confirmation of a February 2000 10 Meter QSO with RZ3DX in Moscow. LOTW definitely adds to the enjoyment of chasing DX!

—Denny Niles WV7S

Growing the Ranks vs. Growing the Enjoyment

By Dan Romanchik, KB6NU

Because I teach amateur radio classes and publish a series of popular amateur radio license study guides (www.kb6nu.com/study-guides/), I often get kudos for "growing the ranks." In fact, Gordon West, WB6NOA, told me this just last week, when he stopped by the booth I was in at the Dayton Hamvention. I’m paraphrasing a little, but after telling me that he’s heard good things about my study guides, he said something like, “You’re doing good work in helping get more people into ham radio.”

People say that as if this is—or should be—the ultimate goal of teaching a license class. While this may be one of the goals, if that’s your primary goal, I think that you’re barking up the wrong tree.

In a way, creating more hams is selfish. If there are more licensed amateur radio operators, they say, then amateur radio will have more political clout with the FCC and with Congress, making it easier to pass legislation like the Amateur Radio Parity Act. While this may certainly help the new ham down the line, its main thrust is to reduce restrictions on those who are currently hams.

My goal in teaching amateur radio classes isn’t to create more hams. Instead, my goal is to help more people have fun with ham radio. The first step in helping people have fun with ham radio is, of course, helping them get their license. I do that by publishing my study guides and teaching ham classes.

The next step, and I’m only really getting started on this right now, is to help people learn what they need to know to become better ham radio operators. That’s why I got a little excited when I saw the article, “Making a Good hobby Better Through Post-Licensing Enrichment” by Tim Busch, N0CKR in the latest issue of Radio Waves, the ARRL’s email newsletter for amateur radio instructors.

In the article, Tim describes several activities that his club encourages, including a “new ham net” and the Field Day GOTA station, but he also details a program of “mini classes” that will teach specific skills related to ham radio. These include:

* Programming Radios and Getting on the Air
* Soldering 101
* Multimeter 101
* Build and Use a Roll-Up J-Pole Antenna
* Build and Use a Satellite Antenna
* Fox-hunts
* Operating Digital Modes: IRLP, AllStar, D-Star, EchoLink, etc.
* Remote Operation
* Software-Defined Radios
* Transitioning from VHF/UHF to HF Operating

* Chasing Awards

* Learn CW

* Contesting

Tim writes, “Each class is intended to be no more than two hours at a sitting, so they can be held before a monthly club meeting. The variety of subject matter allows many club members to get involved in leading a topic. Materials kits are prepared in advance, so students walk away with practical items they can use at home.”

I think this is a great set of classes, and I plan to try some of these in the fall. A couple of other topics that occur to me are:

* Power Supplies 101

* Mobile Operation 101

* ARRL 101

* RFI/TVI 101

Helping new hams—and old hams—have more fun with amateur radio is a lot more satisfying to me than just “growing the ranks.” It would be nice to say that we have a million licensed radio amateurs in the U.S., but I think it would be a lot more valuable to the hobby to say that a larger percentage of licensed hams were active and enjoying ham radio. I know that, for me, increasing the number of active, engaged hams would be more personally satisfying than simply creating a lot of new licensees.

When he's not working on helping new hams, Dan operates CW on the HF bands and blogs about amateur radio at KB6NU.Com. If you have a good idea for a new ham “mini class,” e-mail him at cwgeek@kb6nu.com.

WV7S’s Quad Loop Project

Ten years ago my wife and I moved to Olympia from Maui. This required severe downsizing. Basically, a truck delivered a shipping container to the house and we were forced to pick and choose what went and what would go. I had several hard choices; for example, the SB1000 linear my son and I built had to go. But for reasons I can’t recall I packed the spreaders and Cubex hubs for my four element cubical quad death ray! The pieces ended up in the attic of our Boston Harbor home and sat there as cycle 24 wound down.

