



YAVAPAI SIGNAL



The Yavapai Amateur Radio Club • Prescott, Arizona • DM-34 • Volume 22– No.4 • April 2007



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. If you hear a 1400 Hz pulsing tone, the repeater is on backup battery power and usage should be limited to necessary communications. Our deepest gratitude to Bill Kafka, W2YAV for allowing us to acquire this repeater. ■

YARC Officers for 2007

President

Terry Pemberton, KB7TR
kb7tre@cableone.net

Vice President

Dick Hughes, W6CCD
w6ccd@arrl.net

Secretary

Pat Oliver, K7DUC
joliver@commspeed.net

Treasurer

Patti Halgunseth, KD7VBG
kd7vbg@cableone.net

YARC Board of Directors (includes Club Officers)

John Broughton, WB9VGJ
Ken Severance, WA6AQK
Richard Bozeat, KE7DTR
Walter Schumann, KF6SPS

Newsletter Editor

Joe Oliver, AC6AA
joliver@commspeed.net



March's guest speaker, Mayor Rowle Simmons and Terry, KB7TRE. Rowle presented an informative and entertaining "History of Communications in the Prescott area."

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**Minutes of March 1, 2007
Board Meeting**



A Board Meeting was held at 1815 MST. Present were Terry, KB7TRE; John, WB9VGJ; Pat, K7DUC; Dick, W6CCD; Patti, KD7VBG; Wal-

ter, KF6SPS; Ken, WA6AQK., and Richard, KE7DTR.

The joint swap meet with VVARA to be held on June 2, 2007, was discussed. Getting the word out is important. Other clubs will be notified. Patti, Terry, and John will work on this.

Joint Field Day with VVARA -- Bob, KC8BOB is set up for that. Neil, KA7JAS will be in charge of the radios and Doug, KV8TD will assist.

HB2595, the Amateur Radio Restriction Bill has been covered by e-mail to the members by Joe, AC6AA. He will be asked to address this at the General Meeting.

The Club Family Cookout is set and we will get a report tonight. We will vote tonight on spending money.

The monthly programs are set up through June and we need speakers for the following months.

The Statehood Day at Sharlot Hall Museum went well, with 10 hams attending along with 4 kids. Few contacts were made, but members of the public spoke at length with the participants.

The YARC rosters were e-mailed to members and were appreciated.

The car pool service is going well, with 2 members being brought in by volunteers for this month.

Terry said that there was a donation of radio items by the widow of a silent key. We will discuss the disposition of these items at the General Meeting.

The meeting was adjourned at 1840 MST.

Respectfully submitted,
Pat, K7DUC

**Minutes of March 1, 2007
General Meeting**

Terry, KB7TRE called the meeting to order at 1900 MST. The Pledge of Allegiance was recited and members introduced themselves.

Visitors: Vi Hughes; Rebecca Riviere; Alan Elliot, KD7OEF; Jack Hageman, KX6H; Rob Robinson, WA7ZGK and Tony Brown, WB6LWI.

Due to time constraints, Mayor Rowle Simmons gave his presentation on the History of Communications in Prescott, prior to continuation of the business meeting.

The Business Meeting resumed after a break for refreshments.

New Members: Shorty Stouffer, K6JSI; Susan Stouffer, K6SLS and Hank Riviere, W4ZBP. A motion to vote in the new members was made by John, WB9VGJ and seconded by Bob, WB6ODR. The applicants were voted in by the membership.

Meeting Minutes: A motion to approve the General Meeting minutes of February 1, 2007 was made by Neil, KA7JAS and seconded by John, WB9VGJ. The General Meeting minutes were approved.

Treasurer's Report: Patti, KD7VBG gave the Treasurer's Report. The previous balance was \$3,097.02. The net expenses included the Repeater fund starting monies. The balance for the end of the month in the General fund is \$2110.94.

Random Quotes

“Computers in the future may weigh no more than 15 tons.”- Popular Mechanics, Forecasting the March of Science, 1949.

“I think there is a world market for maybe five computers.” -Thomas Watson, chairman of IBM, 1943.

“There is no reason why anyone would want a computer in their home.” - Ken Olsen, president, chairman of IBM. 1943.

“Louis Pasteur’s theory of germs is ridiculous fiction.” - Pierre Pacht, Professor of Physiology at Toulouse, 1872.

“This telephone has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us.” - Western Union internal memo, 1876.

“The wireless music box has no imaginable commercial value. Who would pay for a message sent to nobody in particular?” - David Sarnoff’s associate in response to his urgings for investments in radio in the 1920’s. ■

Membership Count:



1st Thurs. in Feb....106

Gain/Loss.....-2

1st Thurs. in Mar....104

. A motion to approve the report was made by Mary, AB7NK and seconded by Lloyd, WA6ZZJ. The Treasurer's Report was approved.

