



# YAVAPAI SIGNAL



The Yavapai Amateur Radio Club • Prescott, Arizona • DM-34 • Volume 23 – No.4 • April 2008

## Ned Stearns, AA7A Program Speaker for April



Ned Stearns, AA7A from Scottsdale, AZ, will speak about his experience operating as a 3X in Guinea, West Africa. Ned is the former ARRL Vice Director for the Southwestern Division, former Chairman of the ARRL Contest Advisory Committee, and a member and twice past-President of the CADXA. The Business meeting will be conducted following Ned's presentation.

### 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 2008

##### President Vice President

Terry Pemberton, KB7TRE Jack Ragen, W3IVQ  
kb7tre@cableone.net ragen@cableone.net

##### Secretary Treasurer

Jeff Hanna, WB7RFY Patti Halgunseth, KD7VBG  
jeff668@commspeed.net kd7vbg@cableone.net

#### Board of Directors (includes Club Officers)

John Broughton – WB9VGJ

Tom Griswold -- N6LSA

Richard Bozeat – KE7DTR

Walter Schumann – KF6SPS

**Newsletter Editor:** Joe Oliver, AC6AA

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## Minutes of March 6, 2008 Board Meeting



Board of Directors meeting was called to order at 1820 hrs by the President, KB7TRE. Also in attendance: WB9VGJ, KF6SPS, KE7DTR, N6LSA, W3IVQ, KD7VBG, and WB7RFY.

Future program schedule was discussed. April AA7A on DXpedition to Guinea, May WB6ODR on geocaching, June K6VVR on fox hunting and KD7VBG on Field Day logging program to be used. Program Committee (N6LSA, KE7DTR) received several additional leads to continue the calendar.

Hamfest date of May 31 is confirmed with school; published with ARRL and ARCA.

Need to distribute sign-up sheet to assure 8-12 staff for the day. Possibility of small raffle considered. AB7NK verifies VE session will coincide again.

Field Day and activities already pretty well set; possibility of portable tower to be pursued. Club discount may be available for bulk FD T-shirt order. Referred to membership.

WB9VGJ reports Prescott Valley Arts Festival 2008 has not got a chairman and falls on date with several conflicting activities. Will look to return in 2009.

### Membership Count:



1st Thurs. in Feb.....146  
Gain/Loss.....-3  
1st Thurs. in Mar.....143\*  
\* Includes 13ea 3-month

KB7TRE reviewed Statehood Day activities and will report to membership including a letter received from Bruins Amateur Radio Club at Bradshaw Mountain Middle School.

Support from several school administrators was forwarded to Superintendent of Schools

KB7TRE has lead for window decals; requested to follow-up and report.

Adjourned at 1845 hrs.

Respectfully submitted,

Jeff Hanna, WB7RFY

## Minutes of March 6, 2008 General Meeting

Meeting was called to order at 1900 hrs by the President, KB7TRE. Following Pledge of Allegiance introductions were made.

**Attendance:** 55 of whom 45 signed in.

**Visitors:** 4, including Will Taylor, KE7SJD and Linda Ochoa, W7POF, and Bob Sittererley, K7POF.

**New Members:** On motion of WB9VGJ, second by AB7NK and no dissenting votes, W7TJQ, Bob Erdmann was welcomed to the membership.

**February minutes** were approved as published

**Treasurer,** KD7VBG reports a beginning balance of 1342.70, ending Balance of 1854.63 and repeater fund balance of -223.08. Detailed report approved as stated.

## Committee Reports:

**ARES/RACES:** WA6ZZJ reminded members of first quarterly training meeting March 15, apx. 9am-noon simultaneously at County Public works building in Prescott and in Cornville at the Fire Station; topic back to basics in message handling. Whiskey row marathon Saturday May 03; sign-up sheet now available through Lloyd. KC7CBK solicited assistance for the Whiskey off-road bicycle race April 26; a few operators with ATV/trail bike type vehicles especially needed. Various routes will require some points to be manned by 8am and some until possibly 5pm. Sign-up sheet available through Lee.

**Repeater:** WB6ODR reports good possibility new equipment will be installed by April.

**VE testing:** AB7NK reports 18 applicants at last session with 12 new licenses and several upgrades. Next session Saturday, April 5<sup>th</sup> at Embry Riddle. Contact AB7NK for more info. Round of applause for all our club Volunteer Examiners.

