



YAVAPAI SIGNAL



The Yavapai Amateur Radio Club • Prescott, Arizona • DM-34 • Volume 25 – No. 9 • September 2010

From the President's Desk....



Hello again:

Yes! It's hard to believe it is September already. This is one of our busiest months of scheduled activity involving YARC. Saturday, September 11, 2010 is the March of Dimes for Babies. Sunday, September

19, 2010 is the Skull Valley Loop Challenge Bicycle event. For additional information, please contact Lloyd WA6ZZJ.

The same day, Sunday, September 19, 2010 is the Groom Creek Classic 1/2 Marathon, 10K, 5K, and 2 mile event. For additional information, please contact Patti, KD7VBG. Friday, October 1st and 2nd is the Prescott Road Rally, and for additional information please contact either Bob, KC8BOB and/or Bob, WB7RRQ. We need all the HELP we can get to man these events. Thanks for your much needed help and efforts.

Congratulations to a local recipient of an Award. Elijah Brown, AD7ZJ received an Association Scholarship from the Central Arizona DX Club. Refer to September QST article "AT The Foundation," page 94. Elijah, Keep up the good work!

The YARC Net meets every Wednesday evening at 1900 hrs (7:00 pm) and all are welcome; please plan to join in on the festivities. Please, take the opportunity to join the Net on a regular basis. This is a great time to talk to and meet other members of the YARC.

The September YARC meeting will be held on Thursday, September 09, 2010 at GMMS. The Speaker is Ray Benny, N6VR, and his topic is I.O.T.A. - Islands On The Air - Islands around Mexico and Baja. Ray is a super guy, and his topic is both exciting and interesting. You will not want to miss this meeting. The change in meeting dates is to accommodate Open House at the school.

T-Hunts, normally the Sunday following our meeting, at 1:00 p.m. in the parking lot of The Arizona Credit Union, next to Walgreens, at Gail Gardner Way, and Willow Creek Rd. This month it will be moved one week, to Sunday, September 12, 2010. The momentum and enthusiasm is growing, so come and join in on the fun. Bring any equipment you have

for T-Hunting and we cannot only check it out, but we can show you how it works. You can ride with other hunters as an observer, until you have enough confidence to try it yourself. When the T-Hunt is over we get together for some refreshments at a local café. This is one of the best phases of Ham Radio. Dave, WN7L hid the transmitter, and four teams searched for the hidden transmitter. Jack, W7JLC and his co-pilot Sue won the hunt in August. Hope to see you at the next T-Hunt.

Respectfully:

Pete K6VVR

Note: Meeting Date Changed
The September YARC meeting will be held on Thursday, September 9, 2010, due to an Open House at Granite Mountain Middle School.

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Welcome to the Yavapai Amateur Radio Club

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

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

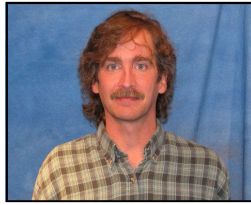
The weekly Net is held every Wednesday at 7:00 p.m. local time on 146.880- repeater. All amateurs are invited to participate, and visitors are always welcome.

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

Club Repeater

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

Minutes of August 5, 2010 Board Meeting



Meeting was called to order at 1818 hrs. by the President, K6VVR. Also in attendance:

AB7NK, KB7TRE, KF6SPS, KE7DTR, WB7UZV, AD7RL and AD7WW.

AB7NK reported on roster updates.

K6VVR reports that the website has been updated.

County Fair discussed. YARC won't be participating this year.

KB7TRE has been in contact with the Secretary of State about YARC being the official station for the Arizona Centennial celebration.

On motion of WB7UZV, second by AD7WW & no dissenting, meeting was adjourned at 1832 hrs.

Respectfully submitted,
George Imburgia, AD7RL
YARC Secretary

Minutes of August 5, 2010 General Meeting

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

Attendance: 65 of whom 47 signed in.

New members K7NGK, N6WCD and Michelle Young welcomed unanimously.

Minutes of the July meeting were corrected as follows: KB7TRE's callsign incorrectly reported as WB7TRE. Bob Budin's name misspelled as Bodine. Corrected minutes approved on motion

of KE7DTR, seconded by KB7TRE.

Treasurer: report offered by AB7NK: Beginning Balance \$4419.37, Income of \$784.00, Expenses of \$700.16, Ending Balance \$4483.21 and Repeater Fund balance of \$1058.92. Report accepted as read with no dissenting.

COMMITTEE REPORTS:

Patches & Decals: AB7NK reports small and large patches and decals available. More are on order.

