



YAVAPAI SIGNAL



The Yavapai Amateur Radio Club • Prescott, Arizona • DM-34 • Volume 29 - No. 6 • June 2014



Greetings Yavapai ARC Members:

The decision has been made. We will participate in Field Day 2014 from the school as we have for the past two years. The Field Day planning committee met and made the decision, partly based on the fact that radio gear is in place and Terry is making the classroom available. Probably, the fact that we seem to have few souls interested in packing gear to a mountain top or lakeside, had something to do with the decision. Please, come join the stalwarts at the radio(s) on Field Day and do what amateur radio is all about. Communicate!

Following directly on the heels of Field Day is our Granite Mountain Hotshots Memorial special event. It is scheduled for Monday, June 30th, the first anniversary of the tragic loss of Prescott's Hotshot team. We will be operating from the Jeep Posse Building, from 6:00 AM until 6:00 PM, with extended hours from remote locations, if we have enough operators.

These events will wrap up the month of June, and then we will see many of you in Williams, AZ for the ARCA-Williams Hamfest. It's beginning to look like a busy summer season.

I hope to see you at our next meeting. That is **June 5th, at 7:00 PM**. Mark your calendar.

Don, WB7TPH

Membership Count:

1st Thurs. in April.....	195
Gain/Loss.....	+1
1st Thurs. in May	196



June Program:

Where is this club headed? Are we drifting? Do we have a purpose and direction? Vice President Rex Mauldin will present his thoughts for a five year plan. He believes that a master plan is a good guide for future BODs and committees. Please join us as Rex presents his thoughts. As a club, we have the good fortune to be able to decide our future. Listen, and then think. Do you agree, disagree, not sure. Put your thoughts in the "Signal". Each of us has a part in deciding our future. ■

Upcoming Events

- **June 28 - 29, 2014** - Field Day.
- **June 30, 2014** - Granite Mountain Hotshots Memorial Special Event at Jeep Posse Building.
- **July 18 - 20, 2014** - ARCA/Williams Hamfest.

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Welcome to the Yavapai Amateur Radio Club

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

Membership in the YARC is open to any interested amateur or non-amateur alike. Dues are \$20.00/year (Full-time students \$15). The YARC meets at 7:00 p.m. local time on the first Thursday of every month in the Technology Room 404, at the Granite Mountain Middle School, 1800 Williamson Valley Road in Prescott. It is about ½ mile north of Iron Springs road, and all amateurs and non-amateurs as well are invited. Programs of interest are included as part of the meeting.

The weekly Net is held every Wednesday at 7:00 p.m. local time on 146.880- repeater. All amateurs are invited to participate, and visitors are always welcome.

The Yavapai County ARES/RACES Net is held on Monday nights approximately at 7:00 p.m. local time on the 145.290- repeater on Mingus Mountain. A PL of 127.3 is required.

Club Repeater

The YARC 146.880- repeater is located on the hill above Willow Creek road and requires a PL of 100.0 Hz. Our deepest gratitude to Bill Kafka, W2YAV, (SK) for allowing us to acquire the original club repeater. ■

Need Cards Checked for ARRL Operating Awards?

Jim Zimmerman, N6KZ can check your QSL cards for DXCC, WAS, VUCC, WAC, etc.

For information contact Jim at: (928) 713-0542.

Jim's QTH is at: 778 Grapevine Lane,
Prescott, AZ 86305.

Minutes of April 24, 2014 Board of Directors Meeting at JB's Restaurant, Prescott, Arizona



Meeting was called to order by N7NGM at 16:55 hours, in the absence of President WB7TPH

Present Members: WH6EAL, N7NGM, W7HAM, KV8TD, AD7YR, W7BJ, WB7RRQ, and WN7E.

Old Business

- N7NGM: Williams Hamfest is in July and we need things to sell. Otherwise things seem to be coming together well. WB7TPH promised tables, WN7E has obtained pop-up tents.

New Business

- N7NGM: Suggests that Field Day should be at someone's house, and stated that the picnic will not be part of Field Day.
- KV8TD: Granite Mountain Hotshot Memorial Radio Club (GMHMRC) does not have anything set up at the moment, the intentions are to have a portable station to work in Yarnell. Could possibly set up multiple stations to work multi band schedule, stations could be home or club stations. Yuma Ham Club has offered to participate.
- N7NGM: Still looking for a trailer, the club needs to set a price ceiling. Suggested budget of \$3000 to be discussed at the next general meeting.

Adjournment: N7NGM adjourned the meeting at 19:27 hours.

Minutes of May 1, 2014 General Meeting

at Granite Mountain Middle School, Prescott, Arizona

Meeting was called to order by WB7TPH at 18:57 hours, and the Pledge of Allegiance to the Flag was recited by all present.

New Licensees: WB7TPH asked that any new licensees introduce themselves.

Rick Cofone, K2CRC and Richard, KD0WVH were intro-

duced to the club members.

Visitors: WB7TPH asked for visitors to please stand and identify themselves.

Sam, W4ITX, and Steven Monroe, KF7BSB were visiting.

New Members: The following new members were unanimously voted into the club.

Richard Miller, KD0WVH.

Donald Madison, W7WYZ.

Rick Cofone, K2CRC.

Michael Nesmith, NP2LY.

Minutes: WB7TPH asked for a motion to approve the minutes of the March 6th, 2014 general meeting as published in the "Yavapai Signal". Motion was made by K7POF, and seconded by KG7EWD. The motion was approved.

Treasurer Report: WB7TPH asked for a motion to approve the Treasurer's report as published in the "Yavapai Signal". Motion was made by W7BNW, and seconded by W7HAM. The motion was approved.

Committee Reports:

- **Event Com:** WA6ZZJ reported on the May 3rd: Whiskey Off road, Friday was uneventful, however Saturday turned in to an actual emergency due to a cold front passage and blowing snow. Many participants turned back at the second checkpoint, and fifty racers had to be bussed back from the fourth checkpoint leaving all their equipment.

