



Yavapai Signal

The Yavapai Amateur Radio Club – Prescott, Arizona – DM-34 – Volume 32 – No. 12 – Dec. 2017

Upcoming Club Events				
Event	Date	Time	Place	Contact / Info:
General Meeting	TH 12/07/17	1900 MST	PMHMS	Club Website
Fox Hunt	SAT 12/09/17	1300 MST	OneAZ Credit Union Parking Lot, GG Wy. & WC Rd.	Pete K6VVR or John WB9VGJ
YARC Breakfast	TH 12/21/17	0800 MST	BackBurner Restaurant, Prescott Valley	Don WB7TPH or Jeff WB7RFY
Special Event Communications — Schedule— See page 10.				
License Testing — Schedule — See page 12.				
General Meeting Programs — See page 4.				

YARC:	Badges	Patches	Shirts
Features:	Name & Call	Club Name & Logo	With or Without Name & Call
Contact Person(s):	Mike Reid N7IEP	Mike Reid N7IEP	Pete Morrison K6VVR
Cost:	\$7.00 each	\$3.00 each	Without Name & Call \$20.00 — With Name & Call \$24.00 each

Club Website Registration
<p>Please register to get on the club's email distribution list and also gain access to the members'-only area of the website. The members'-only area contains the club roster and detailed club treasurer's reports. To register, go to www.w7yrc.org, click "Join Us" and then select "Registration." Fill out the requested information, and then click "Register." The webmaster will then verify your membership and authorize your account. His response is not immediate in real time.</p>

Welcome to the Yavapai Amateur Radio Club

The Yavapai Amateur Radio Club (YARC) is an ARRL affiliate Special Service Club. The club participates in many activities in the quad-city (Prescott, Prescott Valley, Chino Valley, and Dewey-Humboldt) area by providing communications for local events, emergency communications, and promotion of the hobby throughout the community.

Membership in YARC is open to any interested amateur or non-amateur alike. Dues are \$20.00 per year (full-time students \$15). YARC meets at 1900 MST on the first Thursday of every month in the technology classroom at Prescott Mile High Middle School, 300 South Granite Street in Prescott. Vehicular access to the school parking lot is via the entry at the intersection of South Montezuma Street and Carleton Street. Programs of interest are included as part of the meeting.

www.w7yrc.org

YAVAPAI AMATEUR RADIO CLUB – PO BOX 11994 – PRESCOTT AZ 86304-1994

Club Nets

Band	Mode	Frequency	PL	Night	Time
2M	FM	147.260 MHz	+103.5 Hz	Wednesday	1900 MST
2M	SSB (USB)	144.250 MHz	N/A	Wednesday	2000 MST
10M	SSB (USB)	28.440 MHz +/- QRM	N/A	Thursday	2000 MST
1¼M	FM	224.080 MHz	-156.7 Hz	Wednesday	1930 MST
¾M	FM	447.650 MHz	-100.0 Hz	Saturday	0900 MST

Yavapai County ARES/RACES Nets

2M	FM	147.260 MHz	+103.5 Hz	Monday	1830 MST
2M	FM	145.290 MHz	-127.3 Hz	Monday	1900 MST

Club Repeaters

2M	FM	146.880 MHz	-100.0 Hz	Open Use 24/7	Open Use 24/7
¾M	FM	447.650 MHz	-100.0 Hz	Open Use 24/7	Open Use 24/7

Club Mentors (“Elmers”)

Name	Call Sign	Telephone Number
Art Protas	KG6AY	928-227-2954
Jim Zimmerman	N6KZ	928-713-0542

ask.elmer@w7yrc.org

Share Your Surplus Items

Bring any ham related surplus items that you no longer have a need to the next club meeting. **There will no longer be a table outside the building.** Instead there will be a table inside the room where refreshments are served where your items can be placed. Let your fellow club member take those things with them that they feel might be useful to them. The table will be available at each monthly meeting.

Canned Food Donations

Bring your non-perishable food items to the monthly club meetings and Terry Pemberton KB7TRE will take them to the local food bank. Place your bagged items on Terry's desk when you come in.



From the President's Desk

by Kathy Laing, KJ6KMK

We are now at the end of this year and boy have we had a very full year of club activities. We have gained a number of new members and sadly lost a few. December is Member Appreciation Month and we will have party refreshments at the meeting to say a special "Thank You" to all the YARC members. I will also present a "State of YARC for 2017" to remind everyone of what was accomplished this year. I would like encourage everyone to come to the December general meeting and so we can wish "Happy Holidays" to all our friends.

At the November general meeting we presented the Lloyd Halgunseth WA6ZZJ Memorial Award to Bud Semon N7CW. Bud took over the Emergency Coordinator position for ARES/RACES after Lloyd passed away. We also presented the YARC Life Membership Award to Rex Maudlin N7NGM. There is an article in this month's [Signal](#) detailing Bud and Rex's accomplishments. Please join me in congratulating Bud and Rex.

I am also still looking for a few volunteers who would like to act as Santa's Elves and help sick children at the hospital talk to "Santa" on our ham radios.

Please read the articles in this [Signal](#) about how to log-in to our new members' site. Robert Reister WA6FBA, new membership coordinator, will be presenting an in-depth overview of the site and its capabilities. There is also an article on some vital volunteer positions open for 2018.

Man/Horse Race Public Service Event — Corrections

by Frank Bender, K8FB

Note: The article about the Man/Horse Race in the November Signal was from a previous year's event and was submitted in error by me. Following is the correct version. My apologies to all involved - Frank Bender K8FB

The Man/Horse Race was held in the Mingus Mountain Recreation Area on October 7, 2017 . The main events were grueling 25-mile and 50-mile races that went up and down the mountain. For the second year in a row, a horse won the 50-mile race.

This event supported communications sponsored by our partner, the Yavapai County Jeep Posse. Many thanks go to the following people who supported the event: Art KG6AY, Jim N6KZ, Jim K6IYK, Doug NO1D, Sandra KG7VQN, Bill K6DWP, Joann KF7WOT, Terry KG7BAM, Phil N6EEI and his neighbor Jim Lizer, Mike W1DGL, Chris N7HVC, John AB9JS, Mike N7IEP, Fiona KI7LXE, Donna KI6PHP, and Frank K8FB.