Committee Reports:

- **ARES/RACES/Public Service:** Lloyd, WA6ZZJ spoke of the trip to Iowa to pick up the new vehicle for ARES/RACES. It is now at the Public Works Facility awaiting radios.

We have had two small wildfires this year. It may be a bad fire season due to drought.

The first Public Service event will be the Whiskey Row Marathon, on Saturday, May 5.

- **Newsletter:** Joe, AC6AA thanked everyone for contributing pictures and articles.
- **IRLP:** Jack, W7JLC reported that the IRLP is still being used.
- **Public Information:** Bob, WB7RRQ put the club on the Trades List for Prescott. Terry indicated that he had heard two announcements on the radio. Bob and Terry will get together to make up a brochure for the swap meet.
- **Patches/Shirts/Badges:** Patti, KD7VBG has club patches for \$3.00; Dick, W6CCD has club shirts for \$19 for all sizes, except for XXL which are \$21. Name and call sign add \$2 to each, and Bob, WB6ODR has badges for \$5.75.

Bob also reported that he had very good reception from the WinSystem repeater. Information on the system was available at the meeting.

- **VE Testing:** Mary, AB7NK stated that testing will be held on Friday, March 9 and March 30 at the Jeep Posse Building, and on April 21 at Embry-Riddle, soon after Jack's course.

- **Elmer/Technical Specialist:** Neil, KA7JAS said that everything is in order.

Old Business:

- **Swap Meet** with VVARA will be held June 2, 2007 at Granite Mountain Middle School. Volunteers were requested to help.
- **Joint Field Day/BBQ** with VVARA will be held on June 23/24. We need more people on the committee.
- **Special Event Station** at Sharlot Hall Museum was a lot of fun. 10 hams and 4 kids participated. Much interaction with the public took place.
- **HB2595** - Joe, AC6AA said that several updates had been e-mailed to members. Many messages have been sent out to legislators. Members were reminded to use their own words, rather than form letters.
- **Club Family Cookout** - David, K6UWV has been working on this event with Fred, N7PJM and John, W5VJH. John said Saturday, July 14th would be the date and it will run from 10:00 a.m. - 10:00 p.m. at the Watson Lake Ramada. Food has to be decided on. Terry said that hamburgers and hotdogs will be provided by the club, and the rest will be pot luck. The motion to approve the expenditure for reserving the area was made by John, WB9VGJ and seconded by Walt, KF6SPS. The motion passed.

- **Roster Update** Pat, K7DUC stated that good feedback had been received and some discrepancies were noted and corrected. Rosters will be sent out again in 3 months.

- **Carpools** have worked out well. Those members wishing a ride should check into the Wednesday night net prior to the meeting, and carpooling arrangements will be made.

New Business:

- Jack, W7JLC stated that a Technician class will be held at Embry-Riddle on Sat., April 7, starting at 8:00 a.m. in Room 132. Those interested are asked to contact Jack, giving him an e-mail address so he can send out further information. This is an all day class.

Announcements:

- Mary, AB7NK stated that the last test period had resulted in one new Extra Class and 7 new General Class Licenses.
- Next month's meeting, Lloyd, WA6ZZJ will tell us all about ARES/RACES.

The 50/50 drawing was won by Linda, KD7EEO for \$27.

The meeting was adjourned at 9:05 MST.

Respectfully Submitted,
Pat, K7DUC
Secretary

Yavapai Signal Archives

Thanks to Dick Hughes, W6CCD, for creating a website that is dedicated to the preservation of the Yavapai Signal newsletters produced by the Yavapai Amateur Radio Club (YARC) in Prescott Arizona. Most months since January 2000 are available and may be found on the YARC website, or go directly to:

<http://www.rahughes.net/signal>

Treasurer's Financial Reporting Sheet



Club / Group Name: YARC
Reporting Date: MAR '07

By Patti Halgunseth, KD7VBG
Treasurer

Members Name	Dues Paid	Repeater Fund	Donations	Prize Money Paid Out	Net Cash In per Member
Jeff Stouffer/N-K6JSI	\$18.00	\$2.00			\$20.00
Susan Stouffer/N-K6SLS	\$0.00				\$0.00
Hank Riviere/N-W4ZBP	\$18.00	\$2.00			\$20.00
Rick Horsley/R-N7TXH	\$18.00	\$22.00			\$40.00
Ramon Fobes/R-W10TH	\$18.00	\$2.00			\$20.00
Carl Lubisich/R-KE6NOP	\$18.00	\$2.00			\$20.00
Dick Hughes/R-W6CCD	\$18.00	\$2.00			\$20.00
Michael Keefe/R-KC7QZB	\$18.00	\$2.00			\$20.00
Joan Tremper/R-AB7KE	\$18.00	\$2.00			\$20.00
Claude T/R-KC7AJM	\$0.00				\$0.00
Ken Severance/Fam-ARRL	\$52.00				\$52.00
Jack Ragen/ARRL Renew	\$36.00				\$36.00
John Broughton/ARRL-R	\$36.00				\$36.00
50/50	\$54.00				\$54.00
Linda Smith - KD7EEO				\$27.00	(\$27.00)
Total:	\$322.00	\$36.00	\$0.00	\$27.00	\$331.00

Miscellaneous Club Expenses	Cash Out	Check Number
US Postal Service	\$50.00	925
ARRL/John Broughton	\$34.00	926
ARRL/Jack Ragen	\$34.00	927
Richard Hughes/Shirts	\$111.17	928
ARRL/Ken Severance+Fam	\$50.00	929
David Passell/Refreshment	\$20.63	930
Bob Smith/Pizza-Kids	\$42.22	931
Insty Print/Newsletter	\$27.38	932
Repeater Fund	\$36.00	Cash
Total:	\$405.40	

Club Funds Summary	Totals
Starting Balance	\$2,110.94
Net Expenses	\$405.40
Net Income	\$331.00
	<hr/>
	\$2,036.54
Repeater Fund:	\$1,062.00
Cash Flow: (-)	(\$74.44)

HMMM, NICE DRAWING

A Kindergarten teacher was observing her classroom of children while they were drawing. She would occasionally walk around to see each child's work. As she got to one little girl who was working diligently, she asked what the drawing was. The girl replied, "I'm drawing God." The teacher paused and said, "But no one knows what God looks like." Without missing a beat, or looking up from her drawing, the girl replied, "They will in a minute."

CQ DX de YARC -April 2007

By Dick Diddams, W7QHE



ANNUAL INTERNATIONAL DX CONVENTION - VISALIA, CALIFORNIA

April 27 through 29, 2007 the 58th Annual International DX Convention will meet in Visalia, California. If you haven't attended one of these conventions, you don't know what you are missing.

On Saturday, the YL or XYL has opportunities to be entertained by an all-day tour of the area, starting with the Visalia's "Farm Fest", which is an event featuring Food Demonstrations, Arts & Crafts, Music, Educational Displays, etc. The tour continues to Exeter to view the beautiful and famous murals of Tulare County. There are more murals, per square mile in Exeter, than in Florence, Italy. Additional activities include lunch at the Wild Flower Café and visiting the Tulare County Renaissance Festival. This festival features renaissance guilds and merchants, and stage shows from timeframe of England's late 1500's.

Now for the "good-stuff"! On Saturday, while the XYL is being entertained, wined and dined, the OM can **hear about the Dxpeditions** to Swains Island, Lakshadweep Island, Revillagigedo Archipelago, Iraq, Kermadec Island, Montenegro, and Libya.

Or attend technical sessions regarding 1) "Audio Reinforcement for Contesting and DX Operations", by Bob Heil and Chip Margelli; 2) "DXing From A City Lot", by Dean Straw; 3) "Ionospheric Propagation Simplified", by Dave Gomborg; 4) "Why do we DX", by Bob Locher; 5) "Working Your First 100 Countries", by Rich Moseson

Oh, did I mention that there would be **\$25,000 in prizes given away**? And there will be an exhibition center to see and "touch" some of the newest amateur gear? And there is a **Banquet for you and YL or XYL to attend and meet world renowned Dxers.**

For more information go to <http://www.dxconvention.org/> You still have time to register and attend. Do it today!

Announced DX Operations for April may be found on the NG3K Amateur Radio Contest/DX Page at:

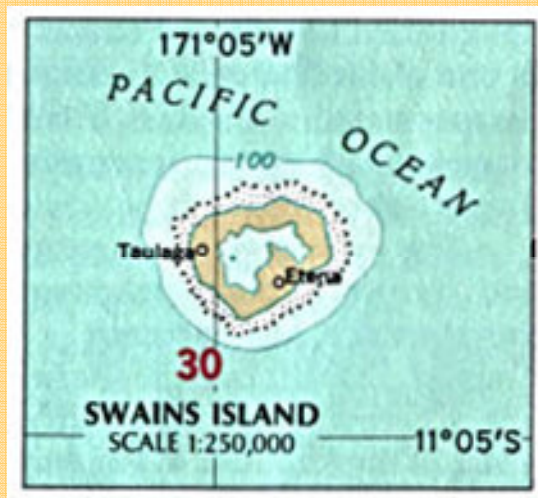
<http://www.ng3k.com/Misc/adxo.html>

SWAINS ISLAND DXPEDITION – N8S APRIL 4 – 15, 2007

Depending on which DXCC Survey of the 100 most-wanted countries, Swains Island ranks no lower than 3 and on most polls it is number 1. Hrane YT1AD, will head a team of as many as 17-hams, of which there are 4-Americans, to Swains Island.