AZWAC: Certificates are available for anyone who works all 15 counties in AZ.

ARES/RACES: WA6ZZJ reports: September and October will be busy months.

Starting in September, several events will require volunteers for communications:

Sept. 11, March of Dimes

Sept. 19, Skull Valley Loop Challenge

Sept. 19, Groom Creek Half-Marathon

Sept. 25, Tour-de-PV Half-Marathon

Oct. 1-2, Prescott Road Rally

Oct. 16, Walk for Diabetes

Newsletter: AC6AA reports "nothing to report."

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 badges. lsmith@cableone.net

Refreshments: K6UWV reports "lots and lots of goodies", including cookies, muffins, soft-drinks and coffee.

Elmer: KA7JAS reports the Elmer team is "Good to go!"

School Clubs: N5RO is looking for volunteers to help out at BMMS.

Nets: KI6AHH reports that the Young and New Hams Net has had disappointing participation on the 147.220 repeater. He would like YARC to consider hosting on a different night on the 146.880 repeater.

Fox-Hunt: Every Sunday after the monthly meeting; start time 1:00 pm; Arizona Credit Union parking lot adjacent to Walgreen's at Willow Creek and Gail Gardner intersection. WN7L won last month and will be hiding the transmitter this month. Check in on the 146.880 repeater.

Food Bank: KB7TRE is accepting donations for the Yavapai Food Bank. Please keep bringing in food.

Slow Code 146.88- 100 Hz PI, Sunday about 7:30pm. WB7UZV thanked YARC for the user of the repeater. Training materials are available from Jim.

OLD BUSINESS

No old business.

NEW BUSINESS

Due to an Open House at GMMS, the September YARC meeting will be on Sept. 9th.

KB7TRE announced plans for the NRA Anniversary special event station at Gunsite on Nov. 17th.

WA6ZZJ moved to adjourn, seconded by KB7TRE, approved 1940hrs.

50/50 of \$88 won by Harold.

Respectfully submitted,
George Imburgia, AD7RL
YARC Secretary

Reprinted with permission from Robert Beasley, K6BJH



Your handheld appears to be O.K. But it looks like someone stole your rubber duck and substituted a licorice twist!

Wanted - Old Yavapai Signals



I am still looking for some back issues of the Yavapai Signal to complete the archive collection. I know they are out there somewhere.

The issues I still need are for **January thru July 1996, September 1996, January and February 1998, and October 2001**. I would especially like to find the October 2001 issue as that will complete all of the 2000 issues.

Please take another look through your files. If you find any I will return them unharmed. Thanks.

73, Dick - W6CCD

A Bit of Humor -- Submitted by Dick, W7QHE

Alice and Frank are Bungee-jumping one day. Alice says to Frank, "You know, we could make a lot of money running our own Bungee-jumping service in Mexico."

Frank thinks this is a great idea. So they pool their money and buy everything they'll need: a tower, an elastic cord, insurance, etc.

They travel to Mexico and begin to set up on a square in a small town.

As they are constructing the tower, a crowd begins to assemble. Slowly, more and more people gather to watch them at work.

When they had finished, there was such a crowd they thought it would be a good idea to give a demonstration.

So, Alice jumps. She bounces at the end of the cord, but when she comes back up, Frank notices that she has a few cuts and scratches.

Unfortunately, Frank isn't able to catch her and she falls again, bounces and comes back up again. This time, she is bruised and bleeding.

Again, Frank misses her. Alice falls again and bounces back up. This time she comes back pretty messed up -- she's got a couple of broken bones and is almost unconscious.

Luckily, Frank finally catches her this time and says, "What happened? Was the cord too long?"

Barely able to speak, Alice gasps, "No, the Bungee cord was fine.....It was the crowd. What the heck is a pinata? ■"

Lightning Safety Myths and Truths

Myth: Lightning never strikes the same place twice.

Truth: Lightning often strikes the same place repeatedly, especially if it's a tall, pointy, isolated object. The Empire State Building is hit nearly 25 times a year.

Myth: If it's not raining or there aren't clouds overhead, you're safe from lightning.

Truth: Lightning often strikes more than three miles from the center of the thunderstorm, far outside the rain or thunderstorm cloud. "Bolts from the blue" can strike 10-15 miles from the thunderstorm.

Myth: Rubber tires on a car protect you from lightning by insulating you from the ground.

Truth: Most cars are safe from lightning, but it is the metal roof and metal sides that protect you, NOT the rubber tires. Remember, convertibles, motorcycles, bicycles, open-shelled outdoor recreational vehicles and cars with fiber-glass shells offer no protection from lightning.