Mike N7IEP

TREASURER'S REPORT Sep 2017	General Fund	Repeater Fund	Prescott Hamfest Fund
BEGINING CASH -August 29, 2017	7,516.61	3,106.95	1763.30
Dues	216.00	24.00	
Donations		5.00	
50/50 drawing	54.00		
Misc. < \$50	48.37	0.24	
	<hr/>	<hr/>	<hr/>
TOTAL INCOME	318.37	29.24	0.00
Elmer equipment cabinet - Tim K7PVY	146.30		
PlaqueMaker - Kathy KJ6KMK	79.00		
Loaner equipment storage - Tim K7PVY	188.31		
CS Supplies - Art KG6AY	178.00		
Jeep Posse use donation	125.00		
Misc. < \$50	173.94		
	<hr/>	<hr/>	<hr/>
TOTAL EXPENSES	890.55	0.00	0.00
CASH - September 29, 2017	6,944.43	3,136.19	1763.30

* * Detailed statements are posted on www.W7YRC.org

General Meeting Programs

November Program – November was Lloyd Halgunseth WA6ZZJ Memorial Month. The 2017 Public Service Award and the Lifetime Membership Award were presented at the meeting. An article about the awards appear elsewhere in this newsletter.

Board/officer elections for 2018 were also held. The results of the election appear in an article elsewhere in this newsletter.

December Program – December's program will be a member appreciation party. Robert Reister, WA6FBA will also be giving an overview of the new online members-only roster.

October 26, 2017 Board of Director's Meeting

----- Minutes -----

Present at Meeting: Kathy-KJ6KMK, Frank-K8FB, Art-KG6AY, Mike-N7IEP, Rex-N7NGM, John-AB9JS, Art-KA5DWI
Absent: Sandy-K9WIZ
Meeting called to Order by KJ6KMK at 1806 MST.

Old Business:

Treasurer's Report and Meeting Minutes: the October 2017 board and general meeting minutes and the September 2017 treasurer's report has been published in the September Signal (General fund \$6944.43, repeater fund \$3136.19, hamfest fund \$1763.30)

☐ A motion was made by John-AB9JS to accept the October 2017 board and general meeting minutes and the September 2017 treasurer's report as published in the November Signal and the motion was seconded by Art KG6AY. Motion passed.

Update on the new membership database and Website – K8FB

☐ Robert Reister, WA6FBA new Membership Coordinator presented. Will present to membership in December and in December Signal and the motion was seconded by Art KG6AY. Motion passed. Kathy-KJ6KMK to email how to log in. Bill Noe, W7PVA will provide information to Richard on new members.

Contacts tab will be in the form of PDF to avoid Spam

☐ A motion was made by Frank-K8FB since the Signal is the official document of YARC, to remove the minutes and agenda from the YARC website. The motion was seconded by Art KA5DWI. Motion passed.

YARC Club Station Open House update – Frank-K8FB

☐ Successful Event. Approximately 30 attended. Two new members.

October 19 ARES Exercise. Acted as Alternate EOC.

☐ Art – KG6AY suggested looking into non-commercial power sources in the future

☐ On November 17, the club station will operate CW for the NRA birthday

Hamfest update – Frank K8FB

Request to approve major expenditure form prepared by K8FB in the amount of \$3000 for the hamfest budget.

☐ A motion was made by Art-KA5DWI to approve the expenditure request for consideration to the membership at the next meeting. The motion was seconded by Art – KG6AY. Motion passed.

Upcoming Programs

Nov -- Elections , Life Membership & and Lloyd Halgunseth WA6ZZJ Memorial

Dec – Membership Appreciation & presentation of the new membership site

New Business:

The Board directed the treasurer to send a check for \$50. to ARRL for the Lloyd Halgunseth WA6ZZJ Memorial

Results of the Nominating Committee – K8FB

☐ A suggestion was made to add "Write In" on ballot. Frank will print 100 ballots. Frank, Rex & Art – KG6AY will act as election monitors.

Discussion of the preparation of the 2018 budget

☐ Request assistance Dave W7BG for spreadsheets. Mike-N7IEP will have draft budget in December

Decision on menu pricing for YARC Party in April 2018 – Kathy – KJ6KMK was tabled until November

Do we want to look at any fundraiser ideas? Proposed by Kathy – KJ6KMK

Hams for Operation Santa' Elves (kids to reach Santa) to be brought up at general meeting

Update from Frank-K8FB on the idea of a YARC yearly scholarship possibly administered by ARRL will not occur this year.

General discussion of future meeting locations. More information at next board meeting.

VVRA Christmas party invitation awarded to Doug NO1D & his wife Shelia to represent YARC.

Additional Business:

☐ Rex-N7NGMA proposed that YARC consider looking into a future replacement of Echolink with D-Star or AllStar Link

Adjournment: KJ6KMK adjourned the meeting at 2002 MST.

Yavapai Amateur Radio Club, General Meeting

Date: November 2, 2017

=====MINUTES=====

Meeting called to order by President Kathy, KJ6KMK at: 1900 MST.

Pledge of Allegiance: led by Kathy, KJ6KMK

Welcome of any visitors: Chuck Newman – KI7PWE; and John Sampley – New Ham who had just passed his Tech exam.

The following new members were accepted into the club:

Sandra Meadowcroft – KF4JHC; and Robert Meadowcroft –KF4RKS.

□ A motion was made by Bill Noe - W7PVA to accept the new members and the motion was seconded by Bob Smith – WB6ODR. Motion passed.

Prelude to Election:

2018 YARC board and officer election – Kathy, KJ6KMK announced candidates:

Secretary – Art Jackson KA5DWI; Vice President – Joseph Thomas KG6IDN;

Board Members: Don Bauer, WB7TPH; David Hansen, W7BJ; John Laing, K7PRS; David Passel K6UWV;

John Stevens, AB9JS.

□ A motion was made by Doug Freeman – KV8TD to close nominations and the motion was seconded by BobSmithWB6ODR. Motion passed. Attendees instructed to hand in ballots by the break to Frank - K8FB.

Old Business:

YARC Club Station Open House – Frank-K8FB 25-30 attended. Arizona QSO Party Event.

Plans for new hams & techs for future operating events

Kathy, KJ6KMK gave a brief demonstration on the changes to www.W7YRC.org

Expect email from the new YARC website on how to log in to the new site.

Announcements and New Business:

Update on the plans for the 2018 Prescott hamfest: Frank, K8FB provided information on the grand prizes selected.