Recently fully retired I was having fun back on the bands with an 80 meter off-center fed dipole hanging from a nearby tree but wanted something with directivity on the higher bands. I then recalled the quad pieces and thought my XYL and neighbors might tolerate a single element version. The fact I could raise and lower the antenna using the Hazer that also found its way into the shipping container made it easier to sell the idea of a new antenna. The Hazer is basically a “car” that straddles Rohn tower elements. It holds a rotator and provides a bracket for a thrust bearing. The elements of the system can be seen in photo 1. The thrust bearing carries the weight of the antenna and thereby lessens the load on the rotator. A line runs from a winch at the base through a pulley at the top of the tower back to the Hazer. This allows me to easily pull the antenna and rotator up or lower them back down.

Another plus was the fact I could raise and lower the tower itself, hence eliminating any need to climb it. I once owned a sailboat. I sold the boat but kept a collection of pulleys of various sizes. With a hinged base I could attach a pulley to an eave and use a winch at the base to raise and lower three 10 foot Rohn sections. This facilitates tweaking the antenna while standing on the ground.

The only question was how to match the antenna to 50 ohm coax. A quad loop presents a 100 ohm load. A decent match required choosing between a 2 to 1 balun and a 75 ohm coax matching section. I chose the former. A balun allows me to feed as many concentric loops as I want whereas a

matching section would be limited to a single band. Despite unfavorable band conditions I wanted to include a loop for 17 meters so a balun was a critical design feature. Later as band conditions improve I might add loops for 12 or even 10 meters.

With these pieces in hand I set to work. I ordered spreader poles and pieces for a support mast and short boom to hold the spreader hub. Next came calculation of the length of wire needed for each loop. I found online a calculator that simplified the math. http://www.qsl.net/yt1vp/CUBICAL%20QUAD%20ANTENNA%20CALCULATOR.htm. However, because I intended to use common insulated house wire, I thought it necessary to adjust the wire length. The capacitance resulting from the insulation is said to slow the RF wave along the wire, thus coated wire must be cut longer than bare copper at a given frequency. I used what seemed to be the standard adjustment of .95 to calculate the lengths needed for the two elements I was planning, although there may disagreement whether the insulation actually affects velocity factor. I was dismayed to quickly realize the lengths I cut were well short. This was due to my mistake in applying the .95 adjusting factor —I should have divided not multiplied the calculator length by .95 to compute the length of each insulated wire loop.

Unaware of the error I proceeded to assemble the spreaders and attach the original two loops. I then attached the spreader assembly to an eight foot mast. I couldn't resist the temptation to test the SWR at ground level. I attached a short piece of coax to the balun and a SWR analyzer. To my delight SWR was a virtually flat 1:1 at the CW portion of both bands. I proceeded to run the antenna up about 35 feet. At that height, however, SWR was lowest at a much higher frequency far outside of the bands. In other words, I had cut the wires much too short.

Down came the Hazer and the tower and out came the soldering iron. But I first needed to recalculate the length of the elements. Coincidentally the May *QST* at age 65 provided a quick way to correct the length of a wire element. You first multiply the resonant frequency (14.450 Mhz in my case for 20 meters) by the initial length of the wire element in feet. You then divide the result by the target frequency (in my case, 14.100 Mhz). The result is the proper length. The trick worked almost perfectly. SWR is now near flat at 14.198 Mhz as can be been seen in photo 2. This is a tad higher than I would prefer but the quad has a relatively broad bandwidth. In short, even at the low end of 20 meters the SWR is more than tolerable. The result for the 17 Meter wire was almost as good but at 18.076 Mhz the lowest SWR is near the bottom of the band and right around where I operate CW. Photos 3 and 4 show the completed quad. I'm pleased with the outcome, at least aesthetically. I can only hope the performance of a single loop at this height will prove worthwhile. I had fun piecing it together using parts that survived the move from Maui ten years ago. Thankfully, Lee, KI7SS, had a spare rotator to contribute to the project. Now all I need are a few sunspots.

Photo 1

Photo 2

Photo 3

Photo 4

— Den, WV7S

O A R S Meeting

Wednesday, June 21, 7:00 pm
Field Day Planning
South Sound Manor Event Center
455 North Street SE
Tumwater

If you are a Ham who has received this newsletter, but are not yet a member of OARS, you are cordially invited to join us. Please complete the membership application found elsewhere in this newsletter and mail it to:

OARS
PO Box 2861
Olympia WA 98507

or bring it to an OARS meeting and see Treasurer Ed Fitzgerald.

OARS
PO BOX 2861
OLYMPIA WA 98507