



YAVAPAI SIGNAL



The Yavapai Amateur Radio Club • Prescott, Arizona • DM-34 • Volume 28- No.12A • December 2013



Seasons Greetings



A Message from the President...

I hope you didn't miss out on the Great YARC Auction. We had a good meeting in November, in which we were able to complete a slate of officers and directors for 2014. Following the elections was the auction, with lots of fun and plenty of donated goodies for folks to bid on. Many things went very low with the lowest being 50 cents. On the other hand, several items generated some real bidding "wars". In all, the club raised \$659. We have not decided what to do with the money, but some should be set aside for the July ham-fest in Williams.

Please thank WB7RRQ, KD5VRW, and W7HAM for their service during 2013 as your YARC directors and welcome them back for 2014. And welcome N7NGM as your new VP, and WH6EAL as secretary. I would like to give my special thank you to Doug KV8TD for filling in as VP this year and to Loren AE7CG for a great job as secretary.

We were able to get a chairperson for our holiday party, as well. Thank you to Carol Hills, for stepping up to the job. Carol is well versed in party planning and already hard at work. We will move the party back a little, and have it on February 15. It will be the YARC Valentine Sweetheart Party. So, all you guys, plan on taking your sweetheart out for a really nice luncheon. Hopefully we will have some details at the December meeting. Anyone wishing to attend the party will need to sign up in December or January, so check your social calendars quickly. By the way, if you don't have a sweetheart, you can come too! Come to the December meeting or check the Yarc-mail for details as they come available. But, don't miss out on a good time.

Don, WB7TPH

December Program:

Our program for the December meeting will be all about event communication. Lloyd WA6ZZJ will do a presentation on what "event-comm" is and how to get involved. We have many new members who have yet to get their feet wet in the service side of amateur radio and we have some seasoned veterans who are not aware of what they need to do to get involved. This should be a great intro to the subject. Don't miss out.



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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. ■



Minutes of October 31, 2013 Board of Directors Meeting at JB's Restaurant, Prescott, Arizona

Present: WB7TPH, W7BJ, AE7CG, WB7RRQ, AD7YR, W7HAM

The meeting was called to order by WB7TPH at 1842 MST.

Agenda:

Old Business:

1. Treasurer's Report and Meeting Minutes: The board approved of the treasurer's report and meeting minutes as published in the November 2013 issue of the *Yavapai Signal*.
2. Projector: W7BJ reported that prices for projectors are steadily rising, and that a particular projector that meets the clubs needs now sells for \$541.99. He was authorized to submit a purchase order to the vendor. With the addition of \$45.26 in sales tax, the total expense was \$587.25.
3. Projection Screen: WB7TPH said that there was no news to report about this subject.
4. Yarnell Special Event Radio Operation: WB7TPH posed the question, "Will KV8TD be the trustee for the special event radio station call sign?" Since KV8TD was not present at the board meeting, the question was not answered.
5. Candidates for Club Officers and Board of Directors Identified: As of the date of the board of directors meeting, KV8TD and N7NGM have been identified as candidates for vice president; and WB7RRQ, W7HAM, and KF7RXW have been identified as candidates for the board of directors. Other nominations for club officers and board members will be taken from the membership in attendance at the November 7, 2013 general meeting.
6. Holiday Party: At the November 7, 2013 general meeting, WB7TPH will poll those present to ascertain who would be interested in attending a YARC holiday party. If there is insufficient interest, then the party will not be held.
7. November Auction: WB7TPH and K6VVR have boxes of equipment and parts. WB7TPH and K6VVR will circulate donation forms to donors. Anything not sold will also be offered for sale at the Williams hamfest in 2014. W7HAM volunteered to help WB7TPH in sorting the material that will be auctioned.

New Business:

1. Format of November 7, 2013 General Meeting: a) abbreviated general business discussion; b) club election; c) break; d) 50-50 drawing; and e) auction.
2. Adjournment: WB7TPH adjourned the meeting at 1907 MST.

Respectfully submitted by

Loren Singh, AE7CG

YARC Secretary

Minutes of November 7, 2013

General Meeting

at Granite Mountain Middle School, Prescott, Arizona

The meeting was called to order by WB7TPH at 1900 MST, and the Pledge of Allegiance to the Flag was recited by all present. Visitors did self-introductions and were welcomed.

WB7TPH asked for a motion to approve the minutes of the October 3, 2013 general meeting as published in the *Yavapai Signal*. WB9VGJ made the motion. K6VVR seconded the motion. The motion was unanimously approved by acclamation.