**Patches:** Available from the Treasurer for \$3.00. Supply is short; time to order more. Previous supplier available at original price and 2 other possible suppliers offered preliminary bids. On motion of N5RO, second by KF6SPS and no dissenting votes, it was approved to order 100 new patches.

**Shirts:** W6CCD has a few available in stock.

**Badges:** WB6ODR handles orders. On hand awaiting pick-up: KD7ODO, KD7ODN, WA7ZGK, KX6H, & KB7CH.

**School Clubs:** N5RO thanks many members for assistance and donation to the Bradshaw group; they have applied for a grant to assist development. School

wants to develop studies into communications technology. KB7TRE stated Granite Mountain group wants more study time for license classes.

**Refreshments:** Committee Chairman K6UWV: eat, drink, and enjoy. Noted coffee volume leaves a bit extra.

**Awards** were presented to:

KI7JZ, Erica Schillneck for providing so many delicious refreshments,

WA6AQK, Ken Severance for service as Board Member 2006, 2007, and Hamfest 2007.

**Hamfest:** Published for May 31<sup>st</sup>; help needed; sign-up sheet is being distributed. 8-10 needed for event plus a few for evening before.

**Field Day:** Several sub-committees formed; will need to assure sufficient support by next meeting for each of many planned activities. ARRL t-shirts available, possibly with group discount. Poll of interest taken; those who are interested contact KD7VBG.

**Statehood day** was great success reports KB7TRE. Some contacts, but stirred excitement among youth and school administrators and parents; thanks from Sharlot Hall Museum administrator also. Letter from the Bradshaw Mountain Middle School group was read. See March Newsletter for detailed write-up of activity.

**Programs:** April is a REVERSE MEETING, with program first at 7:00 pm to accommodate our speaker AA7A, Ned Stearns, who is coming from Phoenix to speak on the recent DXpedition to Western Africa.

**PV Arts Festival** had several conflicts on date; will look to participate in 2009.

**Insurance** will be due soon; have already received rider for club Hamfest.

**ARRL International DX SSB Contest:** On behalf of the club, KC7CBK thanks N7CW, Bud Semon, for offering his terrific station to club members and guests for the contest March 1 & 2.

**50/50 Drawing** of \$ 51.50 was won by KE7DTR.

**Tonight's Program:** KE7NAP, Ellis will speak on working with the blind.

It was motioned by WB9VGJ, Seconded by WA6AQK, with no dissenting vote, to adjourn at 1950 hrs.

Respectfully Submitted,

Jeff, WB7RFY

YARC Secretary

## Tech Support – Entertaining Calls for Help

**Tech support:** Click on the 'my computer' icon on the left of the screen.

**Customer:** Your left or my left?

**Customer:** I have problems printing in red...

**Tech support:** Do you have a color printer?

**Customer:** Aaaah..... thank you.

**Customer:** My keyboard is not working anymore.

**Tech support:** Are you sure it's plugged into the computer?

**Customer:** No. I can't get behind the computer.

**Tech support:** Pick up your keyboard and walk 10 paces back.

**Customer:** OK

**Tech support:** Did the keyboard come with you?

**Customer:** Yes

**Tech support:** That means the keyboard is not plugged in. Is there another keyboard?

**Customer:** Yes, there's another one here. Ah... that one does work

**Tech support:** Your password is the small letter a as in apple, a capital letter V as in Victor, the number 7.

**Customer:** Is that 7 in capital letters?

**Customer:** I can't get on the Internet.

**Tech support:** Are you sure you used the right password?

**Customer:** Yes, I'm sure. I saw my colleague do it.

**Tech support:** Can you tell me what the password was?

**Customer:** Five stars.

A woman customer called the Canon help desk with a problem with her printer.

**Tech support:** Are you running it under windows?

**Customer:** "No, my desk is next to the door, but that is a good point. The man sitting in the cubicle next to me is under a window, and his printer is working fine."

