



YAVAPAI SIGNAL



The Yavapai Amateur Radio Club • Prescott, Arizona • DM-34 • Volume 25 – No.1 • January 2010

HAPPY NEW YEAR

From The Editors's Desk ...

Once again this is the time to look back over the past year to evaluate our club's performance and to see how we might improve that performance in 2010.

2009 was a good year for YARC. Membership has increased 23% from this time last year. Attendance at the last few meetings has been significant, as evidenced by the difficulty finding seats for all the members and visitors.

YARC has made positive strides in several areas. We are fortunate to have energetic, capable leaders and many active, dedicated members supporting our various club activities. There are too many names to mention here, but a special thanks is in order for all you folks who have volunteered your time and effort to maintain the status of our "Special Service Club". By active participation in club activities, YARC has continued to demonstrate proficiency in the following areas:

- Training and supporting local Amateur Radio efforts in licensing, upgrading and continuing education or emerging.
- Public Relations and improving the visibility of Amateur Radio; promoting it as a positive force within our community.
- A willingness to become involved in any local emergency or drill.
- Technical Advancement and encouraging members to become familiar and knowledgeable in technical Amateur Radio aspects in our community.
- Operating Activities in ongoing programs as well as new areas of particular interest for our club.

This coming year, we should continue to accommodate the varying interests of our membership, by providing interesting programs to improve meeting attendance, continued involvement with public service and emergency communications, supporting license classes and VE testing, assisting new members, encouraging student involvement, improving public relations, and sponsoring social events, as well as a variety of activities, such as Field Day, Hamfest, and Fox Hunts.

All members should feel free to offer suggestions to our Board members on how we can improve our club. I'm certain that we will be able to find areas of opportunity to make YARC an even better club.

Have a great New Year!
Joe, AC6AA


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Membership Count:

1st Thurs. in November.....	185
Gain/Loss.....	+3
1st Thurs. in December.....	188*

* Includes 12, 3-Month Memberships



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 for allowing us to acquire the original club repeater.

Minutes of December 3, 2009 Board Meeting



Meeting was called to order at 1820 hrs. by the President, K6VVR. Also in attendance:

KB7TRE, KF6SPS, KE7DTR, WB7UZV, WB7RFY, & AD7RL.

Website review discussed – remains tabled, researching options to Front-Page; webmaster input required.

Pending motion for YARC & VVARA boards to meet; still trying for an acceptable date.

ARCA affiliation renewal due each December; YARC has been member since 1991. On motion of WB7UZV, second of KF6SPS, and no dissenting, required forms and fees will be submitted.

T-hunt progress reviewed; standard monthly schedule will be presented tonight. Encourage all to participate.

Upcoming programs, Jan. – G6NYH; Feb. – open; Mar. – open.

Discussion of ‘starter radios’, ht vs. mobile, revealed options for new licensee’s, included FT-250R & Icom Scout.

WN7E, departing Board member, was thanked for service to the club.

WB7RFY, departing Secretary, was thanked for service to the club.

On motion of WB7RFY, second by KB7TRE & no dissenting, meeting was adjourned at 1840 hrs.

Respectfully submitted,

Jeff Hanna, WB7RFY

YARC Secretary

Minutes of December 3, 2009 General Meeting

Meeting was called to order at 1900 hrs. Following the Pledge of Allegiance; introductions were made.

Attendance: 67 of whom 64 signed in. Visitors included J. Nyman, KE7WYY.

Minutes of the November 5 meeting were approved as published, on motion of KB7TRE, second of KD7VBG, & no dissenting.

New Members, on motion of WB9VGJ, second of KB7CH, and no dissenting: KF7GGU, Marianne Johnson; KF7GGV, Fred Johnson; KF7GGX, Gary Hickman; KF7GGY, Jason Downer; KF7GHA, John Butcher; & Ida Belle Powers, were welcomed into the membership with applause.

Treasurer: report offered by VP in AB7NKs absence for illness: Beginning balance \$3729.91, Ending balance \$3896.14, and repeater fund balance of 837.92. Report accepted as read on motion of AD7FW, second of W5VJH, & no dissenting.

COMMITTEE REPORTS:

ARES/RACES: WA6ZZJ reported on Nov. 14th SET, and announced preliminary public service schedule for 2010.