WB7TPH asked for a motion to approve the treasurer's report for October 2013 as published in the *Yavapai Signal*. WB7RRQ made the motion. K6VVR seconded the motion. The motion was unanimously approved by acclamation.

WB7TPH asked WB9VGJ for a summary of the most recent VEC license examination session. WB9VGJ reported that 42 individuals attended the session. The results were 35 new Technician class licensees and 1 new General class licensee. The success rate was 86%. License examination preparation teachers were KC8BOB, WN7L, and W7JLC. K6VVR served as one of the test session examiners. W7JLC mentioned that the Verde Valley Amateur Radio Association (VVARA) will be sponsoring an upcoming test session in Cornville, and that 8 to 9 individuals had already registered for it. He said there was still room for more participants. W7JLC also mentioned that on December 7, 2013 an orientation meeting for newly licensed Technician class licensees will be held at the ham

radio shack on the campus of Embry-Riddle Aeronautical University (ERAU).

New Members: The following individuals applied for membership in the Yavapai Amateur Radio Club (YARC): Bill Mundy, KB6MUN; Philip Bickford, KC7JGQ; Claire Bickford, KE7BCL; and Melanie Olstadt, KE7GAM. Their applications were unanimously approved by acclamation.

K7NRA, Paulden: WB9VGJ announced that YARC would be operating a special event radio station to commemorate the founding of the National Rifle Association. The station will be operating from 0800 to 1700 MST on November 17, 2013 from the Gunsite Academy in Paulden. All licensed YARC members were encouraged to take part in operating the station.

Old Business:

1. Club Election: WB7RRQ, KD5VRW, and W7HAM are incumbent members of the board of directors and are seeking re-election to a second one-year term. N7NGM is a founding member and past president of YARC and is seeking the office of vice president. WH6EAL is seeking the office of secretary. All of these candidates were elected to their respective offices unanimously by acclamation.
2. T-Shirts: K6VVR mentioned that he had shirts for those who previously ordered them.
3. Fox Hunt: K6VVR announced that the next fox hunt would be held on November 10, 2013 at 1300 MST starting in the parking lot of the Arizona Credit Union, located near the intersection of Gail Gardner Way and Willow Creek Road in Prescott. The event will last from 1300 to 1500 MST.

New Business:

1. Expenses for K7NRA Event: KB7TRE requested \$75.00 to cover the costs for food and other items for the November 17, 2013 operation of the special event radio station in Paulden. The request was approved unanimously by acclamation.
2. Summits On The Air (SOTA): There will be a SOTA operating event on November 9, 2013. Interested hams should check the SOTA website for details.

3. Holiday Party: KA7LKW volunteered to chair a committee to make preparations for a YARC holiday party. WB7TPH said that a party would be held only if 20 or more people indicated an interest to attend.
4. Adjournment: WB7TPH adjourned the meeting at 1928 MST.
5. 50-50 Drawing: KE7GAM drew ticket number 531606. KC7BPI was the lucky winner of \$42.50.
6. Club Auction: K6VVR and WB7TPH served as auctioneers. W7BJ reported that YARC received \$659.00 for all the items sold. Auction results appear in a separate table.