**Tech support:** How may I help you?

**Customer:** I'm writing my first e-mail.

**Tech support:** OK, and what seems to be the problem?

**Customer:** Well, I have the letter 'a' in the address, but how do I get the circle around it?

# Treasurer's Financial Reporting Sheet



Club / Group Name: YARC  
Reporting Date: MAR '08

Patti Halgunseth, KD7VBG  
Treasurer

Members Name	Dues Paid	Repeater Fund	Other Income	Prize Money Paid Out	Net Cash In per Member
Robert Erdmann/N-W7TQJ	\$18.00	\$2.00			\$20.00
Ray Fobes/R-W1OTH	\$18.00	\$2.00			\$20.00
Lloyd Halgunseth/R-WA6ZZJ	\$18.00	\$2.00			\$20.00
Ken Severance/R-WA6AQK	\$18.00	\$2.00			\$20.00
Loraine Severance/R-KD6FDA	\$0.00				\$0.00
Cheryl Severance/R-KD6FCZ	\$18.00	\$2.00			\$20.00
Mike Keefe/R-KC7QZB	\$18.00	\$2.00			\$20.00
Lee Cunningham/R-KC7CBK	\$18.00	\$2.00			\$20.00
Raymond Tyrrell/R-N6MY	\$18.00	\$2.00			\$20.00
John Broughton/ARRL	\$36.00				\$36.00
Ken Severance/ARRL	\$36.00				\$36.00
Loraine Severance/ARRL	\$8.00				\$8.00
Cheryl Severance/ARRL	\$8.00				\$8.00
Terry-Change Statehood Day 50/50			\$10.53		\$10.53
			\$103.00		\$103.00
Richard Bozeat-KE7DTR				\$51.50	(\$51.50)
<b>Total:</b>	<b>\$232.00</b>	<b>\$16.00</b>	<b>\$113.53</b>	<b>\$51.50</b>	<b>\$310.03</b>

Miscellaneous Club Expenses	Cash Out	Check Number
ARRL=John Broughton/R	\$34.00	996
ARRL=Ken Severance/R+Fam	\$50.00	997
Joe Oliver=Stamps	\$41.00	998
David Passell=Refreshments	\$18.33	999
Bob Smith=Web Site Renew	\$75.00	1000
Patti Halgunseth=Tickets	\$7.32	1001
Insty Print=Newsletter	\$27.49	1002
Repeater Fund	\$16.00	Cash

Club Funds Summary	Totals
Starting Balance	\$1,854.63
Net Expenses	\$269.14
Net Income	\$310.03
	<b>\$1,895.52</b>

	Repeater Fund	(\$207.08)
<b>Total:</b>	Cash Flow	<b>\$40.89</b>

## Program Speakers

**April:** Ned Stearns, AA7A will speak about his experience as a 3X in Guinea, West Africa.

**May:** Bob Smith, WB6ODR will speak on "Geocaching".



## This Month's Featured Ham

By Pat Oliver, K7DUC



**George Imburgia, AD7RL**

George got his first license in December of 2006, while he was living in Delaware. He continued to upgrade and earned his Extra Class in December 2007.

Unfortunately, due to the ubiquitous homeowner association rules he is unable to operate on HF at this time. However, he does operate on VHF and UHF and also uses IRLP and Echolink. He doesn't do CW and was discouraged from getting his license for a long time due to the prior code requirement.

He currently uses a Yaesu VX-7R hand held. He also has an HF rig that Neil, KA7JAS loaned him.

George's most memorable contact was with an old friend, in Upper Coomera, Queensland, Australia. This was his first contact and was on Echolink.

He has been building electronic equipment since he was 10 years old -- audio preamps and digital items as an example.

He received his most memorable radio-related mail due to Echolink, when he first started. It was from a Ham in Mississippi, who sent a welcome package with lots of useful information.

The ham related activities he is involved in are Club activities. He enjoys outdoor activities, and is looking forward to helping in the bike rally.

George first became aware of our club when working in the Vet's Memorial booth at the County Fair. He saw our

booth and talked to Marty, KF6BTV, who told him about the Yavapai Amateur Radio Club and also where and when we meet.

George currently does network engineering and is self employed. He is a proficient programmer and uses Assembler language to modify/create programs.

He was in the military for a few years as a paramedic. He continued as a paramedic in civilian life, but was in an accident and could no longer lift patients. He went back to school and took more computer and electronic oriented subjects, which he really loves.

George was originally from Pennsylvania. He moved to Prescott in July, to be near his parents, who live in Prescott Valley. He thinks that this area is great.

He is very happy with the scale and activities of YARC. Not all clubs are so involved.