Swains Island lies 663 nautical miles south of the equator, 100 miles south of Fakaofu (now Fakaofu), 170 miles north and a little east of Apia, Samoa, 200 miles north and a little west of Pago Pago, and 310 miles west of Pukapuka (Danger Islands). As of 2005, the population of the island was 8, all located in the village of Talauga in the west. The village of Etena (southwest) is abandoned. At one time there were 100 people on the island working a coconut plantation.

The island is a ring of sand and coral, a mile and a half east and west, a mile wide, and nowhere more than 20 feet high, surrounding a shallow lagoon, which is only slightly brackish, with no surface connection with the sea. Most of the land, from the crest of the narrow ocean beach to the very edge of the lagoon, is thickly covered with vegetation, about 800 acres of coconut palms and various trees and shrubs found widespread in the Pacific.





By Lloyd, WA6ZZJ

ARES/RACES....

WHAT IS AN EOC?

Many times you have heard me refer to the "EOC" when talking about ARES/RACES. Let's look into just what an EOC (Emergency Operating Center) is.

If you ask an administrator what an EOC is, they will tell you that it is a conference room. An Amateur Radio operator will view it as a radio room and most others have absolutely no idea what you are talking about.

An EOC is an Emergency Operating Center. An EOC is the location where response agency leaders meet to coordinate the response to an emergency or a disaster. Obviously, making an uninformed decision or not passing information to the response personnel would make a bad situation worse. A comprehensive communication facility is a key part of an EOC. An EOC can not exist without these two basic components but more is required for efficient operation.

In reality, an EOC is composed of many parts and there are several "levels" of emergency operating centers. Some companies such as telephone and power companies have EOC's, as do cities, counties and states. Chances are that if you encounter an EOC, it will be a city or county EOC. All EOC's operate similarly, but I will address the Yavapai County EOC.

The county EOC may be a permanent facility or a designated location that can be converted for use as an EOC at a moment's notice. The Yavapai County EOC is established in the Public Works Ready Room at their facility on Commerce Drive in Northeast Prescott. It is very common for a county owned facility such as meeting rooms to be designated as the primary EOC. Other buildings in the area may be designated as alternate locations if the primary site has to be evacuated. The Prescott City EOC located in the basement of City all is also designated an alternate Arizona State EOC.

THE PARTS OF AN EOC

An EOC consists of one or more conference rooms, a communication or radio room, a rest area, washroom facilities, kitchen (optional), and a backup power system to supply power for the heating, lighting, and communication equipment.

CONFERENCE ROOMS

Heads of all the agencies involved in mitigating the disaster use the conference room. The nature of the event will dictate who the participants are. The basic group typically includes the Emergency Management Director and staff, Sheriff, Police, Fire, Ambulance, Public Works, one or more Elected County Officials, and representatives from any other agency that is involved (Red Cross, Animal Disaster Services, Jeep Posse and/or Search and Rescue, etc.). A member of the OEM (Office of Emergency Management) staff will log all significant events on a status board that is visible to all. The OEM staff will record in detail all events and decisions to provide a paper trail of the entire emergency response operation.

COMMUNICATIONS / RADIO ROOM

The radio room will contain all the communication equipment used by the EOC. Communication room personnel will include the ARES/RACES radio operators and possibly runners to deliver the messages.

The Yavapai County EOC radio room has the following communications capabilities:

- 2 Dual Band VHF/UHF Amateur Radio transceivers.
- 1 HF Amateur Radio transceiver.
- 1 VHF Public Safety transceiver (Public Works, Sheriff, Fire, etc.).
- 1 UHF Public Safety transceiver.
- 1 800 MHz transceiver (used on the APS trunked system to maintain contact with the State EOC).

All written messages received in or sent from the radio room will be logged in the ARES/RACES Message/Event Log by the operators(s).

All radios should be equipped with headsets. This serves three purposes. It reduces the background noise level, prevents conversations received on one radio from being retransmitted on another channel, and reduces operator fatigue.