Seminar ideas should be sent to Larry Dorrell – KG7TTD

Major expenditure request for 2018 Prescott hamfest for \$3,000

□ A motion was made by George Hornbeck – KE7BSY to accept request and the motion was seconded by Carol Hills – KA7LKW. Motion passed.

Kathy, KJ6KMK asked if anyone would be interested in helping children at local hospital communicate with Santa Claus – contact her if interested.

N7GMH Special Event at the Jeep Posse by Doug KV8TD. 5 Hams participated and made 70 contacts.

November Program: Lloyd Halgunseth (WA6ZZJ) Memorial Award presented by Dick Hughes – W6CCD, awarded to Bud Semon – N7CW.

Life Membership Award presented by John Broughton – WB7VGJ, awarded to Rex Mauldin – N7NGM.

Upcoming Programs: Dec -- Membership Appreciation & presentation of the new membership website.

Break at 1945 MST.

Meeting called to order at 1955 MST.

Welcome of additional new member: The following new member was accepted into the club: Chuck Newman – KI7PWE.

A motion was made by John Stevens – AB9JS to accept the new member and the motion was seconded by Terry Pemberton – KB7TRE. Motion passed.

Election Results:

Vice President – Joseph Thomas KG6IDN; Secretary – Art Jackson KA5DWI;

Board Members: Don Bauer, WB7TPH; David Hansen, W7BJ; John Laing, K7PRS.

Committee Reports:

K7NRA Special Event at Gunsite – John WB9VGJ; YARC Event Communications – Frank K8FB;

Club Repeaters – Pete K6VVR/Doug NO1D; Fox Hunt – Pete K6VVR said decision in January to move back to Sunday;

Elmer Group – Jim N6KZ; VE testing – next exam on 11 Nov. Practice exam for Techs on 8 Nov.;

Split the Pot: Ticket 8299323 \$41 Won by Art Protas KG6AY

Treasurer's report and general meeting minutes: the October 2017 board and general meeting minutes and the September 2017 treasurer's report have been published in the November Signal (General fund \$6944.13; repeater fund \$3136.19; hamfest fund \$1736.30).

□ A motion was made by Bill Noe - W7PVA to accept the report and minutes and the motion was seconded by Carol Hills – KA7LKW. Motion passed.

Adjournment: KJ6KMK adjourned the meeting at 2011 MST.

2017 Annual Award Presentations

Submitted by John Broughton, WB9VGJ on behalf of the Awards Committee.

The presentation of two prestigious awards took place at the November meeting. The first award was the Lloyd Halgunseth WA6ZZJ Memorial Award. This award is given to the ham who has made significant contributions to Yavapai County ARES/RACES. The award this year was presented to Warren (Bud) Semon Jr. N7CW. With the work Bud has done after taking over as District Emergency Coordinator, who can argue it was not a most deserved award. The award reads:

Lloyd Halgunseth - WA6ZZJ Memorial Award 2017

Presented to:

Warren L. (Bud) Semon

For your dedication, leadership and commitment to Amateur Radio, ARES/RACES and Public Service Events.

The qualifications for Bud's nomination for the award submitted in his nomination package were:

Bud Semon N7CW, has been an active member of both the Yavapai Amateur Radio Club (YARC) and the American Radio Relay League's Amateur Radio Emergency Service (ARES/ Radio Amateurs Civil Emergency Service (RACES), since relocating to Prescott, over 9 years ago. During this time, Bud has provided extensive personal support to maintaining the three ARES/RACES-managed two meter repeaters (Mt. Francis, Mt. Union, and Mingus Mt.), keeping them on the air and also providing their access for general amateur radio community usage.

Bud has also established new procedures for the conduct of the weekly ARES/RACES training nets that has increased readiness for all County ARES/RACES members. When the previous YARC Public Service Coordinator and Yavapai County Emergency Amateur Radio Service Manager, Lloyd Halgunseth WA6ZZJ (SK), passed away, it was Bud who stepped into his empty position to assume leadership of the over 50 hams that make up this volunteer effort. Bud then established a second-level cadre to provide emergency communications leadership in several key Yavapai County cities.

Under Bud's direction, formal training programs were brought to Yavapai County hams, to ensure that all local ARES/RACES members would meet the United States Department of Homeland Security criteria to be Auxiliary Communicators. In addition to his leadership role in training ARES/RACES members, Bud teaches the digital communications classes, thus bringing in this newly evolving technology to the toolset of the Yavapai County emergency communicators. This also ensures our County's compatibility with other Arizona ARES/RACES units to support state-wide disasters, such as earthquakes or other natural disasters.

The description for this award nomination states that any nominee should be an operator that has "...upheld the highest standards of public service — someone who Lloyd would have been proud to work next to". Bud was a trusted lieutenant to Lloyd for several years, often representing him in meetings with county and state-level officials. Bud served as a technical advisor to Lloyd to update the ARES/RACES website and establish telephone recall operational procedures. Bud learned from Lloyd and has continued to pass on this knowledge and commitment to public service through his teachings and fine example.

The other prestigious award presented was the Lifetime Membership award. This award is given to a club member who has served as an officer and who has made significant contributions to the club over a number of years. This year's award was presented to long time YARC member Rex Mauldin N7NGM. His contributions on the award read:

For your dedicated service to YARC as a founding member, the first interim Secretary and co- author of the Signal in 1991, president in 2004, vice-president 2014, 2015, board member in 2005, 2006, 2016, 2017, and for leading the Echolink/IRLP SIG, author of 'Node Talk' and 'App Chat' series in the Signal, establishing Echolink node in Chino Valley, suggesting 'Master Plan' for club in 2014, appearing on television to promote amateur radio, assisting in 447.65 MHz repeater move and upgrade in 2016, and numerous other activities and services to YARC and Amateur Radio.

Congratulations to these two deserving YARC members. Submitted by John Broughton, WB9VGJ, on behalf of the Awards Committee: John WB9VGJ — Dick W6CCD — Jeff WB7RFY — Mary AB7NK.