Newsletter: AC6AA thanked all who have submitted articles, and encourage all to contribute.

VE: WB7UZV reported 2 sessions were held in November, on the 7th & 21st. Statistic for 2009 show 9 sessions, resulting in 96 new licensees’s or upgrades, 50 Technicians, 29 Generals; 17 Extras. Thanks to all VE’s & VI’s.

Patches: Treasurer has two sizes available at \$3.00 each and club decals for \$1.00.

Shirts: W6CCD has supply of club shirts available at \$19.00. w6ccd@arrl.net

Badges: WB6ODR is accepting orders at \$ 6.75 for the custom engraved YARC badge. Has several ready for pick-up. lrsmith@cableone.net

Repeater: Committee reports all working well via WB6ODR.

IRLP: All OK reports W7JLC. Node is on 442.350+ 100 HZ PL.

Classes: W7JLC is planning Spring Technician & General classes. Extra will be offered if there is enough interest. Tech. question pool is changing summer of 2010; if you have a current study guide, please consider giving it to the program so it can be used one last time. "Now What" class (Dec. 05 & 12) program reviewed. New, Newer, and recently reactivated encouraged to attend. K7CBK noted a 'white paper' addressing new hams is available at ARRL website with supporting info.

Elmer: KA7JAS has lots pending, but is in good shape.

Refreshments: K6UWV arose to remind us to recycle, offer thanks to member who brought in ground coffee and soda for club use, and to welcome Ida Belle Powers, who has offered to further assist David with duties. Also thanks to KI7JZ for frequent additions.

School Clubs: KB7TRE reports progress and activities at the K7GMG Granite Mountain Club.

Philanthropic: KB7TRE thanks all for generous support of food bank; please keep it up.

NETS: Young hams of Yavapai coordinator received suggestion to

change preamble to notably invite all new hams. KI6AHH will offer for consideration. Sunday, 7:pm 147.22+ 162.2 Hz PL. **Slow Code** 146.88- 100 Hz PL, Sunday about 7:30pm; WB7UZV has CW training materials to lend if you wish to use. **Club Net:** 146.88- 100 Hz PL Wed. 7: pm is accepting last net control positions open in 2010. AB7YR@netsecs.us

Fox-Hunt: Last 2 have been well received; fun and a new skill everyone should try. There are usually seats available to ride along. Monthly schedule suggested per input at November meeting; Sunday after the monthly meeting; start time 2:00 pm; Arizona Credit Union parking lot adjacent to Walgreen's at Miller Valley/Willow Creek and Gail Gardner intersection. Other hunts will take place on random dates and times & will be announced. November 8th hunt was won by WB6ODR, KD7EEO, & KI7JZ with a time of just 30 minutes.

Annual Party: Will be Saturday, January 16th, 2010. \$ 22.50 per person includes choice of entrée, sides, dessert, and tea/coffee. The adjacent St Michaels bar will be available for no-host cocktails. Social Noon to 1:00 pm; food service at 1:00 pm with drawing and surprises to follow. Payment and selections MUST be made by January meeting. Form and details available in Newsletter and on website, at http://www.w7yrc.org/holiday_party.htm.

OLD BUSINESS:

NRA Special Event: QSL cards prepared by K7NRA were distributed by WB9VGJ to participants. All report another great event.

Pending meeting between YARC & VVARA boards is still pending; looks as if date will be after New Years.

K6VVR thanked all for November

birthday surprise at meeting; was overwhelmed at the time.

NEW BUSINESS:

WB7RRQ rose to inform those assembled of recent SK's, including Jim Blackmore, W6KCF on Nov 29th.

anchors: KI6AHH is looking for a MD-1 desk mic. W6CCD has unopened Zone Alarm Pro firewall program available.

Announcements: KB7TRE reminded all of state tax credit that can be assigned to your choice of schools. This only redirects your tax dollars to your choice of use, it does not add any tax to what you owe, or remove from and refund. Has forms available pre-made out to benefit Granite Mountain program. Must be completed by year end. K7POF reminded all that Dec 5 hamfest in Mesa is a large event. Flyers available on front table.

Tonight's program: is K6VVR demonstrating tips on coax cable assemblies and soldering.

50/50 Drawing of \$ 80.00 was won by W7POF.