Respectfully submitted by

Loren Singh, AE7CG

YARC Secretary

Table 1. Club Auction Results

| Lot | Item(s) | Buyer | Price | Lot | Item(s) | Buyer | Price |
|-----|----------------------------|-----------|----------|-----|-----------------------------|--------|---------|
| 1 | Motorola DTMF Microphone | WA7ARK | \$1.00 | 19 | Cathode Ray Tube Tester | K6UWV | \$2.00 |
| 2 | Packet Node Controller | KE7TDR | \$5.00 | 20 | MaxComm CB Transceiver | WH6EAL | \$1.00 |
| 3 | Kenwood R-2000 Receiver | W6UND | \$60.00 | 21 | Wrist Ground Straps | KE7TDR | \$15.00 |
| 4 | Heath Power Supply | WB7TPH | \$5.00 | 22 | Electronic Parts Assortment | W6UND | \$0.50 |
| 5 | Yaesu FT-990 Transceiver + | W7BJ | \$270.00 | 23 | Palomar Noise Bridge | WA7ARK | \$6.00 |
| 6 | Hitachi Oscilloscope | W7BJ | \$30.00 | 24 | Ramsey Active Antenna Kit | W7JLC | \$2.00 |
| 7 | Astron 35A Power Supply | K6VVR | \$100.00 | 25 | Heath Signal Generator | WB7TPH | \$3.00 |
| 8 | Power Adapter Kit | N7PJN | \$10.00 | 26 | Amplified SW Antenna | KE7TDR | \$2.00 |
| 9 | Miniature Oscilloscope | K6VVR | \$17.00 | 27 | Motorola PTT Microphones | W7BNW | \$5.00 |
| 10 | Telephone Amplifier | Not sold | Not sold | 28 | Heath Field Strength Meter | NC | \$2.00 |
| 11 | Telephone Answering Mach. | K6VVR | \$1.00 | 29 | EMI Filter | W7JLC | \$1.00 |
| 12 | AT&T Trimline Telephone | KA7LKW | \$4.00 | 30 | Knight Z-Bridge | K7POF | \$1.00 |
| 13 | Heath Analog Voltmeter | W7BJ | \$9.00 | 31 | Heath Grid Dip Meter | W7BJ | \$5.00 |
| 14 | Cobra CB Transceiver | W7BJ | \$12.00 | 32 | Swan 10M Transceiver | K6UWV | \$15.00 |
| 15 | Heath High Voltage Probe | KE7TDR | \$3.00 | 33 | Code Practice Oscillator | WB7TPH | \$1.00 |
| 16 | Heath Q-Meter | K7POF | \$5.00 | 34 | Microphone Stand | W7JLC | \$1.00 |
| 17 | Radio Shack SWR Meter | Bill Hart | \$9.00 | 35 | Motorola Loudspeakers (3) | W7BNW | \$10.00 |
| 18 | Vacuum Tube Tester | W7BJ | \$38.00 | 36 | Mobile Antenna Base Springs | KF7YFN | \$4.00 |
| XX | XXXXXXXXXXXXXXXXXXXX | XX | XXX | 37 | Miscellaneous Hardware | NC | \$3.50 |

Upcoming Events

- **December 7, 2013** - Free informal class at Embry-Riddle on getting started in the world of amateur radio.
- **January 2013** - VE Training Session



AND





Yavapai Amateur Radio Club
 PO Box 11994
 Prescott, AZ 86304-1994

**TREASURER'S REPORT
 October 2013**

| | | General Fund | Repeater Fund |
|--|------------|-------------------------|--------------------------|
| BEGINNING CASH BALANCE - September 30, 2013 | | 8,674.76 | 2,012.03 |
| Dues - Shawn Shipley | KG7FFF new | 18.00 | 2.00 |
| Dues - John Broughton | WB9VGJ | 18.00 | 2.00 |
| Dues - Walter Schumann | KF6SPS | 18.00 | 2.00 |
| Dues - Ron Weber | AE7BK | 18.00 | 2.00 |
| Dues - Bob Smith | WB6ODR | 18.00 | 2.00 |
| Dues - Linda Smith | KD7EEO | 0.00 | 0.00 |
| Dues - Szczepan Bartold | KD7HCS | 18.00 | 2.00 |
| Dues - Brian Stapleton | KW6J | 18.00 | 2.00 |
| Dues - Mary Stapleton | WA6CWR | 0.00 | 0.00 |
| Dues - Harold Berthold | KC7BPI | 18.00 | 2.00 |
| Dues - James Grimm | KD7RMV | 18.00 | 2.00 |
| 50/50 Raffle | | 63.00 | |
| 50/50 Raffle - Ron Weber | AE7BK | (31.50) | |
| Interest Income | | | 0.09 |
| TOTAL INCOME | | 193.50 | 18.09 |
| Pete Morrison - Speaker Dinner | 1174 | 28.80 | |
| TOTAL EXPENSES | | 28.80 | 0.00 |
| ENDING CASH BALANCE - October 31, 2013 | | 8,839.46 | 2,030.12 |

Signature: 
 David B Hanson, W7BJ, Treasurer

Date: 11/2/2013

Elmer Program

The March 2010 Yavapai Signal first contained a notice, similar to the one on the right, which listed names to contact if you needed ham radio assistance. The names belonged to members participating in YARC's "Elmer" program. Neil Vince, K7SEN coordinated the program, and with help from other members did a fantastic job assisting others. In January 2013, Neil resigned as the Elmer coordinator, and Bud Semon, N7CW volunteered to take on the task.

Bud and Jim Zimmerman, N6KZ, now are providing excellent service to many of our members, and they are always willing to assist others in the true spirit of Amateur Radio.

The photos below show Bud and Jim with Gene, K7FSK, Ron, K7RJ, and N6VR helping Dick Diddams, W7QHE, disassemble his beam and tower.