EMERGENCY POWER

An emergency backup power plant is required to operate the heating, lighting, and communication equipment for the entire EOC during a power failure. The County EOC does have emergency generator backup.

MANAGEMENT AND STAFF

The quantity of staff and their job assignments will vary depending on the size and the nature of the emergency.

The manager of the EOC will be the County Emergency Management Director (CEMD). This person will be in charge of the overall EOC operation and may also chair the meetings in the conference room.

The District Emergency Coordinator/Radio Officer (DEC/RO) reports to the CEMD and will supervise the communications staff and operations in the radio room.

There may be additional staff assigned to provide food and drinks to the participants, deliver messages, restock supplies and run various errands.

PUBLIC SERVICE COMMUNICATIONS....

The Whiskey Row Marathon is our next scheduled Public Service Communications event. It is on Saturday, May 5, 2007 and will be an early morning event with some stations being on the air by 05:15. I will have a sign up sheet for this event at the April YARC meeting. Please plan to sign up for this event. Our communications is so valuable to the YMCA that the Yavapai Amateur Radio club is considered a major sponsor. Providing Public Service Communications is also a very good way to practice our emergency communications capabilities. 18 to 20 operators are needed for the event, but if we have more I can double up operators on some of the assignments. ■

Radio controlled target aircraft drones

By John, WB9VGJ

A friend of mine, Bill Coons, KD9I, has written a very interesting book, *SHOOT Only at the Red Airplane*, about the development of radio controlled target aircraft drones, a project that began in 1917 and lasted into the 1950s. The project's main goal was to increase the ability of U.S. Navy gunners to down attacking enemy airplanes.

It is a very interesting book, well researched with lots of pictures of drones, control planes and even a couple of movie actors. One of them, Reginald Denny, who owned a hobby shop in Hollywood and appeared in the movie *Mr. Blandings Builds His Dream House*, was one of the pioneers of radio controlled target drones.

Bill is suffering from a terminal lung disease and was told he would become a silent key last spring. He has been busy since the diagnosis writing this book, a goal he set for himself to complete. He also is keeping busy with his aviation artwork, which will be donated to an Ercoupe Web site, and writing aviation safety articles. He had been giving safety seminars for the FAA for the past few years. Bill got his pilot's license at age 60 and bought a 1946 Ercoupe, which he has donated to the aircraft museum at the DuPage County Airport in West Chicago, IL.

If you would be interested in the book, here are a few sources for it. It is a paperback consisting of 132 pages:

The publisher, Lulu: <http://www.lulu.com/content/612540>

Barnes and Noble: <http://tinyurl.com/39fctw>

Amazon.com: <http://tinyurl.com/2wh4gt>



Ever Wonder Why?

Why is the time of day with the slowest traffic called rush hour?

Why isn't there mouse-flavored cat food?

Why didn't Noah swat those two mosquitoes?

Why do they sterilize the needle for lethal injections?

You know that indestructible black box that is used on airplanes? Why don't they make the whole plane out of that stuff?

Why don't sheep shrink when it rains?

Why are they called apartments when they are all stuck together?

If con is the opposite of pro, is Congress the opposite of progress?

If flying is so safe, why do they call the airport the terminal?

Why is it that doctors call what they do "practice"?

Why is "abbreviated" such a long word? ■

This Month's Featured Ham

By Pat Oliver, K7DUC



Jack Ragen, W3IVQ

Jack got his first inspiration from his Dad, who built radios in the 1930's, when Jack was in grade school. When he entered high school, he found out to his delight that the school offered a class that would lead to passing a 1st Class Commercial Radio Operator exam and an Amateur Radio exam. By high school, Jack had been steeped in radio from both his Dad and outside reading. Jack quickly became the assistant instructor for the class.

WWII intervened and Jack joined the Navy as part of their radio, radar, and sonar programs, as one of the teaching staff. After the war, in the late 1940's, he passed both the 1st Class Commercial Exam and the ham exam.

He then continued in his Electrical Engineering studies and became an active member of the University Ham group. While in this group, he converted some war surplus radio equipment for use on the Ham bands.

Jack graduated from the University of Toledo with a B.S. in engineering and joined General Electric, where he designed large radars and taught company electronics and radar courses for freshly hired engineers.

Jack occasionally logged time on his commercial license, and often when visiting military installations, he was able to put together equipment for a Military Amateur Radio Station (MARS) and put it on the air.

He next went to work with the Crosley Division of AVCO, designing color television systems. However, he soon found himself back pursuing radar, infrared, communication equipment, and space hardware (Lunar Lander

items and Apollo program elements). He then went to Fairchild Corp. and was a Launch Integrator for NASA. Jack also formed a Company ham club and did armament design for the A-10, F-14, and F-16 aircraft. A major portion of his time was spent on the ATS-6 Satellite program for NASA and other space product activities.