Dick Hughes W6CCD (left) presenting the Lloyd Halgunseth WA6ZZJ Memorial Award for 2017 to Bud Semon N7CW (right)

(Photo courtesy of John Broughton WB9VGJ)



Rex Mauldin N7NGM (left) receiving the YARC Life Membership Award for 2017
from John Broughton WB9VGJ (right)

(Photo courtesy of John Broughton WB9VGJ)

2018 Election Results

Congratulations to the following officers and board members who were elected to their posts effective at the beginning of 2018:

- Vice President – Joseph Thomas, KG6IDN
- Secretary – Art Jackson, KA5DWI
- Board Members:
 - o Don Bauer, WB7TPH
 - o David Hanson, W7BJ and
 - o John Laing, K7PRS.

These new officers and board members join the remaining officers and board member for 2018:

- President – Kathy Laing, KJ6KMK
- Treasurer – Mike Reid, N7IEP
- Past President Board Member – Frank Bender, K8FB

Retiring as officers and board members at the end of the year are the following. We appreciate their service during their terms:

- Vice President – John Stevens, AB9JS
- Secretary – Sandy Mattsen, K9WIZ
- Board Member – Rex Mauldin, N7NGM
- Board Member – Art Protas, KG6AY and
- Board Member – Art Jackson, KA5DWI.

Thanks to everyone who volunteered to be on the ballot this year. We appreciate all of the officers and board members volunteering their time to support the club. As always, let any officer or board member know of any suggestions or concerns that you might have regarding operations of the club.

New Members

The following new YARC members were voted in at the November 2, 2017 general meeting. Please introduce yourself to them and make them feel welcome:

Sandra Meadowcroft KF4JHC

Robert Meadowcroft KF4RKS

Charles Newman KI7PWE

2018 Public Event Communications Schedule

1. **Sedona Marathon** – February 3, 2018 (MARC) – Contact Frank Bender K8FB (fhb47@hotmail.com)
2. **Whiskey Basin Trail Run** – April 14, 2018 (MARC) – Contact Frank Bender K8FB (fhb47@hotmail.com)
3. **Whiskey Off Road Bike Event** – April 27, 28, & 29, 2018 (MARC) – Contact Frank Bender K8FB (fhb47@hotmail.com)
4. **Whiskey Row Marathon** – May 5, 2018 (MARC) – Contact John Broughton WB9VGJ (wb9vgj@arrl.net)
5. **Chino Grinder** – May 5, 2018 – Contact Bob Thompson KC8BOB (bobnstar@cableone.net)
6. **Groom Creek Mountain Mayhem** – May 2018 (MARC) – Contact: Dottie Akers WF7DS (dottie.akers@gmail.com)
7. **Yarnell Memorial Run** – June 2, 2018 – Contact Doug Jarmoth N0DAJ (n0daj1950@gmail.com)
8. **March of Dimes Walk for Babies** – August 2018 – Need Coordinator
9. **Skull Valley Loop Challenge** – September 2018 – (MARC) Contact Dottie Akers WF7DS (dottie.akers@gmail.com)
10. **Groom Creek Classic** – September 2018 (MARC) – Contact Dottie Akers WF7DS (dottie.akers@gmail.com)
11. **Prescott Road Rally** – October 2018 (MARC) – Contact Bob Rosevear WB7RRQ (rosevear520@cableone.net)
12. **Man/ Horse Race** – October 2018 – Need Coordinator
13. **Diabetes Walkathon** – October 2018 – Contact John Broughton WB9VGJ (wb9vgj@arrl.net)

October 28, 2017 – N7GMH Operation by Doug Freeman, KV8TD

With the release on October 22, 2017 in nationwide theaters of “Only the Brave” depicting the Granite Mountain Hotshots story, on October 28 we had a one-day operation at the YARC club station. I had planned and advertised it to be primarily on 20 Meters, but unfortunately had not paid enough attention to potential contest activity. We could not compete with the CQ WW contest. Moving to 17 Meters, we made about 70 contacts, primarily in the midwest with Florida and Hawaii thrown in.

Operators were KV8TD, KG6AY, N7NGM, KG7LNN AND KI7IPI. It turned out to be a good chance to get some HF operating experience in a low key environment.

2018 Prescott Hamfest at ERAU

The 2018 Prescott Hamfest at ERAU will be held on June 1 and 2, 2018 at Embry-Riddle Aeronautical University (ERAU). This year's hamfest will be a full two-day event, with tailgating, indoor and outdoor commercial vendors, YARC consignment sales booth, test bench, technical seminars, youth activities, technician license exam review, VE license exams, special event station, Arizona Near Space Research (ANSR) balloon launch, Grand Prize and hourly prize drawings, ARRL booth, ARRL QSL card checking, and food concessions. This year the hamfest will also be hosting the ARRL Arizona State Convention, as well as the Amateur Radio Council of Arizona (ARCA) annual meeting and annual repeater council meeting.

The Prescott Hamfest at ERAU is co-sponsored by the Eagle Amateur Radio Club (EARC) at ERAU, YARC, and ARCA – and is an ARRL sanctioned hamfest.

If you would like to volunteer to help out during the hamfest, go to <http://hamfest.w7yrc.org/volunteer/> , fill out the volunteer form with your preferences and submit the form. If you would like to help with the hamfest planning, contact Frank Bender, K8FB at k8fb@w7yrc.org . For additional details go to the hamfest website, www.prescotthamfest.com .

We would like to thank the following hamfest committee members for their ongoing support in planning this year's hamfest: Bill Noe W7PVA, Kathy Laing KJ6KMK, Larry Dorrell KG7TTD, Doug Askerman K7REC, David Hanson W7BJ, Art Jackson KA5DWI, Roger Nash KD5VRW, Steven Bucks KMØCYL (EARC president), Art Protas KG6AY, Jim Zimmerman N6KZ, Don Bauer WB7TPH, Brian Vlastelich K7TSY, Jeff Hanna WB7RFY, Mike Reid N7IEP, Creighton Grotbeck AD7YR, Donna Morgan KI6PHP, Doug Theriault NO1D, Phil Baird N6QCA, and Frank Bender K8FB.

Volunteers Needed for 2018

Looking forward to 2018, we need volunteers willing to help out with some club responsibilities:

Program Chairman – Don Bauer, WB7TPH, has been the Program Chair, but due to other responsibilities would like to retire from this position. The program chair is responsible for obtaining speakers for the club meetings each month. Please send me an email to KJ6KMK.YARC@gmail.com if you are interested.

Public Service Event Administrator – Need a volunteer who will help find event coordinators if one is not identified and ensure the required paperwork is completed for each event.