Dick and his XYL, Lois are moving from Arizona to their new QTH in Virginia. ■

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



Above -- Bud Semon, N7CW removing Dick's Force 12 C-31XR beam from his U.S. Tower



New Officers Elected for 2014-15



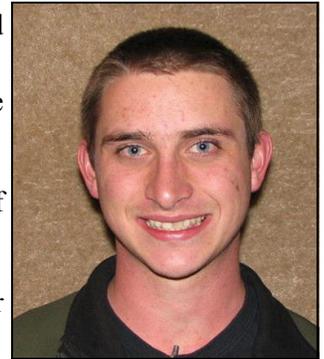
Vice- President
Rex Mauldin, N7NGM

Election of Officers for Vice-President and Secretary, and Board Members were held during November's YARC meeting.

Rex Mauldin, N7NGM was elected Vice-President. Rex is one of YARC's original members and one time President..

Forrest Murdoch, WH6EAL, will assume the responsibilities of Secretary. Forrest is a student at Embry Riddle University.

Three current Board Members also were elected to continue their posts for 2014 -- Ralph Gendron, W7HAM, Bob Rosevear, WB7RRQ, and Roger Nash, KD5VRW.



Secretary
Forrest Murdoch, WH6EAL

Congratulations and thanks to all for stepping up to volunteer for these important positions. ■

Got the license, now what? Getting on the Air

By Jack Crabtree, W7JLC

The Embry-Riddle Eagle Amateur Radio Club is pleased to announce a free informal class with emphasis on getting started in the world of amateur radio. This class is designed for the newly licensed amateur radio operator or those returning to the hobby after a lapse of time.

The class will be held on:

- December 7, 2013, 9:00 A.M. to 11:00 A.M., at Embry-Riddle Aeronautical University, Bldg 75 (AXFAB), Space Systems Laboratory, 3700 Willow Creek Rd, Prescott, AZ
- Preregistration would be appreciated for count only, I would like to know how many to expect.

For additional information contact: Jack Crabtree, 928-771-2344, jskra@cablone.net

The class will cover the following topics:

1. Review of license privileges
2. Equipment selection
 - Transceivers
 - Antennas
 - Power Supplies
 - Coax

- 3 Repeater
- 4 · Making your first contact
- 5 · National and Local Clubs
- 6 · Emergency Communications
- 7 · APRS
- 8 · Hidden Transmitter Hunts
- 9 · Hamfests
- 10 Upgrading your license and more! ■

YARC Officers for 2013

President

Don Bauer, WB7TPH
president@w7yrc.org

Vice President

Doug Freeman, KV8TD
vice.president@w7yrc.org

Secretary

Loren Singh, AE7CG
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

Roger Nash -- KD5VRW

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

SPECIAL EVENT COMMUNICATIONS.....

By Lloyd, WA6ZZJ



Our 2013 special event communications have wrapped up, but preparations are already beginning to take place for upcoming events in 2014 so be sure to check over your 'Go-Kit' and keep your equipment in good operating condition.

A big THANK YOU goes out to all of the people who participated in providing event communications in 2013. If you did not sign up for an event this year then next year would be good time to begin. Whenever possible we always assign new operators at a position with experienced people so they can learn on the job. Amateur Radio operators providing emergency and event communications is one of the reasons we are able to be licensed and have the frequencies to operate on that we have. Event communications is also great experience for emergency communications. Stations are setting up and operating under field conditions and all of our operations are run on controlled nets just like they would under emergency conditions.

We hope "special event" communications never becomes "emergency" communications, but this service offers all of us the opportunity to prepare for emergency communications while helping our community in the process. It is also an excellent way for us to show people what ham radio is all about, what fun we have with it and it helps the Yavapai Amateur Radio Club maintain its ARRL Special Service Club status.

The 2014 Event Communications schedule so far is as follows:

- Saturday, February 1, 2014 will be the Sedona Marathon in the Verde Valley. With this event being in the Verde Valley we are looking to have some assistance from the Verde Valley Amateur Radio Association (VVARA) again as

we did last year. Signups for this event will begin at the December YARC meeting.

- Friday, Saturday and Sunday, April 25, 26, 27, 2014 will be the three day Whiskey Off Road mountain bike event in Prescott. They are anticipating close to 2000 riders this year so our communications will be very important to the success of this event.
- Saturday, May 3, 2014 is the 36th running of the Whiskey Row Marathon in Prescott. This year there are new race times with the marathon beginning at 7:00 a.m..
- Saturday and Sunday, May 17, 18, 2014 is the MS-150 bicycle event once again in the Verde Valley. As with the Sedona Marathon, we will be looking for support from the VVARA on this two day operation.
- Saturday, September 6, 2014 will be the tentative date for the March of Dimes March for Babies in Prescott.