Meeting was adjourned at 1754 hrs, as moved by WN7E, second by N7RIS, and no dissenting.

Respectfully submitted,

Jeff Hanna, WB7RFY

YARC Secretary



2010 YARC PARTY

Mark January 16, 2010 on your calendar and make plans to attend the YARC party at St. Michael's Hotel. Social hour begins at 12:00. Arrive early, relax and enjoy yourselves.



The club will be giving away a Yaesu FT-7800R 2m/440 mobile radio as well as several other very nice prizes.

Ellis KE7NAP will be giving a short humorous speech about his travels. He recently received Toastmasters highest award - "The Distinguished Toastmaster."

Choose from Prime Rib, Chicken Marsala or Salmon (with all the trimmings) all for \$22.50 each which includes tax and gratuity.

Check the November issue of the newsletter for the reservation form or download it from the web site. www.w7yrc.org Click on the holiday party tab.

Reservation forms and payments can be mailed to the club address (shown on the form) or given to Mary – AB7NK at the January meeting.

Your reservations and payment must be received no later than January 8, 2010. Walk-ins will not be allowed as we need to give St. Michael's an exact count. ■

ARIZONA WORKED ALL COUNTIES

Have you worked all 15 Arizona counties? Email az-wac@w7yrc.org for rules and an application.

Upcoming Events

- **January 16, 2010** - YARC Party at St. Michael's Hotel.
- **February 26, 2010** - Ragnar Relay Race

Yes, I'm a Senior Citizen

Yes, I'm a Senior



- I'm the life of the party... even if it lasts until 8 p.m.
- I'm very good at opening childproof caps with a hammer.
- I'm usually interested in going home before I get to where I am going.
- I'm awake many hours before my body allows me to get up.
- I'm smiling all the time because I can't hear a thing you're saying.
- I'm very good at telling stories; over and over and over and over...
- I'm aware that other people's grandchildren are not as cute as mine.
- I'm so cared for -- long term care, eye care, private care, dental care.
- I'm not grouchy, I just don't like traffic, waiting, crowds, politicians.
- I'm sure everything I can't find is in a secure place.
- I'm wrinkled, saggy, lumpy, and that's just my left leg.
- I'm having trouble remembering simple words like....
- I'm realizing that aging is not for wimps.
- I'm sure they are making adults much younger these days.
- I'm wondering, if you're only as old as you feel, how could I be alive at 100!!
- I'm a walking storeroom of facts..... I've just lost the storeroom.
- Yes, I'm a SENIOR CITIZEN and I think I am having the time of my life! ■

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,

Yavapai Amateur Radio Club

December 2009 Treasurer's Summary

By Mary Vince, AB7NK Treasurer

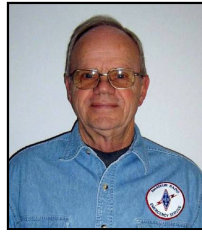
INCOME

11/5	KD7KJL	Mark Parthe	R	1324	20.00
11/5	KJ5CE	Tomi Hammen	R	1142	20.00
11/12	KE7PIX	Ricky Beswick	R	3104	20.00
12/18	WB7RRQ	Bob Rosevear	R	1402	20.00
12/18	KC7MTY	Judy Rosevear	R/F	---	---
11/20	N6DMV	Paul Lucas	R	1660	20.00
11/29	KD7DGT	Michael Paget	R	1954	20.00
11/29	N7TXH	Richard Horsley	R	4299	20.00
11/30	KD7RMV	James Grimm	R	3161	20.00
11/30	W7HAM	Ralph Gendron	R	297	20.00
11/30	W7PAY	Sharon Gendron	R/F	---	---
12/2	KF7GHA	John Butcher	R	1168	20.00
12/2	No Call	Ida Belle Powers	N	cash	20.00
12/2	AE7BK	Ron Weber	R	cash	20.00
12/2	KD6OBC	Ray Shaver	R	cash	20.00
12/2	KW6J	Brian Stapelton	R	cash	20.00
12/2	WA6CWR	Mary Stapelton	R/F	---	---
12/3	?	2 lg, 2 sm patches & 2 decals		cash	15.00
12/3	KF7GHA	John Butcher	ARRL N	1169	36.00
12/3	KE7WOM	Bob Evans	ARRL R	1411	36.00
12/3	50/50			cash	160.00
12/10	KB7TRE	Terry Pemberton	R	?	20.00
12/10	KD7GJH	Sandy Pemberton	R/F	---	---
12/10	K7NPD	Norm Delucchi	R	7686	20.00
12/17	KE7DTW	Henry Dye	R	3312	20.00
12/17	KE7IXS	Bill Burkett	ARRL/R	2560	67.00
12/17	KE7IXS	Bill Burkett	R	2560	---
12/17	KE7VWN	Debbie Burkett	R/F	2560	---
12/07, 12/16, 12/18		2010 YARC Party Deposits			<u>968.00</u>
Total Income					\$1,622.00