Public Information Officer (PIO) – Don Bauer, WB7TPH is the current PIO; however he needs a second-in-command willing to learn how to work with the media to publicize the club's activities. If you are interested in learning how to work with the media or have experience working with the media, Don would really like to hear from you.

K7NRA

**National Rifle Association, 146th Birthday, November 17, 2017 — Special Event Station Operation
 — at K7GST, Paulden, Arizona: HF SSB, Satellite, and 2M FM
 — at W7YRC, Prescott, Arizona: HF CW
 Number of Contacts:**

SSB 76	Satellite 23	CW 74	2M FM 1
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License Testing
by Don Bauer, WB7TPH

Our next test session will be Saturday, January 13, 2018 — 0900 MST, Jeep Posse Building

For anyone needing a session a bit sooner, Jim Scherfling has a test scheduled for January 2, 2018 in Prescott Valley.

Our November 11 test session had a total of 12 candidates. All went home with their desired licenses. Congratulations! There were 5 new technicians, 6 upgrades to General and 1 to Extra.

And we received this email from one of our candidates:

“Mr. Bauer, I want to say thank you for your help and those that assisted today. Please convey my gratitude to all, for now I start my venture anew into the world of amateur radio. Your group fostered the feeling that everybody regardless of standing are there for one reason and that is knowledge, an the quest for it.

Thank You!
Richard Rice”

If you wish to see all of next year’s schedule, check the YARC website or the ARRL website, where we have them posted. A note to all our Technician licensees: Upgrading to General is not that difficult and it is very rewarding. We have mentors and classes to help. Try it, you’ll like it!

Upcoming License Testing

Date	City	Location	Time	Sponsor	Contact	Walk-in
01/02/18	Prescott Valley	Trinity Lutheran Church, 3950 Valorie Dr.	1830 MST	PV Ham Study Group	Jim Scherfling 928-632-2050	Yes
01/13/18	Prescott	Jeep Posse Building	0900 MST	YARC	Don Bauer 928-775-4690	Yes
03/06/18	Prescott Valley	Trinity Lutheran Church, 3950 Valorie Dr.	1830 MST	PV Ham Study Group	Jim Scherfling 928-632-2050	Yes
03/10/18	Prescott	Jeep Posse Building	0900 MST	YARC	Don Bauer 928-775-4690	Yes



November 2017 Foxhunt
by John Broughton, WB9VGJ

The monthly foxhunt was held Saturday, November 18, 2017. Pete K6VVR and Patrick KG7EWD were the foxes. There were two teams for this hunt:

- 1) Robert WA6FBA and John WB9VGJ;
and
- 2) Sherwin WB7NFX and Don KI7IOM.

The results of the hunt were:

Place	Team	Time
—	WA6FBA and WB9VGJ	DNF
—	WB7NFX and KI7IOM	DNF

This was a most interesting and challenging hunt. The foxes hid at a trailhead on a dirt road a little east of a subdivision on the east side of Williamson Valley Rd., north of Pioneer Parkway. Neither team managed to make it to the hidden transmitters.

WA6FBA and I saw the foxes rather early on in the hunt. As you can see in the picture of the location of the foxes (the large X on the right), we traveled several streets in the subdivision trying to find a road that led to the foxes. We came very close when we tried Bailey Ave. to West Cliff Rose Rd. We got to the end of the pavement and the dirt road looked rather rough and also looked like it would end in a private driveway. We had already ended up in a couple of private drives, so we did not go down this dirt road. Turns out, it was only a block or so further to the foxes. We did a lot of driving to no avail. It is frustrating seeing the foxes but not being able to get to them. It will make for good conversations on future hunts.

This is only about the second time in several years that no teams have found the hidden transmitters. It made for a good discussion at the restaurant afterwards. As a result, Pete and Patrick will be hiding the transmitters for the December hunt. You can see pictures of the hunt here:

<https://tinyurl.com/YARCfoxhuntNov2017>

We had our usual after hunt socializing session at Prescott Junction. We would encourage more folks to get involved in the hidden transmitter hunts. They are really fun and help develop direction-finding skills.

Frequency Standard for the Radio Amateur

by Dick Hughes, W6CCD

I have been interested in frequency measurement and standards for as long as I have been a ham. Precision measurement and the instruments for doing that have always been one of the most interesting aspects of amateur radio for me. This article was originally written and published in the [Yavapai Signal](#) in 2003.

I went through a number of 100 KHz crystal calibrators in the early days. I even had a BC-221 frequency meter back in the early 60s. My first serious frequency standard was one I built out of the November 1968 [QST](#). It was called, "The Mainline FS-1 Secondary Frequency Standard." It used a 4 KHz low-drift crystal from International Crystal, and used 7490 ICs for frequency dividers. It had outputs down to 1 KHz. The 7490 ICs were \$10 each then, and all the parts were nearly \$100, which was a lot of money in 1968. I still have that FS-1 frequency standard.

Using the FS-1 standard, I bravely entered the ARRL frequency measurement test in February 1969. Using nothing but the FS-1 and my SB-101 Heathkit transceiver, I zero-beat the FS-1 at the nearest 10 KHz dial mark on the SB-101, then read the frequency as close as I could on that old analog dial. My closest reading was within 24 Hz on 40 meters, and my overall readings had an error of 10.9 parts per million. To qualify for a Class I Official Observer (OO) back then (the top rating) you had to be within 71.4 ppm. I never applied to be an OO, but I was very happy with my test score that was well within the requirements. The very best operators then could measure within about 0.1 parts per million. They were no doubt using much better equipment than I could afford.

As time went on, and transceivers acquired digital dials and temperature compensated crystal oscillators, the need for frequency measurement tests was eventually dropped by the ARRL in 1981. It has since been re-instated. Any modern transceiver within calibration was orders of magnitude better than our old methods of frequency measurement. However, my interest in frequency measurement and standards never diminished. Starting in the 1960s, several companies began producing frequency measurement equipment that was very precise. Hewlett-Packard in particular made some very nice equipment, including a Cesium standard. Unfortunately, it was also very expensive, and out of reach of the average ham.