Some of the dates may be subject to change and more events will be added, but this is the schedule as I have it so far...

Once again, THANK YOU to all who participated in 2013. Looking forward to your help again in 2014. All the veteran, event communications, operators should be encouraging some of our new members and members who haven't participated into becoming active in special event communications. ■

Why SENIORS STILL NEED NEWSPAPERS....

I was visiting my niece last night when I asked if I could borrow a newspaper.

"This is the 21st century," she said. "I don't waste money on newspapers.

Here, use my iPad."

I can tell you this.....That fly never knew what hit him!



November 2013 Foxhunt

By John Broughton, WB9VGJ

The monthly foxhunt was held November 10th. Diane, KE7ODP, and Pete, K6VVR, hid the transmitters and Patrick, KE7EWD, was with them as an observer.



The hunters were:

1. Bryan, W7BNW, and Dave, W7BJ.
2. Bob, WB7RRQ, and Mike, WA7ARK.
3. Jerry, KF7FPD, and his XYL.
4. Jeff, WB7RFY, Frank, KF7ANX, Forrest, WH6EAL, and I.

The hunt got off to a somber start as several hunters came upon a motorcycle/SUV accident at Iron Springs Rd. and Meadowridge. Our team got to the intersection just as the ambulance and fire truck were arriving. A picture of it can be seen with the foxhunt pictures.

The hunt was challenging considering the winding roads, many of which are not through roads, in the neighborhood in which the transmitters were hidden. The

team I was with was first to find the primary transmitter. As Jeff won't be in town for next month's hunt and Frank would rather hunt than hide the transmitters, Forrest and I will be hiding the transmitters.

Bryan and Dave were the second team to find the transmitters. Unfortunately, Bob and Mike did not finish the hunt.

The hiding place for the secondary transmitter was a unique one. There was a very large boulder with a hole drilled through from the front to the back. The transmitter was fastened to a twig with a rubber band and inserted into the rear of the hole. It was challenging to find.

A couple taking a walk in the neighborhood were curious and stopped to see what was going on and had a nice chat with Pete and Patrick.

We had are usual after-hunt get-together at Denny's. The social aspects of the hunts are as enjoyable as the actual hunts.

You can see pictures of the hunt at: <http://tinyurl.com/YARCNov2013foxhunt>

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

VE Testing

By Don Bauer, WB7TPH

Well, the license testing is completed for this year, and we are looking forward to 2014. What an ending we had! First the FCC went dark along with the rest of government (with the exception of those who should have stayed home). Then Jack W7JLC had 50 people sign up for class, and a week later, our VE team saw 42 people test. Fantastic! We have a lot of new Technician licensees, and one upgrade to General.

We were concerned that the FCC would be behind in the processing, but someone at the club meeting said that their license had been posted that day (6 days after the test) and sure enough the licenses I checked on were all posted on Thursday, Nov.7.

With all that for a finale, we can begin planning for next year. We will have a VE training session in January and our first test session will be February 8th.



Editor's Note:

As this year is coming to a close, I would like to thank all of you who have submitted articles, photos, etc, for this newsletter.



A special thanks goes to the following members who on a regular basis have contributed to the Yavapai Signal, and have made this newsletter possible:

- Don Bauer, WB7TPH for his monthly message from the President, for his VE Test results, and Program information.
- Loren Singh, AE7CG, Secretary, for his most timely, comprehensive, and accurate Meeting Minutes.
- David Hanson, W7BJ, Treasurer, for his complete and accurate monthly Treasurer's Report.
- Lloyd Halgunseth, WA6ZZJ, for his outstanding efforts coordinating and reporting Public Service Communications.
- John Broughton, WB9VGJ, for his reporting and pictures of the monthly Foxhunts, NRA Special Event, VE Coordinator activities, and Step Out for Diabetes Walk.
- Dick Hughes, W6CCD, Webmaster, for his timely posting and maintenance of the newsletter on the YARC website.

In addition to the above members, a big **THANKS** goes out to all the other members, too numerous to mention, who contribute so much to the success of the Yavapai Amateur Radio Club, and to the creation of a stronger, more effective Amateur Radio presence in our community. ■

73,
Joe, AC6AA

Club contacts - At a Glance

| | |
|----------------------------|--|
| President - WB7TPH | president@w7yrc.org |
| Vice President - | vice.president@w7yrc.org |
| Secretary - AE7CG | 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 - KD5VRW | rnpublish@sbcglobal.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 |

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.