George is a very valuable and active member of our club. We are fortunate to have him as a member. ■

## For Sale

**2005 Kia Sedona 7-Passenger Van  
Equipped with HF/VHF/UHF Radio**

**Asking \$11,995**

Will be Available August 1, 2008

- Will take Deposit -

Mileage: 48,000 miles

3.5 Liter Engine; all Power; DVD/CD Player

New Tires

### Radio Equipment Installed:

- Yaesu FT-857D HF/VHF/UHF Transceiver
- Ameritron ALS-500M 500 watt Amplifier
- MFJ 6" SWR Meter
- Stealth II Motorized 75M - 10M Antenna
- Dual UHF/VHF Antenna

**Call: Bill Jackson, W6HDP (928) 458-0106**

*Bill is a long time club member who now resides at Las Fuentes in Prescott, AZ.*



By Lloyd, WA6ZZJ

## ARES/RACES.....

The first quarterly ARES/RACES training meeting of 2008 was held on Saturday, March 15, 2008 with meetings held simultaneously at the Yavapai County Public Works Ready Room in Prescott and at the Cornville Fire Station in the Verde Valley.

The topic covered at the meeting was 'back to basics' pencil, paper and voice message handling techniques and working with the ICS-213 message form. Our focus on training in 2007 was using digital communications (Packet and Pactor) and Winlink with email via amateur radio. Both of these methods are in the forefront of emergency communications technology today, but we must not lose sight of what would happen if neither of these methods were available to us and maintain our skills in the basics.

The primary task for amateur radio in emergency communications is to "MOVE THE MESSAGE FORWARD". Our primary means will be on the amateur frequencies, but we could also be called upon to communicate on served agency radios and yes even CB radio if it will get the message through. We could also use GMRS, FRS and MURS radio systems along with the telephone (if they are working) and satellite phone.

Proficiency in message handling is a very important part of our ARES/RACES training, whether it is by voice, digital modes or even CW if necessary. All amateur radio licensees should have a basic knowledge in message handling. Remember the first paragraph in the FCC's Part 97 Amateur Radio rules.

## SPECIAL EVENT COMMUNICATIONS.....

Upcoming special event communications events are:

**Saturday, April 26, 2008** will be the Whiskey Off Road bicycle event. This event will begin on Prescott's Whiskey Row and run through the Prescott National Forest on non

motorized trails. It will consist of three different lengths of ride. The longest will take riders as far out as Skull Valley. Reliable communications is a very necessary and important part of this event as they are looking for upwards of 400 riders.

Lee, KC7CBK, is putting this event together so if you are able to participate, give Lee a call, email or contact him on the radio. More people are still needed to participate in this event.

**Saturday, May 3, 2008** will be the 30<sup>th</sup> Annual Whiskey Row Marathon. This is a long standing event for YARC to provide the communications and be listed as one of the main sponsors of the event. Our communications support is most valuable to the Prescott YMCA who sponsors the marathon. More operators are still needed for this event also, so if you haven't already signed up, please do so.

**The sign up sheets for both events will be at the April YARC meeting for those who have not already signed up.**

## FIELD DAY.....

Plans are progressing for this years Field Day which will be held at Watson Lake Park in Prescott on Saturday and Sunday, June 28<sup>th</sup> and 29<sup>th</sup>. Set up will be at the Ramada on top of the hill overlooking the lake. At this time the committee is looking at running Class 1A with a GOTA Station to go along with the "KISS" principle. The club has also voted to hold this year's annual picnic on the Saturday of the event.

The Ramada is reserved from 0600 on Saturday until noon on Sunday. Set-up will be done on Saturday morning so we are ready to start operating at 1800 UTC, and operations will continue until 1800 UTC on Sunday.

From the ARRL Field Day Packet: "First, and foremost, **Field Day should be a fun activity.** Field Day serves as one of the biggest introductory "drawing cards" we offer in trying to expand interest in the hobby."

Please plan on getting involved and sign up for an operating stint at one or more of the receiver/transmitter positions that will be set up. I'm sure operators will especially be needed through the night time hours. The Ramada has easy good road access and will be well lit, so consider operating a night shift. There will be a sign up sheet at the YARC meetings as the time gets closer. ■

**Excerpts from the  
AMATEUR RADIO COUNCIL OF ARIZONA (ARCA)  
16 February 2008 MEETING MINUTES**

**1st Vice Chairman's Report.**

Doug Collins (KE6JUK) reported that work has begun for the 2008 Arizona State Convention in Williams. He is working with the local hotels in Williams to get special rates for convention attendees in order to ensure vendors get the best possible rates. He is also making the rounds of vendors who are attending the current Yuma event and attempting to recruit them to come to Williams. He would like to get more folks inside the exhibit hall this year, and requested feedback from the ARCA clubs on his ability to negotiate a fee reduction on spaces for commercial vendors as a way to increase vendor participation. Last years expense for raffle prizes was about \$1800 – Doug is looking to offer a prize pool of roughly the same amount this year and is working with AES to see what kind of deal he can arrange. Rick Aldom (W7STS) suggested that Doug might want to contact Pat Marcy from Icom to see if Icom would offer a better rate. Doug requested volunteers to help to encourage increased vendor participation. He doesn't mind if folks going out and encourage vendors to come to the event, but requested that they keep him informed of which vendors they contact.