The Cesium standard alone was \$40,000 in 1960s dollars. Inexpensive frequency counters came on the market, but these weren't much better than our modern transceivers. Then two things happened. First, the U.S. Government, bless their hearts, put 24 GPS satellites up in the sky for the military, which also allowed the average citizen to locate his position with amazing precision. At first, the satellite signals contained something called Selective Availability (SA), which degraded the civilian signal so that the closest you could come with a civilian GPS unit was a few hundred feet. This was done so our enemies couldn't use the same GPS signals to attack us with great precision. However, the military developed a method to selectively turn off SA by region, and on May 2, 2000, SA was turned off in the U.S. Our GPS units can now read within a few feet of the actual location. It has been turned back on a few times, and may be again if we have another Gulf War. The source of all this precision is an atomic clock in each satellite. The clocks produce a very precise timing pulse once each second, and with the proper equipment, these pulses can be averaged and translated into a very precise standard frequency.

One kind of organization that needs very precise timing is the telephone companies. For example, those with CDMA cell networks have to synchronize signals between base stations. Toward this end, custom, GPS disciplined clocks were developed by Hewlett-Packard and Trimble. These clocks contained a GPS receiver that could lock on six or eight satellites at the same time, and other circuitry, including a double-oven, voltage controlled crystal oscillator (VCXO), that could yield the precise 1 pps signal that they needed, as well as standard frequencies. The most useful being 10 MHz. The VCXO is "disciplined" by averaging the timing pulses from the satellites currently locked, then changing the oscillator frequency to synchronize it with the atomic clocks. This is all done very slowly, and the oscillator becomes more precise over time as the crystal ages.

Then the second event came along to benefit amateur operators desiring precise frequency measurement. The telephone companies decided to upgrade their CDMA networks from the IS95 standard to the newer 1XRTT standard. What these are is not important to us. What is important is that the original GPS disciplined clocks could not be upgraded! And guess what? Suddenly, all these expensive GPS clocks became surplus and available for a reasonable amount. In the range of \$250 to \$300. (Continued on next page)

Frequency Standard for the Radio Amateur (Continued)

by Dick Hughes, W6CCD

The two most common receivers available today are the Hewlett-Packard Z3801A and the Trimble GPS Disciplined Clock. The Trimble does not carry a model number. These units require only a power supply, GPS antenna and an RS-422 to RS-232 converter if you want to control the receiver with your computer, and see what is going on. In most cases, you can even get by without the converter. The software is available free, but there is more sophisticated software available for the HP for around \$20. I use the free kind with my Trimble.

Those of you who like to roll your own should read the article, "A GPS-Based Frequency Standard" in the July 1998 QST. Additional information is available on the W7CQ website at http://home.teleport.com/~rewing/10mhz_construction1.htm. An excellent site on use of the commercial receivers is http://www.realhamradio.com/GPS_Frequency_Standard.htm. You might ask, "why do we need such precise measurement of frequency?" For me it is simply an interest in the art of frequency measurement. I do, however, use my GPS receiver to increase the accuracy of a 30-year-old HP 5328A frequency counter. From a more practical standpoint, amateurs who participate in EME (moon-bounce) and weak signal VHF communications have to know their precise frequency, and GPS standard receivers are popular with them. Some modern tranceivers, like the Kenwood TS-950SDX, make a provision on the back for using an external time base.

What kind of frequency accuracy are we talking about? The Trimble is conservatively rated at 2 parts in 10 to the 12th over a one-day average and 2 parts in 10 to the 10th at any single point in time. When I watch the monitor program for my Trimble, I typically see a measured variation of .05 parts per billion! That's 5 parts in 100 billion! About the same as a Rubidium standard. Should be good enough to pass the old OO tests don't you think?



Bob WB6ODR

From the Past and Going Forward

by Bob Smith, WB6ODR

At the last November 2, 2017 general meeting of YARC some interesting improvements to our website were introduced to the general membership. I was intrigued with the changes and got to day-dreaming about some of the last 17 years of evolution for YARC on the web. After being reminded by Dick W6CCD of the location of some back issues of our newsletter I started doing a little research.

Sometime in early 1999, Frank Bennett N7VOJ (SK) built the first known website for the club. It was hosted on the Emery Riddle mainframe computer, as Frank was a professor there. In April 1999 Frank passed away. I told the club at that time that I would try to pick up the pieces if it would bear with me as I learned how to do some programming. Little by little I learned just enough to keep the yarc.pr.erau.edu site on line.

Back in 2000 I started putting together what was needed for the club to get its own call sign. After the original call sign was issued to the club, KD7JBR, I was able to get the vanity call of W7YRC. After getting the call sign and learning more about website hosting, the club requested that I obtain a domain name for W7YRC.org and a website was put up on a different host.

After many changes and updates we have what is on the web today at: <http://w7yrc.org>, and it stands as one of the premiere web sites I've been on recently.

**YAVAPAI AMATEUR RADIO CLUB
HOW TO LOGIN TO NEW ROSTER**

OCTOBER 2017

ACCESS TO THE CLUB'S MEMBERS ONLY INFORMATION IS CHANGING.

In an effort to bring the club into the 21st century, the YARC Board with the help of Robert Reister (WA6FBA) have converted the YARC membership management program from Excel spreadsheet to a centralized database accessible via the web.

What this means to you is now everything that is currently viewable behind the MEMBERS log-in of the club's website is being replaced with a newer, cleaner and easier method of access. Now you can obtain a password is easier, faster and more secure. Passwords are encrypted and can be changed by you quickly at any time.

You will also be able to view and edit your own member profile in real time on this new site. First things first!

In order to access this new site you need to follow some easy log-in instruction:

1. First you will need to access the www.W7YRC.org website.
2. Once you have access to the website, click on the Members link which will take you to the new site. When you click on the Members link, you will be greeted with a new login page.
3. In order to register as a member, enter your call sign in the box in the upper half of the page. To obtain your new password, enter your email address (use the email address currently on the YARC roster) in the "Input box" for new or forgotten passwords on the lower half of the page and click on the SUBMIT button.
4. The system is totally automated. You will see a message that you are going to receive an automated email from the server. When you open your email, click email from YARC and then click on the link provided to access the web page.
5. Follow the directions in the email and enter a password of your choice between 6 and 20 characters and click on the Submit button. Your new password has been registered.
6. Return to the www.W7YRC.org website, click on the Members link and enter your Call Sign as your username and your new login password. Click on Login and now you will be able to see all the members only information which will be easier to keep current.

Can anything go wrong? Of course not. Well, maybe. If something does go wrong and you cannot figure it out, just send me an email and we'll work it out together.