Membership Count:

| | |
|-----------------------------|-----|
| 1st Thurs. in October..... | 188 |
| Gain/Loss..... | +2 |
| 1st Thurs. in November..... | 190 |



Alternating Current

US vs the rest of the West

Reprinted from the "**The AARC Newsletter, THE MODULATION TIMES**"

The system of three-phase alternating current electrical generation and distribution was invented by a nineteenth century creative genius named Nicola Tesla. He made many careful calculations and measurements and found out that 60 Hz (Hertz, cycles per second) was the best frequency for alternating current (AC) power generating. He preferred 240 volts, which put him at odds with Thomas Edison, whose direct current (DC) systems were 110 volts. Perhaps Edison had a useful point in the safety factor of the lower voltage, but DC couldn't provide the power to a distance that AC could.

When the German company AEG built the first European generating facility, its engineers decided to fix the frequency at 50 Hz, because the number 60 didn't fit the metric standard unit sequence (1,2,5). At that time, AEG had a virtual monopoly and their standard spread to the rest of the continent. In Britain, differing frequencies proliferated, and only after World War II the 50-cycle standard was established.

Not only is 50Hz 20% less effective in generation, it is 10-15% less efficient in transmission, it requires up to 30% larger windings and magnetic core materials in transformer construction. Electric motors are much less efficient at the lower frequency, and must also be made more robust to handle the electrical losses and the extra heat generated. Today, only a handful of countries (Antigua, Guyana, Peru, the Philippines, South Korea and the Leeward Islands) follow Tesla's advice and use the 60 Hz frequency together with a voltage of 220-240 V.

Originally Europe was 120V too, just like Japan and the US today. It has been deemed necessary to increase voltage to get more power with less losses and voltage drop from the same copper wire diameter. At the time the US also wanted to change but because of the cost involved to replace all electric appliances, they decided not to. At the time (50s-60s) the average US household already had a fridge, a washing-machine, etc., but not in Europe.

The end result is that now, the US seems not to have evolved from the 1950s and 1960s, and still copes with problems as light bulbs that burn out rather quickly when they are close to the transformer (too high a voltage), or just the other way round: not enough voltage at the end of the line (105 to 127 volt spread).

Note that currently all new American buildings get in fact 240 volts split in two 120 between neutral and hot

wire. Major appliances, such as virtually all drying machines and ovens, are now connected to 240 volts. Mind, Americans who have European equipment shouldn't connect it to these outlets. Although it may work on some appliances, it will definitely not be the case for all of your equipment. The reason for this is that in the US 240 V is two-phase, whereas in Europe it is single phase.

Roughly speaking, to operate a particular appliance requires a particular amount of POWER, which (at least for resistive loads) is current (I - amps) times voltage (E - volts). Remember from your introduction to ham radio PIE. If you double the voltage, you draw half the current to achieve the same power. The primary advantage of lower current is that you lose less power in the wires feeding current to the appliance (or you can use smaller, cheaper wires for the same power loss rating). On the other hand, the higher voltage is somewhat more dangerous if accidentally touched or if there is an accidental short circuit.

Some experienced electricians are relatively casual about touching 110 V circuits, but all respect 230 V. (This constitutes a "don't-try-this-at-home thing, though --it's quite possible to get a fatal shock or start a fire with 110 V!) Current trends are toward the use of even lower voltages (24V, 12V, 5V, 3.3V...) for any devices which do not draw much total power to increase safety.

Power is rarely distributed at these lower voltages; rather it is converted from 110 V or 230 V by a transformer at the earliest opportunity. Even in North America, 220-240V is commonly used in residential appliances for most high-power electrical appliances (ovens, furnaces, dryers, large motors, etc.) so that the supply current and supply wire size can be smaller. Higher power industrial applications often use 480 V or more. And, of course, transmission lines use progressively

higher voltages as the distance and total power go up (22,000 V for local distribution to 1,000,000 V for long distance lines).

How does 220v work from the fuse box? For 220 volts you have two 110 hot lines and a neutral coming to your box. A 110 breaker only uses one line of this to send power to whatever you have connected to it and then the power is returned on your neutral wire. A 220 breaker uses one of each of the two lines to send 220 volts to whatever you have connected to it, but the neutral does not complete the circuit as it does in a 110 volt circuit. In a breaker box each slot that a breaker can connect to, the power is alternately picked up from one line and then the other line. Slot 1 would use line 1...slot 2 would use line 2...slot 3 uses line 1...slot 4 uses line 2 etc etc. A 110 volt breaker only uses one slot and a 220 volt breaker uses two slots.