EXPENSES

12/1		ARCA – 2010 Dues		1114	35.00
12/3	W7POF	50/50 Linda Sitterley		cash	80.00
12/6	AC6AA	Stamps		1115	44.00
12/6	K6UWV	Dave Passell – refreshments		1116	9.18
12/6	Allegra	Newsletters		1117	32.87
12/6	ARRL	KF7GHA (N) & KE7WOM (R)		1118	55.00
12/17	KB7TRE	NRA – refreshments		1119	46.83
12/17	K7NRA	NRA – Certificates & QSL cards		1120	90.70
12/17	ARRL	KE7IXS & KE7VWN (R & R/F)		1121	<u>45.00</u>
Total Expense					438.58

Beginning Balance	\$ 3,896.14	November ending repeater balance	\$837.92
December Income	654.00		
2010 YARC Party deposits	968.00	December repeater fund	<u>36.00</u>
Sub Total	5,518.14	December repeater fund balance	\$873.92
Expenses	<u><438.58></u>		
General Fund Balance	\$ 5,079.56	-----> Net Gain = \$ 1,183.42	



By Lloyd, WA6ZZJ

ARES/RACES.....

ARES/RACES has been enjoying a little time off with a slack period, but this will all change after the first of the year. So... this is a good time for members to check over their equipment and make sure it is in good working condition.

The first scheduled event of the year so far is the annual Wildfire Exercise in March. More information will be out on this as I have it available.

Thanks to all members that participated in the weekly nets, training meetings, activations and events in 2009.

SPECIAL EVENT COMMUNICATIONS.....

The first special communications event of 2010 will be the Ragnar Relay Race on Friday, February 26, 2010. We will once again be assisting the Maricopa County Emergency Communications Group (MCECG) on this event as we did last year. A sign up sheet will be at the January YARC meeting. Last year there were 21 operators involved, but if we get more to sign up the shifts can be divided. This event runs approximately 11 hours to a position and we will be covering seven positions with staggered starts. Start times will be from 06:00 to 10:00 and ending times from 16:00 to 21:30. The route will be the same as last year running from Watson Lake Park in Prescott and our portion (Team Alpha) will end in Kirkland going via Iron Springs Road.

Planning is still in the preliminary stages and I should have more information at the January YARC meeting.

AMATEUR RADIO SPECIAL EVENT COMMUNICATIONS.....

1. The role Amateur Radio serves in Special Event Communications.....

- Provides a community reserve of operators and technicians that are trained and equipped in the art of radio communications.

- Sometimes provides communications where no cellular, wire line or wireless phone service exists.
- Advances the general welfare of the community and public interest by volunteering in support of a larger cause.
- Visible community service by amateur radio volunteers within the community. The amateur radio organization providing the Special Event Communications often has its name acknowledged in the credits of the event.

2. Similarities to Emergency Communications

- Uses the same equipment (mobile, portable and foot-mobile stations).
- Uses the same operating techniques (controlled nets, informal and formal nets).
- Usually involves deployment and operations at multiple locations.
- Provides an excellent simulation of conditions and techniques found in emergency communications situations.