Myth: A lightning victim is electrified. If you touch them, you'll be electrocuted.

Truth: The human body does not store electricity. It is perfectly safe to touch a lightning victim to give them first aid. This is the most chilling of lightning myths. Imagine if someone died because people were afraid to give CPR!

Myth: If outside in a thunderstorm, you should seek shelter under a tree to stay dry.

Truth: Being underneath a tree is the second leading activity for lightning casualties. Don't do it!

Myth: If you are in a house, you are safe from lightning.

Truth: A house is a safe place to be during a thunderstorm as long as you avoid anything that conducts electricity. This means staying off corded phones, electrical appliances, wires, TV cables, computers, plumbing, metal doors and windows.

Myth: If thunderstorms threaten while you are outside playing a game, it is okay to finish it before seeking shelter.

Truth: Many lightning casualties occur because people do not seek shelter soon enough. No game is worth death or life-long injuries. Seek proper shelter immediately if you hear thunder. Adults are responsible for the safety of children.

Myth: Structures with metal, or metal on the body (jewelry, cell phones, Mp3 players, watches, etc), attract lightning.

Truth: Height, pointy shape, and isolation are the dominant factors controlling where a lightning bolt will strike. The presence of metal makes absolutely no difference on where lightning strikes. Mountains are made of stone but get struck by lightning many times a year. When lightning threatens, take proper protective action immediately by seeking a safe shelter – don't waste time removing metal. While metal does not attract lightning, it does conduct it so stay away from metal fences, railing, bleachers, etc.

Myth: If trapped outside and lightning is about to strike, I should lie flat on the ground.

Truth: Lying flat increases your chance of being hit by a ground current. If you are caught outside in a thunderstorm, you keep moving toward a safe shelter.

Source: National Weather Service



September 6, 2010

Labor Day is a national legal holiday that is over 100 years old. Over the years, it has evolved from a purely labor union celebration into a general "last fling of summer" festival.



Yavapai Amateur Radio Club

August 2010 Treasurer's Summary

By Mary Vince, AB7NK

Income

07/21/10	KD7VBG	Patti Halgunseth	#3347	R	20.00
08/05/10	AE7TV	Gene Bockman	cash	R/F	20.00
08/05/10	K7BRB	Barbara Bockman	---	R/F	----
08/05/10	KE7NAP	Ellis Rackoff	cash	R	20.00
08/05/10	No Call	Michelle Young	cash	N	20.00
08/05/10	AD7UR	Rick Myers	cash	R	20.00
08/05/10	KD7CCU	Alan Samuels	cash	shirt	19.00
08/05/10	KD5VRW	Roger Nash	cash	R	20.00
08/05/10	W7MHW	Ken Line	cash	R/F	20.00
08/05/10	AE7AT	Katie Line	cash	R/F	----
08/05/10	AE7AT	Katie Line	cash	shirt	19.00
08/05/10	K6UWV	David Passell	3920	ARRL/R	39.00
08/05/10	K6UWV	David Passell	3921	R	20.00
08/05/10		50/50	cash		88.00
08/05/10	W6HMC	Bob Spencer	5623	R/F	20.00
08/05/10	W6VLS	Virginia Spencer	---	R/F	----
08/05/10	W6HMC	Bob Spencer	5623	shirt	19.00
08/05/10	KF7FOX	Tim Urell	cash	shirt	19.00
08/05/10	N6WCD	Greg Allen	cash	N	20.00
08/05/10	KI7JZ	Erika Schiltneck	cash	decal	1.00
08/05/10	KA7JAS & AB7NK	Neil Vince	5082	ARRL/R	47.00
08/05/10		Repeater fund donations from shirts	cash		<u>4.00</u>
Totals					\$455.00

Expenses

08/01/10	W6CCD	Dick Hughes	1002	shirts	\$112.19
08/05/10	KC7BPI	Harold Berthold	cash	50/50	44.00
08/05/10	K6UWV	David Passell	1003 & 1004	refreshments	32.59
08/05/10		Allegra	1005	newsletters	33.79
08/05/10		U.S. Postmaster	1006	PO box yr rent	60.00
08/05/10	AB7NK	Mary Vince	1007	stamps, 50/50 tickets	
				copies, card stock	60.58
08/05/10		ARRL	1008	W6UWV, KA7JAS & AB7NK	<u>82.00</u>
Total					\$425.15

Beginning Balance	\$ 4,503.21	August ending repeater balance	\$1,058.92
August Income	455.00	August repeater fund	<u>28.00</u>
Expenses	<u><425.15></u>	August repeater fund balance	\$1,086.92
General Fund Balance	\$ 4,533.06		
Increase	\$ 29.85		



By Lloyd, WA6ZZJ

UPCOMING SPECIAL EVENT COMMUNICATION...