What is the difference between a voltage converter and a voltage regulator?

A voltage regulator functions as a voltage converter as well as a voltage stabilizer. A voltage stabilizer will stabilize the electricity to a fixed current. This unit is usually used in countries where the voltage currency is not stable. The voltage regulator will stabilize a voltage fluctuation between 75v-130v to 110v (+- 4%).

The voltage regulator will stabilize a voltage fluctuation between 180v-260v to 220v (+- 4%).

Do voltage converters convert the cycle (Hz)?

All voltage converters only convert the voltage and not the cycle, however most appliances and electronics will function properly with them.

North America 110-120 volt electricity is generated at 60 Hz. (Cycles) Alternating Current. Most foreign 220 - 240 volt electricity is generated at 50Hz. (Cycles) Alternating Current. This difference in cycles may cause the motor in your 60Hz North American appliance to operate slightly slower when used on 50Hz foreign electricity. This cycle difference will also cause analog clocks and timing circuits that use Alternating Current as a timing base to keep incorrect time. Most modern electronic equipment including battery chargers, computers, printers, stereos, tape and CD players, VCR/ DVD players, etc. will not be affected by the difference in cycles. ■

TRIGATRON

One of the common uses for vacuum tubes is as a switch. Some common types have been modified to switch at high speeds as was needed in early vacuum tube computers. RADAR is still a user of high power vacuum and gas tubes for switching voltage to magnetrons. One odd tube developed and still used by the British for switching, is the trigatron. The RAF had problems with their RADARs at high altitudes. What they came up with isn't actually a vacuum tube. It would be more correct to call it a pressure vessel. After many experiments, a mixture of 93% argon and 7% oxygen was pumped into the envelope at a pressure of about 65 PSI. Two of the three electrodes within the envelope would conduct when the trigger electrode was pulsed. This example of the CV100 we have shown here would control up to 250 KW at a voltage of 24 KV.

Vacuum tubes are like light bulbs and when dropped, they break with a pop as the tube implodes. Not very dangerous. The trigatron is another problem. When it breaks, it explodes. To protect the operator from flying glass, they made a machine similar to what they use to make socks for people. The thread seems to be nylon line and a coating of lacquer. Very nice stitch work.

Visit the museum at N6JV.com

Norm N6JV



The Great YARC Auction - November 7, 2013

Pete, K6VVR and Don, WB7TPH served as auctioneers for this event, which was held at the monthly YARC meeting at Granite Mountain Middle School. Thirty Six items plus miscellaneous hardware was auctioned off to a few determined bidders and other members that just couldn't pass up a bargain. The auction netted \$659.00 for the club. ■



How children perceive their grandparents...

1. She was in the bathroom, putting on her makeup, under the watchful eyes of her young granddaughter, as she'd done many times before.. After she applied her lipstick and started to leave, the little one said, "But Grandma, you forgot to kiss the toilet paper good-bye!" I will probably never put lipstick on again without thinking about kissing the toilet paper good-bye....
2. My young grandson called the other day to wish me Happy Birthday. He asked me how old I was, and I told him, 80. My grandson was quiet for a moment, and then he asked, "Did you start at 1?"
3. After putting her grandchildren to bed, a grandmother changed into old slacks and a droopy blouse and proceeded to wash her hair. As she heard the children getting more and more rambunctious, her patience grew thin. Finally, she threw a towel around her head and stormed into their room, putting them back to bed with stern warnings. As she left the room, she heard the three-year-old say with a trembling voice, "Who was THAT?"
4. A grandmother was telling her little granddaughter what her own childhood was like. "We used to skate outside on a pond. I had a swing made from a tire; it hung from a tree in our front yard. We rode our pony. We picked wild raspberries in the woods" The little girl was wide-eyed, taking this all in. At last she said, "I sure wish I'd gotten to know you sooner!"
5. My grandson was visiting one day when he asked, "Grandma, do you know how you and God are alike?" I mentally polished my halo and I said, "No, how are we alike?" "You're both old," he replied.
6. A little girl was diligently pounding away on her grandfather's word processor. She told him she was writing a story. "What's it about?" he asked. "I don't know," she replied. "I can't read."
7. I didn't know if my granddaughter had learned her colors yet, so I decided to test her. I would point out something and ask what color it was. She would tell me and was always correct. It was fun for me, so I

continued. At last, she headed for the door, saying, "Grandma, I think you should try to figure out some of these colors yourself!"