My email address is robert@programmerbob.com and I am the new Membership Coordinator.

Yavapai Amateur Radio Club — W7YRC Club Station Access List — Effective January 26, 2017

Name:	Call:	Lic. Class	Notes:	Telephone:
D. Hanson	W7BJ	E	Rotating Member	602-615-3444
R. Mauldin	N7NGM	E	Rotating Member	277-7164
M. Belanger	W1DGL	E	Rotating Member	420-0498
R. Redford	KG7LMI	G	Rotating Member	623-252-3980
T. Jackson	K6PSR	G	Rotating Member	562-644-0528
F. Bender	K8FB	E	Station Manager	379-5575
J. Zimmerman	N6KZ	E	Elmer Group	713-0542
A. Protas	KG6AY	E	Elmer Group	227-2954
D. Freeman	KV8TD	E	N7GMH Trustee	759-0958
B. Vlastelich	K7TSY	E	License Classes	583-7572
R. Dashiell	W6TYV	G	Dual Member	602-501-2571

Note: K. Laing KJ6KMK; P. Morrison K6VVR; B. Semon N7CW; and D. Bauer WB7TPH have station access, but are not to be contacted for station access

How I Fell in Love with the Digital Modes

by Bill Frantz, AE7JV

I started as an electronics nerd in junior and senior high school. I loved building electronics projects, especially kits. There was a radio club in high school which encouraged me to get my novice ticket WV2NOO in 1960. I am dyslexic and have a great deal of difficulty with written English. However, CW QSOs are in written English with a big dose of CW OP jargon. The jargon I could handle, but I could not get a string of letters to become a word at any speed. Even now, I need to write them down before I can recognize which word they represent. My novice year went by with almost no QSOs.

Fast forward to the year 2000, 40 years later. Somewhere about 1975 I had learned to write English, although I was and still am a slave to spell checkers. I said to myself, "I'll study up and get a no-code Tech ticket." I passed and became KG6JOH. I also passed the General written test, but still had to pass the 5 WPM CW requirement within the next year to become a General.

I had learned 5 WPM 40 years earlier and figured I could do it again. So I got the CW CDs and relearned the code. At the same time I studied for the Extra exam because I wanted to stop having to jump through hoops and just be a ham. Within the year I had passed both exams and became AE6JV. But I still wasn't doing very much on the air. I was one of those hams that built equipment but rarely used it.

PSK31 was like the computer chat rooms. Typing I can do with my eyes closed and the incoming words appeared in print, so I could read them the way I read books, papers, etc.

I look back at my log and see the first 3 years as exclusively PSK31 contacts. Then I branched out to RTTY for the North American QSO Party. Finally in March 2013 I decide to try to contact TX5K on Clipperton Island. On 15M I managed both a SSB contact, and my first CW contact. I was decoding the CW partially by ear but mostly with the K3. I was sending from the K3's memory. After listening as my call was sent many times in the pileup, I could recognize it when TX5K came back with it and press the other button to send the exchange.

Six months later, my log shows what I described as my first CW QSO with AI, W6SQQ in Orange, CA. The log shows he was using a K3 with a G5RV and had nice cool weather. I copied that QSO by typing it into my computer and reading the screen. I still have that file.

My log from that time shows many digital contacts, a scattering of SSB, and almost no CW. Then came the W1AW portable operations. I was hooked on contacting the W1AWs, and I made many more CW contacts, but these were certainly not rag chewing. They were as mechanical as the digital contacts when the operators just play macros at each other.

These days, when I operate CW, I am either contesting or DXing. In either case, the vocabulary is small enough that I can recognize the words -- CQ UP NA TU 5NN ? -- without having to think about the letters. If I need to think about the letters, I still use a computer to change them into words, eliminating many of the real advantages CW has. I can use a straight key, but slow down alarmingly when confronted with a paddle.

Somewhere along the line, I managed to earn a DXCC and a Grand Slam WAS -- WAS on CW, digital, voice. I still consider digital to be my "home" mode. I have had many enjoyable rag chews on PSK31, particularly with Michael VE3NOO and Mary KC9TIE. As an example, today I got a LotW acknowledgment for a FT8 QSO with Jim ZL1LC. My log shows two other QSOs with him on PSK31. It also notes that he operates from Waiheke Island, Oneroa with a Icom 706 and a Cushcraft vertical. I don't know if we got away from the macros, but certainly exchanged more than signal reports and grid squares in those QSOs. I will continue to struggle with CW and be happy that there are so many modes people can use. Almost anyone can find something that works for them.



W7YRC 2M FM Net — 147.260 MHz, PL +103.5 Hz — Wed., 1900 MST — NCS = Net Control Station

Call	Name	10/25/17	11/01/17	11/08/17	11/15/17
AE7CG	Loren	NCS	NCS	NCS	NCS
K6VVR	Pete	x	x	x	x
K7DCT	Andrew	x	x	x	x
KA5DWI	Art	x			x
KF7FPD	Jerry	x	x	x	x
KF7PQV	Dan				x
KG6AY	Art	x			x
W7HAM	Ralph		x	x	x
WA6AQK	Ken		x	x	x
WN7E	Tom	x	x	x	
KF7INF	Dennis	x	x	x	x
KG7EWD	Patrick	x	x		x
KG6IDN	Joe	x	x	x	
K6PSR	Tony			x	
WA6FBA	Robert		x		x
NO1D	Doug	x	x		
KI7LXI	Sheila	x	x		
KI7LWZ	Mike			x	x
KG7LMJ	Mike	x	x	x	
KD7OIW	Peter	x		x	x
WB7RXK	Clyde		x	x	
W7OTB	Vince				x
N7IEP	Mike			x	
N7NRE	David		x		x
K1PMS	Patti	x			
AG7GY	Tim			x	
W8ARZ	Bob				x





**Verde Valley Amateur Radio Association (VVARA) Christmas Party
December 9, 2017 at The Grill at StoneRidge, Prescott Valley**

Dec 9, 2017, 10:30 AM to 1:30 PM at The Grill at StoneRidge, 1601 N. Bluff Top Drive (West Side of Prescott Valley, from Hwy 69, turn onto StoneRidge, go up hill & make the 1st left to the restaurant.)