Saturday, September 11, 2010 is the March of Dimes March for Babies. This event is fully staffed at this time.

Sunday, September 19, 2010 is the Skull Valley Loop Challenge Bicycle event. This year it will only be the 54 mile loop out Iron Springs through Skull Valley, Kirkland, Wilhoit and back to Prescott on Highway 89. A minimum of 10 operators is needed with two being mobile units. Benefit: Camp Courage /Yavapai County Burn Camp. More operators could be used for this event.

Sunday, September 19, 2010 is also the Groom Creek Classic ½ Marathon, 10K, 5K and 2 mile event. A minimum of 10 operators is needed. Benefit: Groom Creek Fire fighters Fund. Patti, KD7VBG, is coordinating this event. More operators could be used for this event.

Saturday, September 25, 2010 is the Tour de Pee Vee ½ Marathon, 10K, 5K and Two Mile Event. A minimum of 10 operators is needed for this event. Benefit is the Boys and Girls Clubs. More operators could be used for this event.

Friday and Saturday, October 1st and 2nd is the Prescott Road Rally. Sign up on line at: www.prescotttrally.com.

Saturday, October 16, 2010 is the Americas Walk for Diabetes. John, WB9VGJ, will be coordinating this event. Benefit: American Diabetes Association. Sign up for this event will begin at the September YARC meeting.

If you did not sign up at the August YARC meeting please consider doing so. Special event communication is an excellent way to get practice and prepare for emergency communications and at the same time give back to the community. There will be sign up sheets again at the September YARC meeting.

OPERATING AT YOUR NEXT SPECIAL COMMUNICATIONS EVENT

OPERATIONS.....

Arrival - Plan to arrive early. Your location or staging area may be unfamiliar and you will need the extra time. This will also give you time to set-up and checkout your equipment before the event starts. There are also times when your location may have limited access after a certain time. Being early gets you in before the roads are closed. In most cases the event communications coordinator will announce a time for you to be on site.

Check-In - Check in with net control when you arrive at your location. This lets the net control know you are on site and the quality of your communications. In some cases moving about improves communications. If this is the case, remember the spot and use it when you need to communicate with net control.

Traffic Control - Most, if not all, special events are run as controlled nets. This means that all communications are directed through net control. The net is generally very busy handling traffic. If you need to contact another station, make the request through net control. Net control will hold traffic and give you permission to contact your party. At some events a secondary communication frequency is set up for this very thing. Always give the net control plenty of time to respond, as net control is usually a very busy place.

Keep your traffic to a minimum. Give all the details and be precise at the same time. Think about what you are going to say before you transmit. This will maximize the net to emergency traffic if needed and at the same time maximize your battery life. Always be sure to contact net control before you pass your traffic. You want to make sure net control hears and understands your message. As we have heard many times before, listen, listen, listen. If an emergency occurs or the net becomes congested or the noise level at your location increases, listening becomes ever so important. You don't want to miss a call from net control.

Tactical Calls - A number of special event nets use tactical calls. These allow an easy identification of a location or function. "Water One," "Van," "Shadow," are typical of tactical calls used at events. Know your tactical call and listen for it. In closing your transmission always use your FCC call sign.

Equipment Use - Choose equipment that works well for public service events. Ease of use should be a prime consideration. Will it provide the communications capability to support the event? The event is not the place to try out that new radio or set-up. Try it out before the event to iron out all the bugs and get the operation down pat. Create a "cheat sheet" to help remember key features for your radio.

EQUIPMENT

Batteries - Do you have a spare battery? Is it charged? If you have the alkaline battery case, do you have extra batteries for it?

If you use gel-cell to power your base set-up will it run for the entire event? Make sure your batteries are charged up at the start of the event. You may never know when the event may become longer than anticipated.

Power Cords - Various power cords and adapters can turn a bad situation into a good one. RACES standard connections (Anderson Power Poles) are preferred on all equipment. Make sure your kit is up to the situation. A cable with "gator" clips on one end is very handy for connecting to the car battery in a pinch. The cigarette lighter adapter is very handy if your position suddenly needs to become mobile.