After retiring from Fairchild, he became an independent consultant working for NASA and various contractors at NASA. He still misses the activity and stimulation of his chosen profession.

Jack and Irene moved to Prescott in the 1990's and he has been active in YARC since then. He no longer uses CW, and prefers phone contacts on 2 meters, 70 cm, and HF. For HF contacts, he mostly operates on 20 meters. He does not participate in contests, but has done Field Day in the past.

His most memorable contacts, include ones with the Jim Jones commune. He was in contact with a YL named Sarah, who had been a lawyer in New York. Jack received a QSL card from her, but within a few weeks she participated in the group's mass suicide.

Jack has many pieces of equipment in his shack, including a Kenwood TS-520, a Yaesu FT-840, a Heathkit tuner, a Kenwood 1000, etc. He has 2 meter capability in his car and at home. He carries 2 meter/70cm hand helds with him on his trips. In the past, he built most of his equipment, but does not do that now.

He feels the club is progressing in the right direction and would like to see more community involvement, especially with the Boy Scouts.

Jack has been a very vital and active member of YARC, both as an Elmer and as a Director of the Board. We are fortunate to have him as part of our group. ■

Upcoming Events of Interest

-  **April 7, 2007 - One Day Tech. License Class at Embry-Riddle.**
-  **April 21, 2007 - VE Testing at Embry-Riddle.**
-  **April 27-29, 2007 - DX Convention in Visalia, CA.**
-  **May 5, 2007 - Whiskey Row Marathon - Prescott**
-  **May 19, 2007 - ARES/RACES Training**
-  **June 2, 2007 - Joint Swap Meet with VVARA - Granite Mountain Middle School Parking Lot**

Packet Radio

By Jim Clark, N5RO

Those club members who are ARES/RACES members recently attended a training session on packet radio. For those who did not or if you've never tried packet radio, you're missing a great opportunity to explore a mode that is one of the more useful aspects of amateur radio. If you thought packet was going out of style, think again. "Why Packet Radio?" Like any mode in the amateur service, it provides a group of amateurs with a way of having fun and providing a very useful service.

Packet radio has been around since the mid-60's, but the first transmission was seen on the amateur bands on May 31st, 1978 as a result of research done in Montreal, Canada. This was followed by the Vancouver Amateur Digital Communication Group (VADCG) development of a Terminal Node Controller (TNC) in 1980. This was followed by TAPR (Tucson Amateur Packet Radio) with the creation of the TNC-1 in 1982 and then the TNC-2 in '84-'85. Packet radio exploded when TAPR sold over a thousand TNC-2 kits. Packet radio now has thousands of amateurs using it daily, various manufacturers making and selling TNCs, or modems as sometimes called, and over several hundred thousand TNCs having been sold to date. No other mode of amateur radio has seen such explosive growth!

Packet radio is not just for emergency communications. Packet allows hams to communicate via Bulletin Boards (BBS). BBSs do two main things: send and receive personal messages for local users (like yourself), and send and receive messages or bulletins intended for people locally or around the world.

Keyboard-to-Keyboard: Like other amateur modes (SSB, FM, etc), packet radio can be used to talk to other amateurs directly. Amateurs can talk to each other simultaneously using their keyboards when they can directly communicate with each other. With the use of networks (see a little later), amateurs can talk at a distance beyond the reach of their own stations by using the network.

You can use packet to send email by radio, even to an Internet email address (refer to the "E-mail by Radio" article in the December newsletter). [Packet is used in PAC-TOR, which is, (to oversimplify) a sort of "combination" of packet and AMTOR (AMateur Teleprinting Over Radio - an improved type of RTTY) with some other error correcting features.]

RACES/ARES/NTS and Emergency Communications: Packet radio is being used in many emergency services. Whether packet is used to pass a message accurately and in large quantities or to handle messages passed by the National Traffic System, it provides an important function during disasters. Here in Arizona, it is and will be used more and more in Winlink – an advanced message and email handling system – for emergency message traffic.

APRS combines GPS with packet radio to allow a master station to plot on their computer the location of all other stations in the field. This coordinates the exact position of weather spotters or searchers (very important here in Arizona), without having to waste radio time informing the control station of their locations. Some of our local Search and Rescue volunteers now use APRS to good advantage, saving air time having to report positions and helping when net control cannot contact them so it's also a safety issue. Amateurs in Oklahoma and other areas distribute Doppler Radar images via the packet network. The small weather image file takes only a few minutes to retrieve and display. This helps those amateurs outside of the local ATV coverage to get an accurate weather picture from Doppler Radar.