8. When my grandson Billy and I entered our vacation cabin, we kept the lights off until we were inside to keep from attracting pesky insects. Still, a few fireflies followed us in. Noticing them before I did, Billy whispered, "It's no use Grandpa. Now the mosquitoes are coming after us with flashlights."
9. When my grandson asked me how old I was, I teasingly replied, "I'm not sure." "Look in your underwear, Grandpa," he advised "Mine says I'm 4 to 6."
10. A second grader came home from school and said to her grandmother, "Grandma, guess what? We learned how to make babies today." The grandmother, more than a little surprised, tried to keep her cool. "That's interesting." she said.. "How do you make babies?" "It's simple," replied the girl. "You just change 'y' to 'i' and add 'es'."
11. Children's Logic: "Give me a sentence about a public servant," said a teacher. The small boy wrote: "The fireman came down the ladder pregnant." The teacher took the lad aside to correct him. "Don't you know what pregnant means?" she asked. "Sure," said the young boy confidently. "It means carrying a child."
12. A grandfather was delivering his grandchildren to their home one day when a fire truck zoomed past. Sitting in the front seat of the fire truck was a Dalmatian dog. The children started discussing the dog's duties. "They use him to keep crowds back," said one child. "No," said another. "He's just for good luck." A third child brought the argument to a close. "They use the dogs," she said firmly, "to find the fire hydrants."
13. A 6-year-old was asked where his grandma lived. "Oh," he said, "she lives at the airport, and when we want her, we just go get her. Then, when we're done having her visit, we take her back to the airport."
14. Grandpa is the smartest man on earth! He teaches me good things, but I don't get to see him enough.. to get as smart as him!
15. My Grandparents are funny, when they bend over, you hear gas leaks.. and they blame the dog. ■

K7NRA Special Event

By John Broughton, WB9VGJ

Our K7NRA special event to celebrate the National Rifle Association's 142nd birthday was held Nov. 17th at Gunsite Academy. Buz, K7GST, once again generously offered the radio shack in his barn for the event. He is a most generous host.

Terry, KB7TRE, brought doughnuts, fried chicken, potato salad, macaroni salad and rolls. He also provided the coffee.

With the event being on a Sunday, we did not have a large number of folks attend. We had just eight hams and one visitor (N7NGM's father). Dave, W7BJ, brought his equipment so we had two stations operating. We did not have a CW station operating this year. We have had one the past few years, but the total number of contacts was never very high.



Mike, K7NRA starting off the Special Event

The major problem was that the annual ARRL Sweepstakes were in full swing and it was very difficult and often impossible to make contacts as there were stations working the Sweepstakes filling the bands on 10M, 15M and 20M. When an open spot was to be had near our published frequencies, it seemed that there would be a small number of stations answering our CQ calls, but then no stations would answer. On 40M we had a problem with intermittent high-level static noise. We ended the operation prematurely around 3:30 p.m. We only managed 52 QSOs for the day: 44 on HF and 8 on 2M. It was a frustrating day for the operators. However, Buz, K7GST, Gunsite's owner spent a good portion of the day socializing with us, which made the overall operation very enjoyable. He is a most gracious host.

My thanks to all who came up and participated in the operation.

Pictures N7PJN and I took can be seen at: <http://tinyurl.com/K7NRA2013album>

73, John, WB9VGJ

-- A Few Best Oddities --

- Cut flowers become sleepy and wilt in the presence of Apples.
- In 1913, the tax on a \$4000 annual income was one penny.
- Henry Ford forgot to put a reverse gear in his first automobile.
- Ninety Seven percent of all people offered a new pen to try, write their own name.
- A dog is as old at 12 years as a man at 84.
- Saturday is the most dangerous day to drive a car.
- In the U.S. a person dies every 14.5 seconds.
- If a color blinded woman marries a man with normal vision, all of their sons will be color blind, the daughters will have normal vision.

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, N7PJJ

| 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 | WA7UID | | | | 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 |

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

For more Repeater Information & Listings refer to:

- www.w7ara.org/Web/
- www.azrepeaters.net
- www.azfreqcoord.org/listings.htm

YAVAPAI AMATEUR RADIO CLUB

P.O. BOX 11994

PRESCOTT, AZ 86304

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

Many thanks to Dick Hughes, W6CCD, our Webmaster