**Section Manager's Report.**

Tom (K7DF) reported that the Arizona State Legislature is working on a bill of interest to hams. The bill would provide some protection from homeowners associations for hams who want to erect antennas if they are involved in emergency communications. Tom is also working an action that would turn over a portion of the amateur radio vehicle license plate fees to ARCA. Dan Brown (NA7DB) who has been one of the major liaisons to the legislature suffered a setback with his health in January, but both actions are moving forward.

**Southwest Division Convention Report.**

ARRL Southwest Division Convention Chair Rick Aldom (W7STS) reported that plans for the convention are motoring along nicely. We now have 30 confirmed speakers with 12 more pending. The speakers list is posted on the website and descriptions of the presentations along with bios of the speakers will follow shortly. The list of raffle prizes is also posted: the Grand Prize is an Icom IC-756ProIII, the Registration Prize is an Icom IC-746Pro, the Early Bird Prize is an Icom IC-7000 mobile, and there are sixteen additional radios that will be given away as hourly prizes throughout the convention. For more information on the convention (including registration instructions and a link to a special hotel rate at the Mesa Marriott hotel, visit <http://www.azhamcom.org>. ■

# VE Tidbits



*by Mary Vince – AB7NK*

## **VE Test Results for February 2008**

The test session held on February 23<sup>rd</sup> at Embry Riddle yielded four new Technicians, and upgrades for seven General Class and one Extra Class. Two of the applicants aced their tests. Congratulations to everyone who passed the testing.

I was under the weather that day, so Dick Hughes, W6CCD filled in for me. Dick said, "You never know how much work someone else does until you try to fill their shoes!" I understand that the test session was very successful, due no doubt to my very faithful VE's who always come through for me.

A tip for those who didn't make it last time. Experience shows that the first answer that comes to mind is probably the correct one. The more time you spend agonizing over a question, the more likely it is that you will choose the wrong one.

Our next test session will be on at 9:00 A.M. sharp, April 5<sup>th</sup> in the King Engineering & Technology Center at Embry Riddle University. We will be testing for all license classes. Please e-mail me if you plan to attend. It makes it so much easier for me if I know in advance who is coming.

We are tentatively planning on having a test session again at the YARC Prescott Hamfest in May. More information when it becomes available.

Mary – AB7NK  
VE Team Leader

For more information contact Mary, AB7NK  
[ab7nk@arrl.net](mailto:ab7nk@arrl.net)

# 10 Meters As I Remember It...

By Joe Oliver, AC6AA

As some of you old timers remember, getting your Ham license in the “old days” was not all that easy. In 1947, it required you to go to the nearest Federal Building, which in my case was 50 miles away in San Francisco, California. There you had to face a stern FCC Inspector, who gave you a written exam, which included such things as drawing circuit diagrams. You also had to pass a code test, which required you to actually send, as well as receive, a perfect 13 WPM. I was fortunate to pass the test on my first try.

A short time later, my Class B license with a W6YQN call sign came in the mail. My Elmer had built a very compact 10 watt, crystal controlled, 10 meter AM transmitter, which he sold to me for \$10. That pretty much determined that 10 meters would be the band to operate on.

At that time, almost everyone operating on phone had an AM transmitter – and many were crystal controlled. Therefore, if you called CQ on one frequency, you had to tune up and down the band to find someone calling you if he/she was not on your frequency. This operating practice caused a bit of confusion, not to mention the added space taken up on the band for a QSO occupying two different frequencies. In addition, as you tuned across the band, you usually heard a cacophony of heterodynes producing squeals and squawks, as one station’s carrier interfered with another. On weekends, the 10 meter band was jam packed with stations all vying for an interference free frequency.

There was no doubt that 10 meters was a popular band. At the “right” time, you could work great distances with only milliwatts of power. 10 meters was basically a sun up to sun down band. In the early morning, European stations with their characteristic arctic flutter could be heard, and were easily identifiable as DX. Later in the afternoon, Pacific stations could readily be heard. Most DX stations operated below 28.5 MHz, which was the low end of the American phone band at that time. Few foreigners ventured above 28.5, since they probably would get lost in the QRM. The result of this operating practice by DX stations, resulted in a huge number of U.S. stations attempting to get as close to the edge of the band as possible.