3. Differences with Emergency Communications

- It is scheduled, as opposed to an unscheduled emergency event.
- Does not require activation by an emergency management agency.
- Does not exercise an activation system and the related deployment.
- In contrast to emergency events and emergency management agencies, usually does not require reporting to and coordinating with more than one lead organization. There may be many organizations participating in the event, but the sponsoring organization usually has the key, lead role.
- Often, amateur radio operations takes operator sign-ups several days in advance, assigns them to operating locations, and provides the master list to the sponsoring agency for their records/actions. This does not happen during emergencies.
- May not require wearing a visible ID badge. ■

Club Member Buz Mills, K7GST To Run For Governor of Arizona

Published on December 14th, 2009

Posted by [Gary Shumway](#) www.redpills.org

Good news for Arizona! Owen “Buz” Mills, the owner of [Gunsite Academy](#) located in Paulden, AZ (near Prescott) has thrown his hat into the ring to campaign for Arizona’s Governorship. I do not know about Buz’s politics, but I do know that Gunsite is one of the premier firearms training facilities in the U.S. Apparently he is going to be campaigning on the Republican ticket. Unless a strong third-party candidate comes forward, Buz may be the man for which to vote. Being steadfast in support of the Second Amendment goes a long ways in my mind.



From theoutdoorwire.com dated 12/09/2008 under “[News & Good Deeds That Shouldn’t Go Unnoticed](#)“:

Former ironworker, Marine, and cable mogul turned shooting school owner, Owen “Buz” Mills has filed the necessary paperwork to run for governor. Sources tell us Mills has been making the rounds with Republican leaders for some time and decided it was “time to step forward and do something” about the mess Arizona is in.

He’s formed his exploratory committee and is, we’re told, moving to get ready for the primary in August.

A lifelong shooter and passionate advocate for the Second Amendment, it will probably not be difficult to know where the straight-talking Mills stands on the issues. If nothing else, I’m betting he’ll be a breath of fresh air in the business-as-usual political industry. ■



YARC Officers for 2010

President

Pete Morrison, K6VVR
pm_service@earthlink.net

Vice President

Jim Ball, WB7UZV

Secretary

George Imburgia
ad7rl@netsecs.us

Treasurer

Mary Vince, AB7NK
ab7nk@ARRL.net

Board of Directors (includes Club Officers)

Terry Pemberton -- KB7TRE

Will Taylor -- AD7WW

Richard Bozeat -- KE7DTR

Walter Schumann -- KF6SPS

Newsletter Editor: Joe Oliver, AC6AA

Did You Know?

- A rat can go without water longer than a camel can.
- The hippopotamus has skin an inch and a half thick, so solid that most bullets cannot penetrate it.
- The crocodile is surprisingly fast on land. If pursued by a crocodile, a person should run in a zigzag motion, for the crocodile has little or no ability to make sudden changes of direction.
- The venom of the king cobra is so deadly that one gram of it can kill 150 people. Just to handle the substance can put one in a coma.
- A completely blind chameleon will still take on the colors of its environment.
- The Washington Monument sinks 6 inches every year.
- Human eyes are so sensitive that on a clear night when there is no moon, a person sitting on a mountain peak can see a match struck 50 miles away.
- The pupil of the eye expands as much as 45 percent when a person looks at something pleasing.
- Tongue prints are as unique as finger prints.
- The men who served as guards along the Great Wall of China in the Middle Ages were often born on the wall, grew up there, married there, died there, and were buried within it. Many of these guards never left the wall their entire lives. ■

-Internet

Some Local Sightseeing/Activities

By John Broughton, WB9VGJ

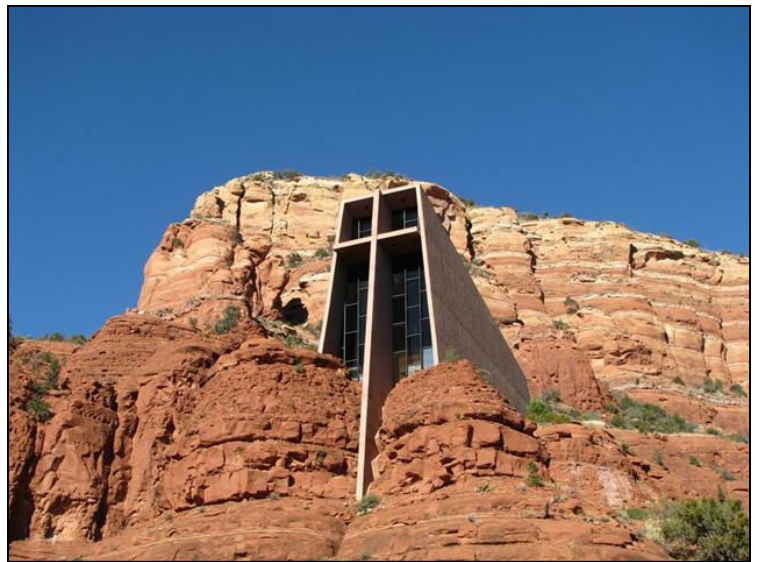
I was asked to write a piece about some of my recent sightseeing and activities. While many of you are familiar with most or all of these places, you might not be aware of a couple of fun things to do. This came about from stuff my wife and I did Thanksgiving week with one of our nephews who spent the week with us.