Upcoming events:

Mar 3rd: KC8BOB chino Grinder.

May 17-19th: MS-150 working in conjunction with VVARA.

May 24th: Mountain Mayhem in Groom Creek.

- **Newsletter:** AC6AA, nothing to report.
- **AZ worked all counties:** WN7L reported no new applications.
- **Patches and Badges:** W7BJ, Badges \$7 patches \$3.
- **Shirts:** K6VVR, shirts are available.
- **Fox hunt:** K6VVR, Fox hunt starts at 13:00 Sunday

May 4th. WB7TPH thanked WB9VGJ for the fox hunt reports.

- **Elmers:** KB7TRE got the antennas up for KG6GMG, thanking the elmers Bud, N7CW and Jim, N6KZ.
- **Licensing:** VE test May 3rd. 14 people showed up for the April 19th licensing class.
- **ARCA:** WB7RFY - Anyone interested in contacting individuals whose call sign is expired, to rekindle their interest in amateur radio, please contact WB7TPH or WB7RFY.

Old Business:

Williams Hamfest: W7HAM - Need equipment donations for the Williams Hamfest. WB7TPH promised to obtain tables. Event is July 17th-18th.

GMHMRC: The Granite Mountain Hotshot memorial as of this time has no set location; the radio club is planning on setting up in one location, which is open to suggestions. It is authorized for individuals to operate using the same call sign on different bands during the memorial. These individuals may work from home or any club station willing to participate. The Yuma Ham Club has promised to set up four stations. Still looking for CW operators; all logging will be networked.

KV8TD: The first weekend in June is museum ship weekend. KV8TD wishes to work from Valley Airport south of Grand Canyon from a Lockheed Constellation. Any persons interested in working this special event please contact KV8TD.

Field Day: WN7E needs operators for field day. YARC is invited to work atop Mingus Mountain in conjunction with VVARA. Alternate sites are still in the works. A planning meeting is proposed for one week from today.

50/50 Drawing: The winning ticket No. 532141, WB6RRQ won 33 Dollars

Presentation: WA7ARK gave a presentation on lightning protection. Mike started the presentation with the premise that in Arizona, per the five year flash density, two to four lightning strikes will occur within every square kilometer per year. Damage can take place not only from a direct strike, but also may occur from the induced voltage. Damage from lightning can be negated if proper grounding is used. The key to protection from lightning is to conduct the strike pulse current to ground through a low impedance

path and to prevent this destructive current from flowing through your house, wiring, and electronic equipment. The IEEE "Standard" strike is defined as a 8 μ s (rise time) by 20 μ s (fall time) with an average current of 18,000 amps for the first stroke and half that for the second and third strokes. An average strike is three to four strokes. All metal grounded construction will normally withstand a direct lightning strike. Some antennas, particularly fiberglass models can be destroyed by a lightning strike. Grounding equipment within ones shack should be done so with a single point ground, such as a solid brass or copper buss bar. Also copper strap or flashing is superior to wire or braid when dealing with grounding. The final checklist regarding lighting protection is.

- Use steel antenna support (tower)
- Prefer DC grounded antennas
- Side-mount fiberglass antennas
- Ground rods at base of tower, three to four
- Short Cu straps from tower to rods
- Bond coax shield to top and bottom of tower
- Don't forget the rotator cable
- Add metal Entry Panel on outside of building, near Ham equipment.
- Anything connected to tower should go through the entry panel.
- Install coax and rotor cable protectors
- Strap from Entry Panel to rods
- Ground rod(s) under Entry Panel
- More ground rods? point of diminishing returns
- Use metal console, or a Copper bus bar under wooden console. (SPG)
- Ground straps from all equipment to bus bar
- Tie negative side of 12V DC power supply and negative side of 12V battery bank to bus bar
- Tie bus bar to Entry Panel with strap through wall

Adjournment: WB7TPH adjourned the meeting at 20:12 hours. ■

THE IMPORTANCE OF ARRL MEMBERSHIP

The Yavapai Amateur Radio Club is an ARRL affiliated club, and as such, our membership roster must have a minimum of 51 percent ARRL members. Therefore it is important we maintain this requirement to remain an ARRL affiliated club.

If you are not presently a member of the ARRL, or if your membership has lapsed for more than two years, there is a good way to join the ARRL and benefit our club as well.

ARRL Membership Application forms can be obtained from the YARC web site: <http://www.w7yrc.org/>. or ask our Treasurer for a Special ARRL Club Membership Application.

Complete the Application and return it to the Treasurer with the application fee.

There is no extra cost to you, and our club gets to retain a portion of the dues. ■



The Ham Whisperer



An on-line International Morse Code Course put together by Andy KE4GKP is available at: <http://www.hamwhisperer.com/p/ham-courses.html>.

There are 11 separate lessons. The lessons for the International Morse Code Course are designed to help learn the Morse Code from the easiest to the hardest characters. This course covers all 26 letters of the English alphabet, numbers 0 to 9, some punctuation marks, as well as some procedural signals. This course is designed for Amateur Radio operators, but feel free to use it for what ever reason you may need to learn Morse Code. You can find the answers to all the Random Runs found at the end of the lessons. ■

SPECIAL EVENT COMMUNICATIONS.....

By Lloyd, WA6ZZJ



WHISKEY OFF ROAD COMMUNICATIONS.....

Communications for this year's Whiskey Off Road Mountain Bike Event took place April 25, 26 and 27, 2014. This was the 11th year for this event in Prescott.

Friday was the 15 Proof (mile) Fun Ride which went smoothly with no major incidents. The Criterium Race in the evening was much the same. Saturday's 50 mile event was much different however. Saturday morning the weather spanned the gamut of some rain, wind, snow, sleet and finally a little sunshine.