U.S. stations could be heard throughout the day, but as evening hours approached and the band started closing to a

particular part of the country, signal strength between stations increased dramatically. It was not uncommon to receive a 40 dB over S9 signal report and then a few minutes later lose the station completely.

Once the evening hours set in, it was an ideal time for the locals to gather together on 10 meters for a nightly roundtable. 2 meter activity was almost non-existent. There were no repeaters in the area to support nets that are so commonplace today. The roundtables provided an opportunity for camaraderie amongst the local hams, and plenty of playful joking and humor resulted.

The advent of television broadcasting in the San Francisco Bay area in 1949, and the resulting TVI (television interference), brought an end to my enjoyment of 10 meters. Neighbors were installing 50 feet high yagi antennas on their roofs in an attempt to receive a snowy TV picture originating 50 miles away, on poorly designed receivers susceptible to outside interference. It was a losing battle for hams like us.

Unable to cope with complaints of TV interference, I gradually lost interest in the 10 meter band, and eventually ham radio.

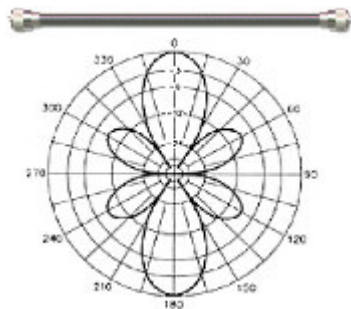
Returning to ham radio in May 1996, was a new experience. When calling CQ, it was no longer necessary to tune up and down a band to find someone calling you. People were using transceivers to talk with one another on the *same* frequency. Gone were the bothersome heterodynes, and with the predominance of cable TV in our area, TVI was no longer a problem for most Hams.

As solar cycle 23 progressed, communications on the higher frequency bands, i.e., 15, 12, and 10 meters became possible. The U.S. phone band on 10 meters had now been extended to 28.300 MHz, and most DX stations were operating within the U.S. Amateur band. AM was still alive, with a few stations still operating their “boat anchors” on or about 29.0 MHz.

With solar cycle 24 now in progress, many of you may be looking forward to 10 meter openings in the next few years. Perhaps 10 meter propagation will never be as good as it has been in previous solar cycles, but with its unique characteristics, 10 meters will always be a popular operating band.

Comparing current amateur radio operating conditions with those of 60 years ago, one certainly has a better appreciation for the benefits of our present day Single-Side Band transceivers and the advent of cable and satellite TV. ■

*“On weekends, the 10 Meter band was jam-packed with stations.....”*



# Antenna gain made easy

By Bruce Randall, W1ZE

I am sure you have heard hams say and have seen antenna ads that state their antenna has 11 dB of gain or some other impressive figure. Sounds good doesn't it. But being the skeptic you are, you should ask

The following question, "compared to what?"

I can prove to you that the stubby rubber ducky antenna on my tiny HT has 40 dB of gain. You may now be saying to yourself, old ZE has been nibbling on those magic mushrooms again. No I have not. Here is how you get 40-dB gain. You measure the signal strength from that rubber-ducky antenna against the HT feeding a dummy load and you will see a very high gain figure.

As you already know, gain is a measurement greater than another reference point. Saying your antenna exhibits 11dB of gain means zip, absolutely nothing, unless you know what you measured your antenna against.

Antenna measurements are usually measured against one of two reference antennas. The first is a theoretical radiating device in free space called an isotropic radiator. You can not buy one of these at HRO. The other reference antenna is a half-wave dipole. You can buy one of these at HRO.

Physicists and antenna engineers tell us that a dipole has 2.1 dB gain over an isotropic antenna. If you sell antennas to hams (and yes, CBers) for a living, you want your ad to have the highest figure you can, so most likely your stated gain figure will be against an isotropic antenna source, and that figure is called **dBi**. I like to see the gain figure compared to a "real" antenna, such as a dipole. That figure is called **dBd**.

Bill Orr, W6SAI (SK) published a table in his Amateur Radio Antenna Handbook (still in print) that has an easy reference matrix called a "Truth Table" showing the real gain of various types of popular antennas used by hams. The following is a similar table you can refer to when talking about the gain of antennas.