"Why Packet Radio?"

Are you a Dixer? A DX Packet Cluster can help. Many areas have DX spotting nodes or networks. HF operators connect to their local DX Packet Cluster in order to receive reports on the latest DX or for rare international operators to contact. A DX Cluster allows many HF operators to be connected over packet radio at the same time while operating HF and hunting for DX. When someone finds a DX station, they send a packet message to the DX Cluster, which then sends the information to all other packet operators using the DX Cluster. DX Clusters allow everyone to operate many more hard to find DX stations in one evening than was possible operating by oneself. Some amateurs have been known to attain enough contacts to qualify for DXCC in a matter of weeks by taking advantage of DX Packet Clusters.

Networking: Since amateurs typically use VHF or UHF to transmit their data, their range of communications is limited to approximately line of sight. An average packet station talks in a radius of about 10-30 miles. Packet Networks allow amateurs to widen the area of communications past their line of sight, by having a series of packet stations linked by radio that can be used to get their packet messages to where ever the network goes. Much like the telephone system, networks provide long distance service outside the local area.

See Packet Radio Page 10

● Packet Radio (Continued from Page 9)

There are a number of amateur networks which allow amateurs to travel from one area to another. Network types include: Net/Rom, TCP/IP, TexNet, G8BPQ, ROSE, KaNodes, etc. Refer to <http://www.azfreqcoord.org/packet/packet.html> for a list of nodes and networks in our area.

Satellite Communications: Many of the amateur radio satellites in orbit contain computer systems that provide packet capability. Most packet satellites provide BBS-like functions for messages to be passed to anywhere in the world within 24 hours. Several contain CCD cameras, which allow amateurs to download images of the earth and some allow users to retrieve data from the onboard experiments. Most satellites use AX.25 with special software developed for satellite communications. DOVE, Digital Orbit Voice Encoder, can be received with any normal VHF/FM 2-meter packet station, but most of the packet satellites use SSB and require more complex equipment in order to operate them.

Conclusion: These are just some of the things you can do with packet radio. Once you find something that you can do with packet radio, then you have a reason to get the equipment or software necessary to get on the air. A good place to start is to find a ham who uses packet and visit. To learn more, check out <http://www2.arrl.org/tis/info/pdf/49244.pdf> – one of the earlier QST articles on the subject which gives a pretty good explanation of the subject. ■

ENJOY!!



Ham Radio Antenna Bills in Three States

Lawmakers in three States - Arizona, Maryland and Oklahoma -- are considering Amateur Radio antenna bills that would put the essence of PRB-1 into each State's statutes.

Arizona's HB 2595 extends the protection of PRB-1, described in FCC's Amateur Radio Rules in 97.15(b), to homeowners in certain private communities where CC&R's apply. This bill calls for "reasonable heights and dimensions for communications antennae and structures".

HB2595 has been approved by the House of Representatives and currently is moving through the State Senate.

A continued effort by all radio amateurs is needed to ensure passage of this important bill. ■



Computer Tips

For HP, Lexmark, and some Canon Ink Jet Cartridges.

Many of us experience printer problems where a cartridge won't print, some colors are not printing, or the printout is streaked or faded. If the printer's Print Head Cleaning Program does not help, take the cartridge to a hot water faucet.

- Turn on the hot water...let it get hot.
- Put the print head portion (where ink comes out) under the hot water for 2 to 3 seconds.
- Dry off the cartridge with a soft tissue or paper towel.
- Re-insert the cartridge into the printer.
- Run the normal cleaning routine a few times.

If this doesn't work, try a "Soaking Technique" as follows:

- Fill a disposable bowl or cup (e.g., Styrofoam) with 3/4-1" of hot (not boiling) water.
- Place the cartridge print head into the water.
- Soak the cartridge for 12-24 hours, preferably overnight.
- Remove the cartridge from the water and dry off the print head using a soft tissue or paper towel.
- Re-insert the cartridge into the printer and run a cleaning routine to determine success.

Free Utility Finds Big Computer Files

WinDirStat is a neat application that creates a graphical depiction of the contents of your hard drive, shows where all your disc space has gone, and helps you clean it up. It is ideal for finding big files that may be hidden in subdirectories.

WinDirStat scans your drive and produces three useful views: 1) A **Directory List**, which shows directories and files sorted by size descending. At the top you see the directories and files, which use up most space. 2) A **Tree-map** showing each file as a colored rectangle, the area of which is proportional to the file size. 3) An **Extension List** which shows the file types that take up the most space on the drive.