When the weather took a turn for the worse about 0830 some of the riders dropped out of the race and returned to Prescott via Copper Basin Road after the Whiskey Two checkpoint. Others continued on until reaching the Whiskey Four checkpoint where about 50 riders dropped out and were transported back to Prescott via automobile and bus. Our amateur radio coordination of the evacuation of these riders to Prescott quite possibly kept the situation from becoming much worse as several riders were developing hypothermia like conditions and some so cold they just couldn't stop shaking. The weather front moved out and the second race was started around noon although it was reduced from a 25 mile to a 15 mile ride and it finished with no major incidents.

For Sundays Pro Race the weather was good and it also run with no major incidents with the Amateur Radio net securing at 1330.

Thirty eight amateur radio operators participated in providing communications for this three day event with some working all three days.

For ARRL Newsletter article see:

<http://www.arrl.org/arrlletter?issue=2014-05-08>

For ARRL ARES E-Letter article see:

<http://www.arrl.org/ares-el?issue=2014-05-21>

WHISKEY ROW MARATHON.....

The 36th running of the Whiskey Row Marathon was one week later with a change in the weather that made it ideal for the race. There were 1945 runners altogether registered in the four different events. This was the 15th year that communications were conducted for this event in the name of the Yavapai Amateur Radio Club. Amateur radio operators involved in the communications staffed twelve different locations. As always, the Prescott YMCA was very thankful for our service. YARC is listed as a major sponsor of the event on the Whiskey Row Marathon t-shirts.

Twenty five operators were involved with communications on this event.

MS-150 RIDE THE VORTEX BICYCLE EVENT IN THE VERDE VALLEY.....

On this event the weather had warmed into the 90's so it looked to be a little warm for the riders, but there were over 500 that had registered and at 0700 on Saturday the riders were off on one of three distance rides. There was a 50, 70 and 90 mile distance for them to chose from. Communications consisted of keeping track of the first and last riders, rest stop supplies and directing and maintaining communications with the five SAG vehicles that picked up riders with broken bikes and some that were just tired and couldn't ride any farther.

Unfortunately, about mid day on Saturday the event had a cloud cast over it when a rider was hit by a car and airlifted to Flagstaff Medical Center where she later succumbed to the injuries. The road was closed to all traffic for approximately 50 minutes and then reopened for bicycles and two SAG vehicles only. During the road closure, riders were held at three different rest stops to avoid congestion at the stop closest to the incident. The ride did continue and wrapped up at about 1700. Sundays two ride event was shortened to just the one 30 mile ride and all went well with just a few minor bike and tired rider problems.

Twenty two operators took part in assisting with the communications on the MS-150 with some working both days. On this event, as with the Sedona Marathon in February, we worked with the Verde Valley Amateur Radio Association (VVARA).

Many times the MS-150 staff would thank us for being there and riders would stop by and thank us for volunteering. So... our services were very much appreciated.

GROOM CREEK MOUNTAIN MAYHEM....

This event on Saturday, May 24, 2014 wraps up the 'spring' YARC Event Communications season and there will be an article on it in next months newsletter.

Thanks to all operators who took part in these events. It is dedicated members such as you that make us able to supply the communications for the many events that we do. Please keep up the good work and keep in mind that our second event communications season looks to begin in early September. ■



HOW TO INSTALL THE NEW HOME SECURITY SYSTEM:

1. Go to a second-hand store and buy a pair of men's used size 14-16 work boots.



2. Place them on your front porch, along with several empty beer cans, a copy of Guns & Ammo magazine and several NRA magazines.

3. Put a few giant dog dishes next to the boots and magazines.

4. Leave a note on your door that reads: 'Hey Bubba, Big Jim, Duke and Slim, I went to the gun shop for more ammunition. Back in an hour. Don't mess with the pit bulls – they attacked the mailman this morning and messed him up real bad. I don't think Killer took part in it, but it was hard to tell from all the blood. PS - I locked all four of 'em in the house. Better wait outside.'

The Whiskey Off Road Mountain Bike Event and Whiskey Row Marathon are but two of several Special Event Communications that YARC members have participated in. John, WB9VGJ has additional pictures of both events at these following links:

<http://tinyurl.com/WhiskeyOff-Road2014> and
<http://tinyurl.com/whiskeyrowmarathon2014> .

May 2014 Foxhunt

By John Broughton, WB9VGJ

The monthly foxhunt was held Sunday, May 4th. The foxes were Forrest, WH6EAL, and I.

The three teams of hunters were:

1. Byon, N6BG, and his wife Lara, KD6AYO.
2. Mike, WA7ARK, and Dave, W7BJ.
3. Pete, K6VVR, Diane, KE7ODP, and Patrick, KG7EWD.



We hid the transmitters on a forest road on the south side of Prescott off Hwy 89. The road is one that is not exceptionally transparent as one drives by the Prescott Pine Mobile Home Resort. The forest road is immediately adjacent to the entrance to the resort,

The weather was once again beautiful, which is common for us.

Unfortunately, only one team found the transmitters: N6BG and KD6AYO. That is because the battery died on the transmitter before the other two teams were able to locate it. However, both teams got close and had driven through the resort looking for it. It was a challenging hunt, which is one of the main reasons WH6EAL picked the spot.

We had our usual after-hunt get-together at Denny's; the social aspects of the hunts are as enjoyable as the actual hunts. WA7ARK and K6VVR had a discussion regarding the battery failure and it looks like the problem was discovered so we hope it will not happen in the future.

You can see pictures of the hunt at:
<http://tinyurl.com/YARCMay2014foxhunt> .

If you want to see them in a slideshow, just click on the slideshow icon above the pictures. Or, you can view them simply by clicking on the first picture then navigating through them.

We would encourage more folks to get involved in the

hidden transmitter hunts. They are really fun and help develop direction-finding skills.

73,
John, WB9VGJ

Spring Cleaning Time!

Start saving ham stuff for the Williams Hamfest. YARC will have a booth, and we will need stuff to sell.

You can bring donations to the club meetings or let Don Bauer know that you have items to donate. We can make arrangements to pick up.