ANTENNA	GAIN OVER AN ISOTROPIC RADIATOR (dBi)	GAIN OVER A HALF-WAVE DIPOLE (dBd)
ISOTROPIC RADIATOR	0	-2.1
GROUND PLANE	+0.3	-1.8
HALF-WAVE DIPOLE	+2.1	0
5/8-WAVE ANTENNA	+3.3	+1.2
QUAD LOOP ELEMENT	+4.1	+2.0
2 ELEMENT YAGI	+7.1	+5.0
3 ELEMENT YAGI	+10.1	+8.0
4 ELEMENT YAGI	+12.1	+10.0
2 ELEMENT QUAD	+9.1	+7.0
3 ELEMENT QUAD	+12.1	+10.0
4 ELEMENT QUAD	+14.1	+12.0

The above truth table shows 0 dB for a dipole and you can compare gain figures to that. The dBd and dBi results given are approximates because gain figures can vary slightly depending on various factors such as:

- Beam element spacing.
- How high the antenna is above true ground.
- Antenna traps & loading coils.
- Loop antenna shapes.
- Angle of radiation and polarity.
- And other factors.

These days, most of the antenna manufacturers who market antennas to hams are doing a better job at stating their antenna gain figures in dBd. However there are still a few out there that do not, so beware. ■

73, Bruce

# Designated Friends



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*A little preparation can be a big help.*

Scott, N7FSP, a friend of mine, called recently after he nearly died due to a misdiagnosis and shared a few thoughts with me. His story is not as important as the message he wanted to share with others in the amateur community and that is just what will happen to our stuff when we are gone. I don't want this to appear to be all gloom and doom, but let's face it, we are all going to become a silent key (SK) at some point. If that were to happen unexpectedly, do you have your shack in order? This article is to promote a bit of thought process when you are sitting in the shack, and the bands are a bit slow.

## What Is This Stuff?

We recently lost a fellow here, and he, like many of us, was a total pack rat. It appears that he was not able to walk through a hamfest, flea market, yard sale or any location related to acquiring stuff without bringing some of it home. He passed away quietly in his sleep, and his daughter was left to dispose of his "stuff." I have been involved in a number of SK estate sales, and know first hand what can happen when the survivor, be it a daughter, son, wife or husband, has no idea what things in the shack even *are* let alone what they may be worth. And I think we have all seen at some point what happens when the "vultures" move in after the death of a ham. Items that may be worth thousands of dollars are let go for pennies. I was fortunate to have been called by the widow of another local ham who told me she would like to just give the stuff away to Goodwill. I talked her out of that, and after taking an inventory and making a trip to a local swap meet, she was shocked when I was able to hand her a check for nearly \$5000.

## Some Things to Think About

Now as I write this, I am guilty of not being prepared myself, but I felt it more important to share this information with others, to get folks thinking about this before another untimely death leaves a survivor wondering just what to do with it all.

So, here are my suggestions, but I think they are sound ideas:

1. Like the title of this article states, designate a friend or two who can help if something were to happen to you. Ask them first, of course, and make sure others know about them. Perhaps even name them in your will. (You might check with your lawyer about this.)
2. Make an inventory of everything in your shack that you feel is worth more than a buck. Okay I know this may take some time, but you can work on it waiting to nab that "rare one" or while listening in on the local net. If you have a box of things that are just miscellaneous items list them as such, but if you repack or rearrange them later, make a note in your list.
3. For all the items that are higher dollar amounts, list the price you paid and the amount it is worth now. You may need to update this every few years, but it will help those who need the help when the time comes. Just because you paid \$800 for it new does not make it worth that now. Many estate sales fall into this trap in that "well we paid that much for it." We all know that the value of gear drops pretty fast for most items, so let's give our survivors a good head start on the price.
4. Towers, masts and feed lines: If you are the only one on the planet who knows how you got that 85 foot tower up in your 60 x 20 back lot, let someone in on the secret. I have helped to take down many towers over the years and some of them were real buggers until we figured out how they were put up. Hams are *very* creative at tower installations, and when the procedure is lost with the original installer, things can go wrong. A map or diagram of how the feed lines and control cables are routed out of the shack and out to the antenna support is very handy as well.
5. Repeaters and packet nodes: These are another whole problem, if you are a packet sysop, or repeater owner, do you have a plan so your most often used equipment will continue to serve the amateur community? Does anyone know who your leases are with? Are they written or verbal? If verbal does anyone know whom to contact to make arrangements to take over the lease? And then what becomes of the equipment? Are you planning to donate it to a club or group if you depart this world? Or will someone be forced to have to deal with it after you're gone? I hold two leases for packet nodes with thousands of dollars worth of equipment. Do I have a "successor" for these sites? No, but I am working on it now. Do you have a written plan for your site?