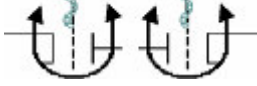
Available free at <http://tinyurl.com/23mzsf>

“Boatanchors”

By Dennis Kidder,

WA6NIA

From ARALB’s “The Oscillator”



You hear the term all the time. You see them on eBay and you see them on the cover of the latest *QST*. Why the big deal? What’s so special about some old radio? Well, indulge me here and allow me to share a few thoughts on the subject.

We owe a lot to the hams who came before us, back to the earliest days of wireless. They were the pioneers, paving the way for future generations of hams and especially for the growth of the fledgling electronics industry. Where would we be today if it weren’t for the likes of Marconi, Armstrong, De Forest and many others? For the most part, we take all of their innovations for granted. But, where would we be without cell phones, microwave ovens, and the Internet?

So, what’s this got to do with boatanchors, you say? Old radios are a link to our past. They are a way to preserve and pay homage to those who came before us. At one time, the radio industry in the United States was second to none. Familiar to many are the names of Collins Radio, R.L. Drake, Hammarlund, Hallicrafters and National Radio Company. They set the standards by which we compared all other rigs.

There were no digital readouts (at least not electronic ones); no digital signal processing; no “instant bandswitching.” These radios were big, heavy, power hungry beasts. They could be temperamental, touchy to tune, and yes, they really did glow in the dark, but there was warmth to their sound, and they were alive.

The term “boatanchor” is a name of endearment, bestowed upon certain old radios by those who wish to preserve and enjoy them. And while there are some radios that truly belong at the bottom of the sea, there are others that deserve our respect and care. For many hams of earlier eras, these old radios were all they could afford to put on the air. Now, many years later, many of these radios are considered nearly worthless, overtaken by newer technologies such as Single Sideband. Many a ham in the ‘50’s got his start with a war surplus BC-348 receiver.

Today, yesterday’s castoffs are coveted treasures. That BC-348, once destined for the scrap heap is now a fine collectible. And while it won’t perform like the receiver in a modern HF transceiver, it will still do a respectable

turn. It worked back then, and there’s no reason why it can’t work today.

Collecting radios doesn’t have to become an obsession. Having one really nice boatanchor is a great way to preserve our radio past. But once you are hooked, there may be no turning back. You don’t have to break the bank to enjoy these old beasts. There are bargains to be found even on eBay or at the local radio store. So, network. Seek out advice from collectors. You might even find someone willing to give you an old radio to get you started.

There is something special about old radios. Yes, they are big and heavy and take up too much power and room to operate and they can be temperamental. But spend a thought on what it was like before the days of cell phones, the Internet, microwave ovens, color televisions and compact disks. Then remember how very special these radios were and are. It is truly an act of love to collect and preserve these non-computerized windows into the past. ■

From “The ARRL Club News” and The American Radio Relay League

A successful Field Day or any other club activity involves leadership, planning and teamwork. In any club there is always going to be a core group of players that ignite the spark and get things started. These people are leaders. But it is the participation of all of the individual members that makes any event a success. The best home run hitter cannot hit a grand slam unless other batters did their part to load the bases. It takes teamwork.

Being a member of a club is more than sending in your dues money. Every member of a club has to step up to the plate and swing the bat. Healthy and active clubs have many positions that need to be filled. In addition to the offices like club president, vice president, secretary and treasurer, successful clubs often have committees that oversee specific areas of club business and activities. Active club members are those who volunteer to help out and make things happen. Active members don’t wait to be asked to get involved. Active members are involved for the good of the club.

Whether your club is large or small, everyone is a member of the team and every member of the team is counting on you to do your part. Active and involved members combined with strong leadership are a solid combination for a championship club. ■

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, N7PJN

Area Repeaters

Frequency	PL	Location	Owner/Club	Auto-Patch	Rem. BaseOr Linked	Vo IP	Notes:
52.560-	100.0	Mt. Union	N7NGM			Echo	-500KHz Offset
53.040-	None	Prescott Airport	WB7BYV				-1MHz Offset
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+	100.0	Prescott Heights	W2YAV				
147.140+	162.2	Flagstaff/-Mt. Elden	ARA		Linked to Mt. Ord 147.360-		
147.220+	162.2	Mingus Mtn	VVARA				
147.260+	103.5	Mt. Union	ARES/RACES				
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	KB6TWC
448.475-	100.0	Flagstaff-Elden	ARA	Yes			
448.500-	100.0	Prescott	KB6TWC	Yes	RB to White Tank 146.940		E-mail owner for instructions
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. 927.3875		
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 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

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

Many thanks to Bob Smith, WB6ODR, our Webmaster