Club contacts - At a Glance

President - WB7TPH	president@w7yrc.org
Vice President - N7NGM	vice.president@w7yrc.org
Secretary - WH6EAL	secretary@w7yrc.org
Treasurer - W7BJ	treasurer@w7yrc.org
Board Member - AD7YR	cgrobeck@gmail.com
Board Member - W7HAM	smokey7@cableone.net
Board Member - WB7RRQ	rosevear520@cableone.net
Board Member - WN7E	mrgriz@cableone.net
Arizona WAC Administrator	az.wac@w7yrc.org
Ask Elmer for Help	ask.elmer@w7yrc.org
Badges	badges@w7yrc.org
Field Day Chairman	field.day@w7yrc.org
Fox Hunts	fox.hunt@w7yrc.org
License Classes	classes@w7yrc.org
Mail List	yarc_mail@w7yrc.org
Membership Application	membership@w7yrc.org
Net Manager	net.manager@w7yrc.org
Newsletter Editor	newsletter@w7yrc.org
Program Inputs	programs@w7yrc.org
Public Information Officer	pio@w7yrc.org
Public Service - DEC	public.service@w7yrc.org
Repeater Trustee	repeater@w7yrc.org
Special Events	special.event@w7yrc.org
VE Test Liaison	testing@w7yrc.org
YARC Party Coordinator	yarc.party@w7yrc.org
Information	info@w7yrc.org
Webmaster	yarc@w7yrc.org
Webmaster	w7yrc@w7yrc.org
Webmaster	webmaster@w7yrc.org

What is a QR Code?

By Joe, AC6AA

Quick Response (QR) codes were created in Japan in 1994 to track vehicles during manufacture. They have slowly been gaining traction in the United States, but seem to have taken a foothold lately, appearing on all sorts of items. They can be found on newspapers, in-store displays, coupons, websites, QSL cards, Ham Radio Flyers, and on various other products ...including such things as billboards and gravestones.



Figure 1 - QR Code

The QR code is a 2-dimensional redesign of the common bar code (see Figure 2). The QR code contains a large amount of information, storing up to 4290 alphanumeric characters. The QR code typically consists of black modules (square dots) arranged in a square grid on a white background as shown in Figure 1.



Figure 2 -Bar Code

QR codes can be read by a Smartphone with a camera or other mobile device like a PC tablet. If your smartphone does not have a QR Code Reader, simply download a free AP onto your phone, snap a picture of the QR code, and the phone software will display the information. If you take a picture of the QR code in Figure 1, you will see the YARC website Home page, just as if you were clicking on <http://www.w7yrc.org>.

You can generate your own QR code by choosing any one of several web applications. The code displayed above was generated using www.qrstuff.com, and can be saved on your computer, printed, or e-mailed. You can store website URL's, plain text, phone numbers, email addresses and pretty much any other alphanumeric data. It also is possible to customize a QR code with a logo, lettering, picture or some company color schema.

If you don't have a Smartphone, you still can decode QR codes found on the Internet by uploading or typing their location to <http://zxing.org/decode.jsp>. ■

YARC Officers for 2014

President

Don Bauer, WB7TPH
president@w7yrc.org

Vice President

Rex Mauldin, N7NGM
vice.president@w7yrc.org

Secretary

Forrest Murdock, WH6EAL
secretary@w7yrc.org

Treasurer

David Hanson, W7BJ
treasurer@w7yrc.org

Board of Directors (includes Club Officers)

Creighton Grotbeck -- AD7YR

Ralph Gendron -- W7HAM

Bob Rosevear -- WB7RRQ

Tom Griswold -- WN7E

Newsletter Editor: Joe Oliver, AC6AA
newsletter@w7yrc.org



The Mojave Death Race returned with a vengeance in 2013 and is bigger and better in 2014.

The Mojave Death race is a 250+ mile Run, Mountain Bike, & Road Bike relay race across the Mojave Desert. Teams of 12, 8, or 6 will traverse 250+ miles and climb over 16,000 feet of inhospitable desert by foot, mountain bike and road bike. The race starts in Nipton California and runs through the Mojave National Preserve to the National Trails Highway (RT 66) and back to Nipton. Dates for the 2014 race are May 31 and June 1.



HAM OPERATORS NEEDED



Are you up to the challenge?

To volunteer go to www.mojavedeathrace.com, click on the volunteer tab then scroll down to [Ham Radio Volunteer info](#)

Call Dick Bruno at 714 315-1637 for additional info

APP CHAT

By Rex Mauldin/N7NGM

This month we shall take a look at an app called iAPRS which allows you to post your position for others to see where you are. Since this iPhone that I have is not able to access a cell tower, I am unable to demonstrate it by moving around and leave a track for you to see. My location is shown by the little blue dot in figure 1. As you can see, KE7JGM and K7YCA are shown. With more users, more stations would be present on the screen. Figure 2 shows KD6DUR after panning slightly to the east. By selecting a different layer from the settings tab, more detailed road information can be shown. Doing so tends to cover stations as seen in figure 3. Figure 4 shows the overall menu by which you can enter your station call as I have done here along with a symbol.

I assigned a password and username in order to operate this app, but for some reason it didn't want to post my position onto the web site www.aprs.fi, which is my goal. I will need to check into this further and find out why it didn't work. This illustrates one reason why I am writing these articles in order to share with you the problems I encounter along the way so that you can decide for yourself if you want to have this application installed on your iPhone or not. I am sure there is a simple reason for my present difficulties, and when I find it I will pass it on to you. The rest of the app has many pages of detailed information to describe the operation of this application of which two are shown in figures 5 and 6. There are close to 18 pages of information to read through.

This application could be used to plot your position along with many others during an event that you are helping out with such as a race, a search, or for field day operations so that others can find where you are at any given moment.

That is it for this month. Fewer words and more photos.