We spent a day at Old Tucson Studios (<http://www.oldtucson.com>) -- not really local, but a great day trip. It is open every day except Christmas Eve and Christmas day. It opens at 10:00 a.m. and closes at 4:00 p.m. or 5:00 p.m., depending on time of year. There are lots of interesting things to see and a guided tour is free. They put on some action shows, some with very good humor, and some nice musical numbers in the saloon. There is a very good BBQ restaurant on the grounds. Here are some pictures I took: <http://tinyurl.com/yhdq5n7>



Old Tucson Studio Saloon

Most everyone has been to Sedona, as we have several times. This time, I did something new. We visited the Chapel of the Holy Cross, which is interesting. From there you can look down across the street on a very nice single-family estate. In the pictures you can see what its assessed valuation for 2010 is and what the real estate taxes are. Anyone from the East or West Coasts or near large cities, like Chicago, will have no sympathy for folks who complain about real estate taxes here in AZ; I'm sure our four nephews in IL pay more RE taxes on their average homes. The other pictures were taken at the look-out on the road to the Sedona Airport and there are several from Montezuma Well, another interesting place to visit: <http://tinyurl.com/yb8e6lv>.



Chapel of the Holy Cross in Sedona

I highly recommend the Coffee Pot Restaurant in Sedona (<http://coffeepotsedona.com/>) for good food at reasonable prices. They have 100 different omelets alone.

The very fun thing my nephew and I did at Sedona was to take a biplane tour with Red Rock Biplane Tours: (<http://www.sedonaairtours.com/redrockbiplanetours/>).

See Local Sightseeing, Page 9

● **Local Sightseeing** (Continued from Page 8)



John and Nephew Shaun with Red Rock Biplane

One other local fun thing we did was to take a 2-hour horseback ride at Foothills Ranch in Mayer, right on Rt. 69 (http://www.foothills-ranch.com/trail_rides.html). Not being regular, or even irregular horseback riders, we both came to understand the term ‘saddle sore.’ You can see pictures from the ride here: <http://tinyurl.com/ylp6cwr>. Our trail guide was a retired Marine warrant officer and very interesting to listen to.

For those of you who like to walk and hike, there are lots of good places to do that locally. A few of us who belong to Club 50 in Prescott Valley take a monthly hike. You can see pictures of several of them here:

<http://users.commspeed.net/wb9vgj/docs/club50.htm>

I have been appointed the *official* photographer for our hikes as I love taking pictures. I’m always looking for new critters and found one 12/16 when we came across three Swainson’s hawks while hiking the wash that goes through Prescott Country Club. They were not shy and sat and watched us as we walked past.

<http://tinyurl.com/yg54wm2>

I would encourage you to check out some of these sights/activities if you haven’t already done so. ■

John, WB9VGJ

Here are pictures I took of the plane ride:

<http://tinyurl.com/y8r7lfd> If you have acrophobia, don’t let that discourage you. I have it and I really enjoy riding in open cockpit biplanes, though I’ve only done it twice, once in a Stearman that was built the month and year I was born.