Salads: (A) Organic Field Greens Salad with Dried Cranberries, Crumbled Goat Cheese, Toasted Almonds and Champagne Vinaigrette, (B) Chopped Caesar Salad with Shaved Parmesan, Garlic Croutons and House Caesar, (C) Chefs Seasonal Inspiration of Local Vegetables.

Starches: (A) Roasted New Potatoes with Garlic Confit and Fine Herbs, (B) Tarragon Potato Puree Northwestern, (C) Wild Rice with Lemon and Parsley

Assorted Mini Desserts - Choice of Three: (A) Crème Puffs with Salted Caramel, (B) Petite Fruit Cobblers, (C) Crème Brûlée Spoons, (D) Cheesecake Parfaits, (E) Berry Parfait with Vanilla Cream, (F) Chocolate Mousse Tower

Beverages: Coffee, Decaf, Hot Tea, Iced Tea

Dinners:

- (a) Sous Vide Angus Beef Bistro Filet with Caramelized Onions & Wild Herbs
- (b) Herb Grilled Chicken Breast with Wild Mushroom & Roasted Shallot Ragout
- (c) Charred Wild Salmon with Herb Stewed Heirloom Tomato & Arugula Pistou
- (d) Vegetarian Plate
- (e) Lobster and Ricotta Ravioli with Sauce American & Basil Pesto
- (f) Country Farm Ham with Local Honey & Rosemary Glaze
- (g) Roasted Boneless Pork "Porchetta" with Roasted Red Pepper & Arugula

— All this for only \$22.00 per person. Last day for reservations will be December 1 —

Complete the following, detach, and mail to Tim with your check:

Name _____ Name _____
 Dinner _____ Starch _____ Desserts _____ Dinner _____ Starch _____ Desserts _____
 (a) Beef Bistro Filet, (b) Herb Grilled Chicken Breast, (c) Wild Charred Salmon,
 (d) Vegetarian, (e) Lobster Ricotta Ravioli Basil Pesto, (f) Honey Farm Ham,
 (g) Roasted Pork "Porchetta"

Tim Henriksen, KF7GCO, P.O. Box 31, Cornville, AZ 86325

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Breakfast and Lunch Gatherings

There are a number of lunch and breakfast gatherings in the area that are open to all radio amateurs and interested persons. Please let us know of any updates or corrections at info@w7yrc.org .

Third Thursday of the Month – **YARC** holds an informal **breakfast** gathering at the **BackBurner** Restaurant at 0800 MST. The restaurant is at 8400 Long Mesa Drive in Prescott Valley. Contact Don Bauer WB7TPH or Jeff Hanna WB7RFY.

Second Tuesday of the Month – **Quarter Century Wireless Association (QCWA)** brunch gathering, 1030 MST to 1230 MST at the **Golden Corral** Restaurant in Frontier Village in Prescott, off Highway 69. You do not have to be a QCWA member to attend.

Every Monday – **Dan Nichols (W6SAK SK) Memorial Lunch**, 1100 MST to 1230 MST at **roving locations**. Contact Bob Rosevear WB7RRQ, 928-458-7830, rosevear520@cablone.net; or Bob Smith WB6ODR, 928-443-9321, lsmith@cablone.net for the next location.

Every Wednesday – **Breakfast** at 0700 MST at the **Manzanita Grill** at the Antelope Hills Golf Course, near the Prescott airport.

Every Wednesday – **Lunch** – 1100 MST at **Costco** — “The Umbrella Club”

Club Officers, 2017

Officer	Name	Call Sign	Email Address
President	Kathy Laing	KJ6KMK	kj6kmk.yarc@gmail.com
Vice President	John Stevens	AB9JS	vice.president@w7yrc.org
Treasurer	Mike Reid	N7IEP	treasurer@w7yrc.org
Secretary	Sandy Mattsen	K9WIZ	secretary@w7yrc.org
Director	Art Jackson	KA5DWI	ka5dwi@w7yrc.org
Director	Rex Mauldin	N7NGM	n7ngm@w7yrc.org
Director	Art Protas	KG6AY	kg6ay@w7yrc.org
Director	Frank Bender	K8FB	fhb47@hotmail.com
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Editor	Loren Singh	AE7CG	ae7cg@arri.net
Webmaster	Randy Dashiell	W6TYV	webmaster@w7yrc.org





NRA Birthday Special Event — November 17, 2017

by John Broughton, WB9VGJ

The annual operation was held at Gunsite Academy in Paulden on November 17, 2017 — the NRA's 146 th birthday. The event consisted of three stations: the usual HF phone station using the station of Gunsite's owner, Buz Mills K7GST; a satellite station set up by Dale KL7R, assisted by his XYL Chris NL7DU; and a CW operation at our club station at the Jeep Posse building in Prescott operated by Frank K8FB and Loren AE7CG.

Current band conditions are not that great. This solar cycle is one of the lowest on record. That made it difficult to make contacts. On SSB, most contacts were made on 15M. Not too many were made on 20M and none were made on 40M due to the poor band conditions and a lot of noise on the band.

Dale did well on with satellite contacts considering he inadvertently left most of his satellite gear at home in Alaska by mistake. As a result, he only had his rig and a handheld 5-element yagi antenna rather than his usual tripod mounted long yagi.

We had 16 hams who signed the sign-in sheet at Gunsite. Of those 16, 10 of them took their turn at operating the phone station: KB7TRE, KL7R, W1DGL, AB9JS, NØSCA, K6PSR, K7TSY, KI7PWA (W1DGL acted as her control operator; this was her first HF experience – Thanks, Mike.), KI7ALL, and N6EEI. Unfortunately, Mike K7NRA, was unable to attend again this year. He is very generous in lending his call sign for the event.

Due to the poor band conditions, our QSO count was down from former years. We had 76 contacts on phone, 74 on CW. 23 on satellite, and 1 on 2M FM for a total of 174 contacts.

Our special thanks to Buz K7GST for his hospitality in using his facility; to Mike K7NRA for the use of his call sign; to Terry KB7TRE for putting out the directional signs, bringing the food and making the coffee; and to Chaz Cone W4GKF in Atlanta, Georgia who makes and distributes the online certificates to those stations who request them via email. He offered this as an idea in 2015 and volunteered to handle it for us and is doing a great job with it. He also provides certificates for those who operated during the event.

Pictures Dale and I took of the event can be seen at:

<https://tinyurl.com/NRAbirthdayoperation2017>