Rex

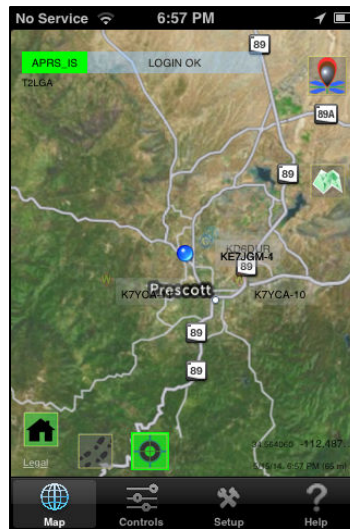


Figure 1

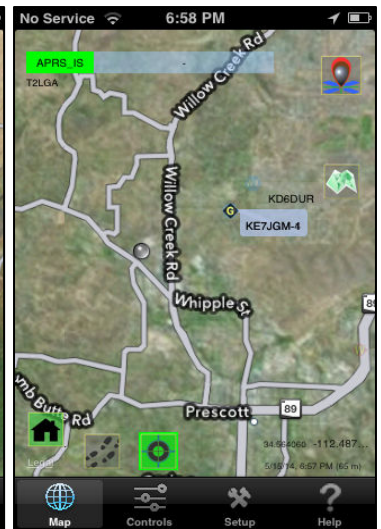


Figure 2

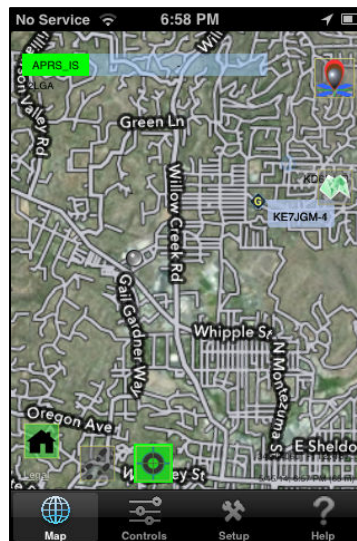


Figure 3

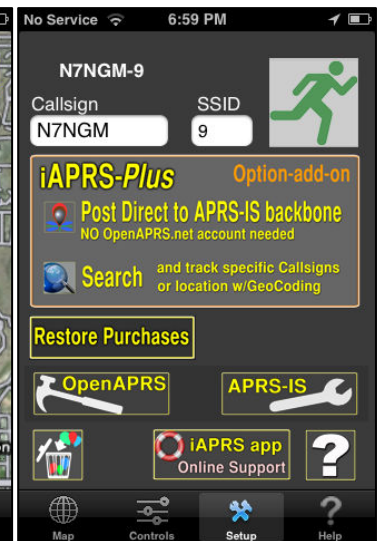


Figure 4

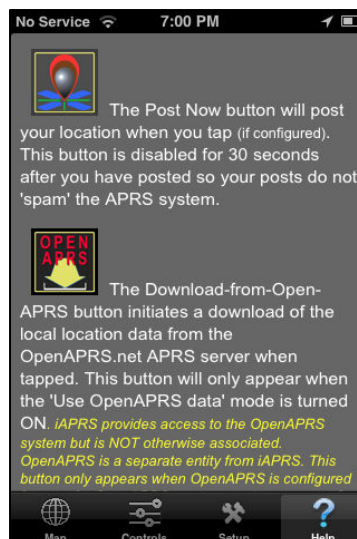


Figure 5

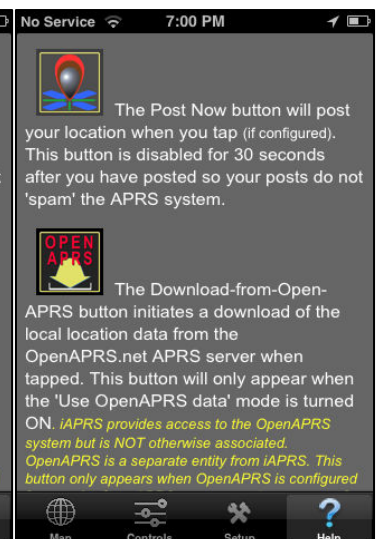


Figure 6

JUNE 30TH GRANITE MOUNTAIN HOTSHOTS MEMORIAL OPERATION

By Doug, KV8TD

Plans are coming together for this "special event" operation on June 30. We are planning to have our local operation from the Jeep Posse building at Pioneer Park. The idea is to have at least one, possibly two, stations operating from there beginning at 0600.

In order to get more coverage of the event, we have invited other clubs and / or individuals from around the state to participate as well. There will be specific one hour blocks assigned to each individual or club throughout the day for each band so that no more than one operator will be on a band or mode at any given time. An individual operator may have from one to several hours as long as his operation is coordinated. We are planning for both SSB and CW operations, if desired. During the 10 hour period from 0700 to 1700 each hour block will be dedicated to 2 of the 20 firefighters. I expect that 20 meters will be used for the full period plus the time before and after the '10 hour block' period, with 40, 15, 17, 12 and 10 each working for at least part of the time. YARC members who wish to operate from their home stations are encouraged to do so after coordinating with the overall scheduling. Stations from outside YARC will also be given time slots to operate after coordination. If there is sufficient participation, we plan to extend the operation beyond the ten hour time frame. If not, we will concentrate on the primary hours.

A 'script' will be generated and provided to operators to define the event and its meaning. Each operator or club will use a common logging program which will be integrated after the fact so that certificates may be awarded for each contact as requested. The mechanism for this is still TBD, could be online, could be via SASE or both.

We do need to know as soon as possible who is available to participate, and who wishes to operate from the posse building. While it is necessary that a General class or above operator be present and acting as 'control operator' during on the air periods, TECHs will be ac-

corded every opportunity to participate both operating and, as importantly, logging.

Please let me know, no later than the June club meeting what times you will be available so we can begin the scheduling detail work. There will be a signup sheet at the club meeting, or you can email me at w6nhx@aol.com.