Trail Ride - Foothills Ranch



Swainson's Hawk



Nine Words You Might Think Came from Science,

but Which Are Really from Science Fiction

1. **Robotics.** This is probably the most well-known of these, since Isaac Asimov is famous for (among many other things) his three laws of robotics. Even so, I include it because it is one of the only actual sciences to have been first named in a science fiction story ("Liar!", 1941). Asimov also named the related occupation (**roboticist**) and the adjective **robotic**.
2. **Genetic engineering.** The other science that received its name from a science fiction story, in this case Jack Williamson's novel *Dragon's Island*, which was coincidentally published in the same year as "Liar!" The occupation of **genetic engineer** took a few more years to be named, this time by Poul Anderson.
3. **Zero-gravity/zero-g.** A defining feature of life in outer space (sans artificial gravity, of course). The first known use of "zero-gravity" is from Jack Binder (better known for his work as an artist) in 1938, and actually refers to the gravityless state of the center of the Earth's core. Arthur C. Clarke gave us "zero-g" in his 1952 novel *Islands in the Sky*.
4. **Deep space.** One of the other defining features of outer space is its essential emptiness. In science fiction, this phrase most commonly refers to a region of empty space between stars or that is remote from the home world. E. E. "Doc" Smith seems to have coined this phrase in 1934. The more common use in the sciences refers to the region of space outside of the Earth's atmosphere.
5. **Ion drive.** An ion drive is a type of spaceship engine that creates propulsion by emitting charged particles in the direction opposite of the one you want to travel. The earliest citation in *Brave New Words* is again from Jack Williamson ("The Equalizer", 1947). A number of spacecraft have used this technology, beginning in the 1970s.
6. **Pressure suit.** A suit that maintains a stable pressure around its occupant; useful in both space exploration and high-altitude flights. This is another one from the fertile mind of E. E. Smith. Curiously, his pressure suits were furred, an innovation not, alas, replicated by NASA.
7. **Virus.** Computer virus, that is. Dave Gerrold (of "The Trouble With Tribbles" fame) was apparently the first to make the verbal analogy between biological viruses and self-replicating computer programs, in his 1972 story "When Harlie Was One."
8. **Worm.** Another type of self-replicating computer program. So named by John Brunner in his 1975 novel *Shockwave Rider*.
9. **Gas giant.** A large planet, like Jupiter or Neptune, that is composed largely of gaseous material. The first known use of this term is from a story ("Solar Plexus") by James Blish; the odd thing about it is that it was first used in a reprint of the story, eleven years after the story was first published. Whether this is because Blish conceived of the term in the intervening years or read it somewhere else, or whether it was in the original manuscript and got edited out is impossible to say at this point.

From Oxford University Press

NHP #4: Power Supplies and Batteries

By Gerry Crenshaw, WD4BIS

Why have Battery backup? How much Power Supply or Battery for the Station? What connectors?

One of the items found in most ham shacks is a battery or a DC power supply. The reason for this is simple enough: most of our equipment is meant to be used in a mobile environment and that means a DC. power supply in the 12.5 v to 13.5 v range. Even a lot of our base equipment has the provision to be run from a DC. Supply.

How big a power supply to get has been the subject of some heated discussions on the air, so how do you pick a supply for the home? My past experience is that I tend to outgrow an existing supply. If you stay in this hobby long you keep on adding equipment that runs off DC and soon you are popping fuses.

Start by looking at the equipment in the shack and adding up the currents in amps. Lets say that the Radio, Linear Amp and TNC add up to about 7 amps. The general rule of thumb is to double that number, in this case 14 amps, and then look for a supply in that range. In this case a 15 amp supply should serve you well and leave you room to change equipment around at a later date. Don't buy the biggest supply you can afford. If you have too little load on a supply, they don't regulate well. Picking a supply for mid range seems to be the best compromise.

Supplies on the surplus market have their hazards. Computer Power Supplies often use switching type regulators. These can generate harmonic interference on your radio. Supplies meant for the audio industry can break regulation when they get in a RF Field. The Radio Shack DC. Supply was notorious for this, as soon as you started transmitting the supply broke regulation and the voltage climbed to 16 plus volts. (This usually meant a trip to repair shop also.)

Since a lot of us want Battery Backup we tend to sooner or later get a battery that will run the station. For those of us who work the "Thons" (Walkathon, Bikeathon, or Runathon) or other Public Service Events the ideas of a battery for these events become very attractive. Batteries tend to become a ten ton liability after a few of these events. We tend to buy something like a Boat or RV battery to run a handi-talkie for 4 to 5 hours. You are never stationed near the Car and lugging this battery all over White Rock Lake gets old after an event or two.