*See Designated Friends Page 11*

● **Designated Friends** (*Continued from Page 10*)

This could go on forever with things to think about, but is intended to get your thought process going on just what will happen to your gear. I know I am going to work on mine so if anything happens, those who live on will not be left with a burden to remember me by. Much of this could have legal implications, so if you do have a will it would be beneficial to talk to your lawyer to insure what you have stated is what will actually be done.

*Mark Tharp, KB7HDX, has been licensed since 1989. He is involved in search and rescue as well as other service organizations in the Yakima valley. He has served as president of both the Yakima ARC and Yakima County Radio Amateurs. He is currently ARRL Eastern Washington Section Manager.* ■

**Postage increase**

The price of a first class stamp will increase 1¢ cent from 41¢ to 42¢ on Monday May 12. Customers may continue to use Forever Stamps they purchased for 41¢, even after the price change.



While the 42¢ stamp will be sufficient for a one ounce letter, the cost of a two ounce letter also increases by 1¢ to 59¢. Postcards will increase by 1¢ to 27¢. First-Class International Letters (1oz. to Canada and Mexico) will increase from 69¢ to 72¢, and a 1oz. Letter to other countries, currently 90¢, will increase to 94¢.

The US Postal Service adjusts its mailing service prices each May. By law, these prices can increase on average no more than the rate of inflation as measured by the Consumer Price Index.

The 7<sup>th</sup> Call Area QSO Party is designed to encourage friendly competition among the states in the W7 call area and to provide a forum for hams in these states to be “DX” for a weekend. The operating hours are 1300 UTC Saturday to 0700 UTC Sunday (6 AM to midnight PDT the first Saturday in May).

Details (rules, classifications, scoring, etc.) may be found at <http://www.7qp.org> as well as the Arizona Captain:Bob, K8IA, [BobK8IA@aol.com](mailto:BobK8IA@aol.com) ■

**The 7<sup>th</sup> Call Area QSO PARTY**  
May 3-4 2008

## Upcoming Events

- April 12, 2008** - AARC Hamfest at DeVry University, Dunlap Road, Phoenix, AZ.
- April 26, 2008** - Whiskey Off Road Bicycle Event.
- May 3, 2008** - Whiskey Row Marathon.
- May 3, 2008** - CARA Hamfest at Club Site, Moson Road, Sierra Vista, AZ. ARCA Meeting - 11:00 A.M.
- May 28, 2008** - Annual regional Wildfire Exercise.
- May 31, 2008** - Prescott Hamfest at Granite Mountain Middle School, 1800 Williamson Valley Road in Prescott.
- June 7, 2008** - White Mountain Hamfest at Show Low Intermediate School, 500 Linden Road in Show Low.
- June 28 - 29, 2008** - Field Day/YARC Picnic at Watson Lake in Prescott.
- July 18, 2008** - ARCA/Williams Hamfest at 800 Rodeo Road in Williams, AZ.
- September 12 - 14, 2008** - ARRL Southwestern Division Convention in Mesa, AZ.

**Technical Tips** by *Vic Black, AB6SO*

**Screw Sizes**

Theoretically, metric and US fasteners are not interchangeable. However in practice, because of built in manufacturing tolerances or allowable deviations from the norm, a #10-32 screw or nut (.190 major diameter, .032 pitch) can be interchanged with M5 x .8 (.196 major diameter, .032 pitch). I used this fact to advantage on my bicycle when some rusty nickel plated steel hex head M5 screws needed replacing. There are now some elegant low profile stainless steel hex socket drive button head #10-32 screws in their place.

## Weekly Breakfasts



### Tues. Morning Breakfast:

For time and location --  
Contact Bob Rosevear, WB7RRQ  
at [rosevear520@cableone.net](mailto:rosevear520@cableone.net)  
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" W 112°27'15.4")\*  
informal – all are invited

8:00 a.m.

#### Masonic Lodge

(1280 Willow Creek Road,  
2<sup>nd</sup> 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	
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. 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 Tone of 100.0 Hz**

For more Repeater Information & Listings refer to:

- [www.w7ara.org/Web/](http://www.w7ara.org/Web/)
- [www.azrepeaters.net](http://www.azrepeaters.net)
- [www.azfreqcoord.org/listings.htm](http://www.azfreqcoord.org/listings.htm)

## YAVAPAI AMATEUR RADIO CLUB

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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