ONE OTHER MAJOR ITEM; WE WILL NEED A SET UP CREW SUNDAY EVENING AND A TEAR-DOWN CREW, FOLLOWING THE EVENT (PROBABLY MONDAY EVENING AFTER 6 PM), SO PLEASE SIGN UP FOR THAT AS WELL. ALSO, ANYONE WITH PORTABLE ANTENNAS AND SUPPORTS OR RADIOS FOR USE AT THE POSSE BUILDING, ARE ENCOURAGED TO CONTACT ME AS WELL.

Doug, KV8TD

w6nhx@aol.com

Need a Hand?

If you need assistance, we want to help you. If you are just starting out in ham radio, or simply have run across something that you could use a hand with... technical assistance or answers to questions about the Yavapai Amateur Radio Club, are available from knowledgeable club members.



Don't Hesitate to Ask for Help!!

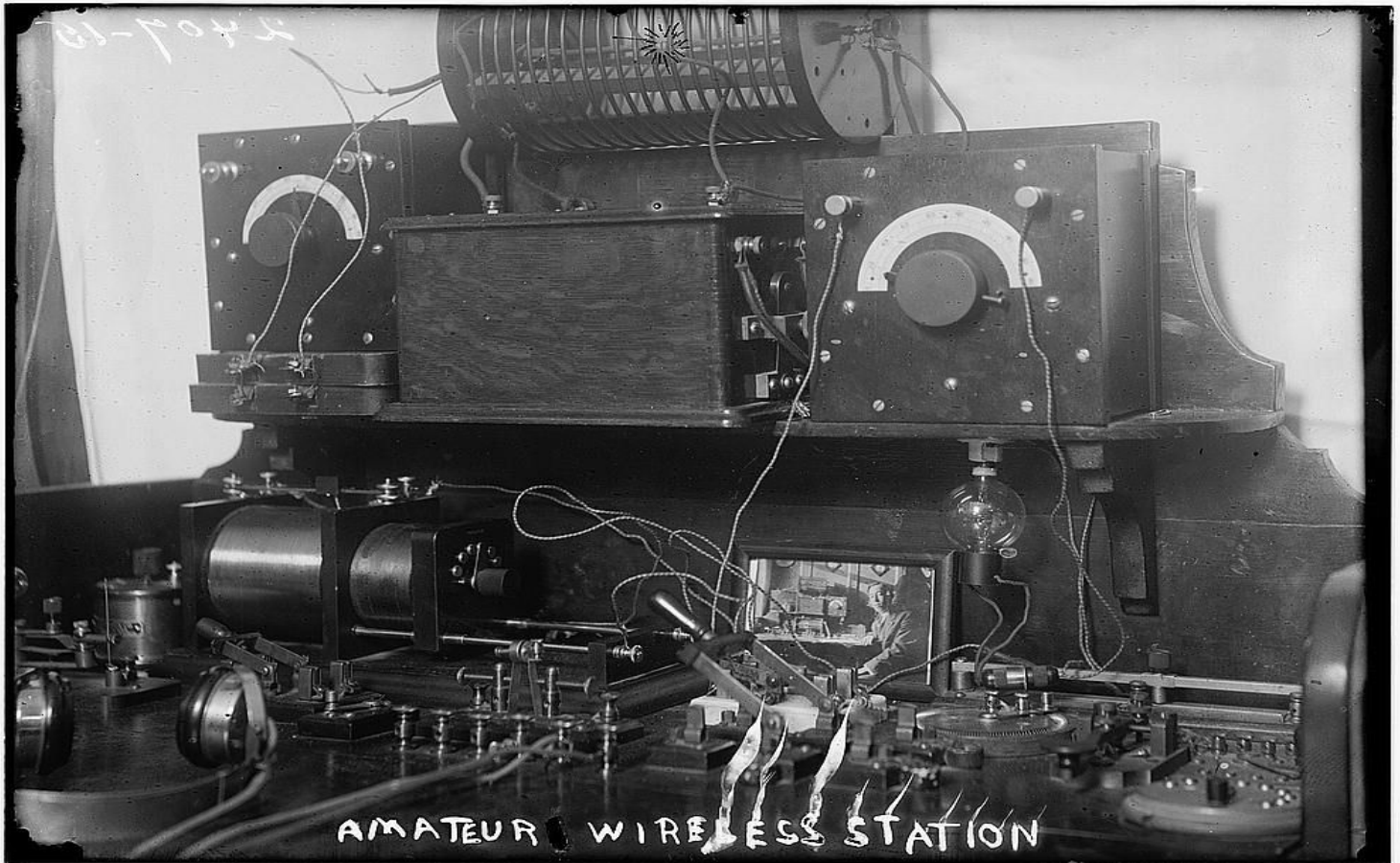
CALL:

Bud Semon, N7CW at: (928) 771- 8267

or

Jim Zimmerman, N6KZ at (928) 713- 0542

Amateur Radio Has Come A Long Way...



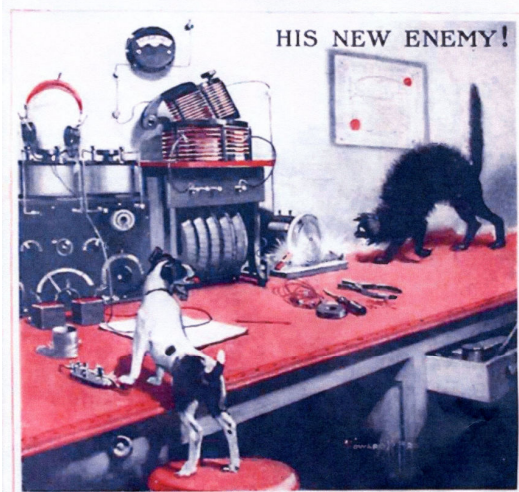
Example of a wireless station circa 1910 -1915



Most radio amateurs are familiar with the unique design and the desirable features of Collins Radio equipment. Art Collins' design and manufacturing philosophy was established prior to World War II.