How do you pick a battery that is the best compromise between weight and length of service? Batteries are rated in "AMP HOURS" meaning that a 25 Amp Hour Battery can deliver 25 amps to a load continuously for 1 hour. Most radios only draw maximum current when transmitting so the specifications on the radio are broken up into Transmit and Receive current draw. A mobile radio (for example: 35 W output) draws about 10 amps when transmitting and 0.7 amps when receiving. A 25 Amp hour battery would last 2.5 hours continuous transmit ($25/10=2.5$) or 35.7 hours receive only ($25/0.7=35.714285$) for most of these events. Unless you are the Net Control Station (NCS), this battery is much too large. When trying to size a battery for these events, figure on a 30% transmit and 70 % receive cycle. A small battery such as a 1.2 Amp hour will power a 5 Watt handi-talkie for about 4.7 hours in receive and 18 minutes in transmit (These numbers assume a transmit current of 1.3 amps and a receive current of .250 amps.): more than ample for a public service event.

Connectors for power sources vary widely from automotive lighter plugs to Banana Plugs and Jones Connectors and everything in between. The ARRL Field Service recommends the 2 pin Molex connector that happens to be the Garland/Dallas RACES Standard. Regardless of the Battery or Power Supply you choose please have in addition to your connector, an adapter with standard RACES Connectors on your DC source.

This lesson was recently learned the hard way this spring during the Lancaster Tornado. Operators who were not in Emergency Service Organization such as RACES or ARES brought their equipment in to help.

Some of this equipment could not be used without extensive modifications and there just wasn't time to tinker with it at the time.

Batteries and power supplies have become as much a part of the shack as Radio and antennas. Having the ability to help in a pinch is a great asset. Even if it's not a major emergency, being able to bring up the auto patch when the lights go out in your neighborhood is a great comfort to you and your family.

Have fun and 73's

Gerry WD4BIS

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Weekly Breakfasts



Tues. Morning Breakfast:

**7:00 a.m. at
Back Burner Cafe**
8400 E. Long Mesa Drive
& N. Robert Road
Informal – all are invited.

Wed. Morning Breakfasts:

**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

**8:00 a.m.
Masonic Lodge**
(1280 Willow Creek Road,
2nd Floor; above Bank of America)
informal – all are invited

* Location data (per WGS84) provided
by Fred Zimmermann, N7PJM

Area Repeaters

Fre- quency	PL	Location	Owner/Club	Auto- Patch	Rem. BaseOr Linked	Vo IP	Notes:
52.560-	100.0	Mt. Union	N7NGM			IRLP	Node 3301
145.290-	127.3	Mingus Mtn.	ARES/RACES				
146.780-	91.5	Williams Mtn.	BWARC			IRLP	
146.880-	100.0	Prescott	YARC				
146.980-	162.2	Flagstaff	CARC				
147.000+	162.2	Mingus Mtn	MMRG				
147.040+	107.2	Prescott Heights	W2YAV				
147.140+	162.2	Flagstaff/-Mt. Elden	ARA		Linked to Mt. Ord -		Mt. Ord=147.36
147.220+	162.2	Mingus Mtn	VVARA				
147.260+	103.5	Mt. Union	ARES/RACES				
224.080-	156.7	Mt. Union	WA7JC				
442.150+	100.0	Mingus Mtn	W1OQ/Northlink				
442.350+	100.0	Glassford Hill	N7KPU			IRLP	
445.300-	100.0	Prescott	WINSYSTEM		Node 3727	IRLP	
448.475-	100.0	Flagstaff-Elden	ARA	Yes			
448.500-	100.0	Prescott	K6JSI				
448.875-	100.0	Flagstaff-Elden	Northlink		Linked		
449.175-	100.0	Towers Mountain	Northlink		Linked		
449.675-	88.50	Prescott Airport	WB7BYV		Linked to P Mtn.		P mtn=927.3875
927.0875-	151.4	Mingus Mtn	WB7BYV				
927.3875-	151.4	Prescott	WB7BYV	Yes	Yes	Echo	Be Nice

Y.A.R.C. IRLP NODE
Node Number 3182
442.350+ MHz with a
PL Tone of 100.0 Hz

For more Repeater Information & Listings refer to:

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

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PRESCOTT, AZ 86304

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Many thanks to Bob Smith, WB6ODR, our Webmaster