An interesting overview of the first ten years of Collins Radio is presented in a 22-minute video found at this website: <http://tinyurl.com/kmb4gey>.

This video introduces Art Collins and discusses the radio landscape of the late 1920s and early 1930s. An overview of five pre-war Collins Transmitters is shown. ■



"THE 100 WIRELESS MAGAZINE"



R.L. Drake

From "Boat Anchor Manufacturers", at <http://www.ominous-valve.com/ba-mfrs.html>

Drake is the exception, a privately held, American, family business that has managed to stay afloat selling gear to civilians, though they have had your occasional military contract. Robert Drake started the company in 1943, eventually moving to larger quarters in Miamisburg, Ohio, and then to an even nicer plant in Franklin. It's hard for me to be objective about Drake, because I think it's a great company.

Drake started by selling filters to the military in World War II. These were good filters, and when interference from ham radios to TV sets became a problem after the war, they were easily adapted. I wish that I had kept my old TV-1000LP and its high-pass companion, that an Elmer had given me when I was learning ham radio. They beat anything made now.

While Collins got all the credit for revolutionizing ham radio, Drake was actually there first, with its line of compact base station SSB receivers, the 1A, 2, 2A and 2B. These looked kind of dinky, especially when put alongside the heavy metal of the era, but they used advanced circuitry with a design philosophy similar to the Collins, and they tuned SSB like real champs. They became instant classics, as witness the obscene prices fetched by the 1A on eBay.

Drake's numbering convention continues to this day. The first model in a new line gets a new sequential number, like an airplane, and then the refinements get letters. It is always chronological.

The 2B was especially well received. It was simply a great receiver, sensitive and stable. It put one more nail in the rapidly expanding coffin of "battleship" gear which needed a dedicated room for its use.



Drake TR-4, W-4, MS-4 circa 1971

Next, Drake got into transceivers, the TR-3 and 4. I sound like a broken record, but the TR-4/ 4A is a neat radio, with its little square box, and its external speaker/power supply. There was also an accessory RV-4, which added another VFO. Right now, there are plenty of these transceivers at swap meets, and they can easily be restored and put right back onto the air. It's a simple, little radio that does simple, little things, but you can't beat it for the price.

Next, Drake issued its famous 4-line of separates. They really hit their stride here. First came the R-4, and the T-4, a companion 'reciter' without a VFO, for slaving to the receiver. With the R-4A came the T-4X, a transmitter in its own right, with its own VFO/PTO plus transceive capability, like the Collins. Further improvements were made in the R-4B/T-4XB, and R-4C/T-4XC. There was also a linear, the L-4B, with full legal output, and a couple of shortwave receivers, the prized SPR-4 and the broadcast-oriented SW-4. The 4-line had a mindboggling array of accessories, from filters (of course!) to external frequency synthesizers (the FS-4), antenna tuners (the well regarded MN-200 and MN-2000), RTTY terminals, control consoles and generally just about any commercially viable idea that the engineers could think up.

There's been some debate over whether the 4-line should really count as a boat anchor. It was transitional; a hybrid design. Each revision had fewer tubes and more solid state devices. In size and weight, these were more like dinghy anchors, though the PS-1 power supply could at least keep a car from rolling.

Amazingly, the 4-line is still a viable choice today. It's about the best value on the used market. It lacks the Collins mystique, but also the Collins prices. I'm using one as my primary station right now, and I'd stack it up against any ricebox made. My experience comes close to what I feel when using the better Kenwood radios, like the TS-940 and 950, and the Drake is even about the same size! Operating the 4-line feels a lot like using the Collins S-line, minus the reassuring sturdiness of the Collins. About the only time this becomes a techni-

cal drawback is with the finicky "sweep tube" final of the T4X series, as compared to the rock-solid 6146s in the Collins.

Furthermore, the R-4 may be the most listenable ham receiver ever made. It's like getting a better antenna, or moving to a desert island. The filters in the R-4B and C differ, and both have their adherents, but to my ears the R-4B is the winner. You simply don't get tired from using this radio, even in all-night contest QRM. In fact, many hard-core contesters and DXers hung onto their 4-lines until only a couple of years ago, when computer automation of logging, duping, band changing, etc. required more sophisticated transceivers.

After this came the 7-line, all solid state, and in a redesigned, spacey, blue motif. The TR-7 was a ham transceiver, with a power supply in a matching case, and the R-7 was a very good, general coverage, fully synthesized receiver with a similar look. Like the R-4, the R-7 has its fanatics, who won't listen to anything else. It's a winner, even though it is rather hard to tune. Once again, Drake just kept getting out every kind of high-tech, or even just plain gee-whiz, accessory anyone could ever imagine.



This period also had some rare, amazing radios, such as the UV-3. This extremely advanced transceiver had modules that put it on as many as 3 VHF/UHF bands at once, run from an advanced control head that has been hacked, interfaced, and adapted for more remote bases than seems possible. The UV-3 was at least 10 years ahead of its time, and more if you include the excellent 220 MHz band, which for a long time was left off Japanese radios. (There's no 220 in

Japan.)

In the 80s, Peter Drake, who had replaced his late father, got the company into satellite TV receivers. These were made with typical Drake quality. The demand was huge, and Drake dropped all of its other products to concentrate on them. This led to an epic closeout sale at ham stores.

In the 1990s, Drake broadened its line with a number of video, CATV, and assisted listening products. Happily, it also got back into radio with its very successful R-8 series. There were also brief advertisements of an amateur transceiver.

Unfortunately, it didn't last. In 2005, Drake once again withdrew from HF radio products. While the excellent R-8B was still a steady seller, it could no longer recoup the cost of parts without a major price hike, and management chose to discontinue it. Too bad. The company, however, remains a going concern. ■

VE Testing

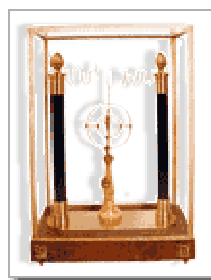
By Don Bauer, WB7TPH

The May 3 test session had 17 candidates testing for mostly Technician licenses. We did have two who upgraded to General, which is always wonderful to see. Overall, we had 15 people pass the tests, including the two Generals. Congratulations to all. The next opportunity will be an evening session in August. The sad news is that two failed to pass and one simply because he second-guessed himself and changed an answer. When taking multiple choice tests, please don't change your mind and the answer, unless you are absolutely sure. Nuf said!



What persuaded Giuseppe Zamboni that he had invented a perpetual motion machine?

From the American Museum of Radio and Electricity



Zamboni Perpetual Motion Machine

longer in motion.

The very light pendulum in Fr. Zamboni's "electrical perpetuum mobile" was still moving at the time of his death in 1846. He never knew that it finally stopped, some say 40, others say 100, years later. The collection at the American Museum of Radio includes a Zamboni perpetual motion machine that is, alas, no



AMATEUR RADIO COUNCIL OF ARIZONA

2014 ARCA/ WILLIAMS HAMFEST & ARRL Arizona State Convention



JULY 18 & 19, 2014

*Presented by the Amateur Radio Council of Arizona
and the City of Williams*



WILLIAMS RODEO GROUNDS, 800 RODEO ROAD, WILLIAMS, AZ
GATES OPEN AT NOON THURSDAY JULY 17
MAIN HALL OPENS AT 8:00 A.M. FRIDAY, JULY 18

FREE ADMISSION!

JULY 20, 2014 - GRAND CANYON TRAIN TRIP

MAIN PRIZES

Grand Prize - Yaesu FT-897D HF/6M/2M/70CM Mobile
Second Prize - ICOM ID-31A UHF HT with D-Star Third
Prize - Yaesu FT-60R 2M/70CM HT with wide receive
Fourth Prize - Argent Data APRS Tracker & GPS with
Baofeng HT/Complete Combo Kit Early Bird - Baofeng
5R dual-band HT

ALL OUTSIDE SPACES - \$20 per Space
Selling and/or Camping

INSIDE SPACES - \$85 per Space

Advance Reservation Closes July 1
After July 1 - On-Site Reservation Only

\$25 per Space

(all prices are for entire weekend)

PRIZES

DOOR PRIZES EVERY HOUR

RAFFLE TICKETS

12 for \$20.00, or 3 for \$5.00

Commercial Vendors, Huge Swap
Meetings, Seminars, Activities, VE Tests
ARRL Card Checking, Hospitality Suite
Saturday Night BBQ Dinner
Sunday Grand Canyon Train Trip



FOR RESERVATION INFORMATION

Visit the ARCA Web Site

www.arca-az.org

On-Line Reservation Available on Web
Site

Call - 602-881-ARCA (2722) for info

Talk-In - 146.78 - (91.5 PL)

W7W SPECIAL EVENT STATION

NO FOOD OR BEVERAGE SALES WITHOUT WRITTEN PERMISSION & HEALTH PERMITS

NO DRUGS or ALCOHOL PERMITTED on GROUNDS

Area Repeaters

Weekly Breakfasts

Wed. Morning Breakfast:
7:00 a.m. at Iron Horse Restaurant (Hwy 89 in Chino Valley)
 * (N 34°43'56.5" W112°27'15.4")
informal – all are invited

Breakfast at Masonic Lodge:
3rd Saturday of each Month
at 9:00 a.m.

(1280 Willow Creek Road, 2nd Floor; above Bank of America)
informal – all are invited

* Location data (per WGS84) provided by Fred Zimmermann, N7PJN

Freq.	PL	Location	Owner/Club	Auto-Patch	Links	Vo IP	Notes:
52.560-	100.0	Mt. Union	N7NGM			IRLP	Node 3301
144.390	Simplex						APRS- www.aprs.fi
145.290-	127.3	Mingus Mtn.	K7YCA				ARES/RACES
145.350-	162.2	Wildflower	W7QHC				Dawn
146.760-	131.8	Hayden Peak	N7SKO				WECOM INC
146.780-	91.5	Bill Williams Mtn.	K7NAZ			IRLP	BWMRC LITZ, 3178
146.880-	100.0	Prescott Heights	W7YRC				YARC
146.920-	162.2	Mount Ord	W7MDY				ARA
146.980-	162.2	Mt. Elden	W7ARA				ARA
147.000+	162.2	Mingus Mt.	K7MRG				MMRG
147.140+	162.2	Mt. Elden	W7ARA				ARA
147.220+	162.2	Mingus Mtn	W7EI				VVARA LITZ
147.260+	103.5	Mt. Union	K7YCA				ARES/RACES
147.260+	127.3	Mt. Francis	K7YCA				ARES/RACES
147.360+	162.2	Mt. Ord	W7MDY				ARA
442.150+	100.0	Mingus Mtn	K7MRG				MMRG
446.025	Simplex		N7NGM			Echo	
448.475-	100	Mt. Elden	W7ARA				ARA
448.875-	100.0	Mt. Elden	W7ARA				ARA
449.250-	192.8	Chino Valley	K7POF				
449.7250-	107.2	Mingus Mtn	K6DLP				
927.0875-	151.4	Mingus Mtn	WB7BYV				
927.3875-	151.4	Prescott	WB7BYV			Echo	ARA

Area Packet Node Station Frequencies.

See http://www.k7yca.org/packet_radio.htm for a list of Winlink nodes and gateways "

Y.A.R.C. IRLP NODE
Node Number 3182
146.100 MHz No PL Tone



T-Hunt Frequencies:
Primary - 145.100 MHz
Secondary - 146.565 MHz

For more Repeater Information & Listings refer to:

- www.w7ara.org/Web/
- www.azrepeaters.net

YAVAPAI AMATEUR RADIO CLUB

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Visit us on the web at <http://www.w7yrc.org>

Many thanks to Dick Hughes, W6CCD, our Webmaster