Antennas - That standard rubber duckie is not necessarily the best antenna for the task. Your favorite repeater may not be the one used for the event. In fact, a number of events are run simplex. Invest in one of the extended performance duckies or a telescoping antenna. If you are a mobile or a fixed station invest in a 5/8 magnetic mount or pole mounted antenna. A good antenna does more than more watts in most cases.

Headsets or Speaker Microphones - At a number of events the noise level is very high. The event sponsors like a lot of loud music, bands and other methods of making noise to enhance the participants enjoyment. This though is counter-productive to the communicator. In situations like this the headset is a necessity. Make sure it works with your equipment.

Note Taking - Net control is not always the one who needs writing materials to keep track of things. All positions need writing materials. Remember the description of the missing runner? A pencil is preferred over a pen (remember the weather) and a note pad should be a staple in your equipment kit. The 4" by 8" "reporters note-book" is one of the handiest due to its size. Mechanical pencils don't need sharpening and are preferred over wood-lead pencils. At some events, various forms are provided. These range from missing person's reports to log sheets.

Niceties - Dress for the weather. Carry wet weather gear or additional outer garments if needed to suit the conditions. Aspirin, antacid tablets, prescription medicine, sunscreen and insect repellent should be part of everyone's personal 'go-kit'. Drinks, especially water, and snacks should be included since it may be a long time to lunch. A small, insulated container is handy to carry your snacks and don't forget the lawn chair! ■

YARC AUGUST FOX HUNT

By David Drown, WN7L

The August YARC Fox Hunt was a great success for the 10 hams that participated on Sunday the 8th. Four teams, of two hunters each, tried to out-fox the foxes (K6VVR and WN7L). The team of Sue (N0GUT) and Jack (W7JLC) Crabtree were the successful hunters with a time of 14 minutes and a total of only 3.6 miles traveled. A combination of skill and woman's intuition, not to mention family togetherness and luck, facilitated the victory and discovery of the sly old fox. The remaining hunters were sorted out over more than an hour and as much as 9.5 miles traveled. The fox was devious and attempted to bounce RF off a hill side using a directional antenna with some success.

The monthly fox hunt bodes well to provide challenge for the hunters, deviousness for the "hidiers" and visibility for the club with the community and the Prescott Police Department. The police were not directly involved, but were notified by Pete to be aware of any suspicious activity that might be reported or observed to be only the local ham club having some fun. By-standing neighbors and dogs took part with interest and lots of questions.

The turnout was favorable but encouragement for a larger cadre of hunters was expressed by all participants. There were several tape measure directional antennae, constructed at one of our earlier meetings, that were not represented in the hunt.

Of course the highlight of the day was the debriefing of the hunters at Denny's following the hunt. It provided for camaraderie and discussion of the fun had by all. Those who participated are represented in the accompanying photo. See you at the September hunt. ■



Arizona Worked All Counties AZ-WAC) Award

Work all 15 Arizona Counties; download an application at <http://www.w7yrc.org/az-wac.htm> or to have one e-mailed to you email az-wac@w7yrc.org. You have the option of having the award e-mailed to you to print or by sending \$5.00, one will be printed on photo paper and mailed to you.



September Program

Ray Benny, N6VR will speak on I.O.T.A. (Islands On The Air) -- islands around Mexico and Baja, California.



Membership Count:

1st Thurs. in July.....184
Gain/Loss.....-2
1st Thurs. in August.....182



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

joliver@cableone.net

Upcoming Events

- **September 11, 2010** - March of Dimes for Babies.
- **September 17, 18 & 19, 2010** - ARRL Southwestern Division Amateur Radio Convention.
- **September 19, 2010** - Skull Valley Loop Challenge.
- **September 19, 2010** - Groom Creek 1/2 Marathon, 1K and 2 Mile.
- **September 25, 2010** - Tour de Pee Vee 1/2 Marathon.
- **October 1 & 2, 2010** - Prescott Road Rally.
- **October 9 & 10, 2010** - Arizona QSO Party
- **October 16, 2010** - America's Walk for Diabetes.

Need a Hand?



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

Don't Hesitate to Ask for Help!!

Call: **Neil Vince**, KA7JAS at: (928) 775-2158

Jim Ball, WB7UZV (928) 445-2997

Will Taylor, AD7WW (928) 445-1717



VE TESTING

By Mary Vince, AB7NK

A special test session will be held Saturday, September 18, 2010 at 9:00 a.m. We will be testing for all license classes. Due to limited seating please email me at your earliest convenience at: ab7nk@arrl.net

2010 Arizona QSO Party

The 2010 Arizona QSO Party, sponsored by the ARRL Arizona Section and Catalina Radio Club will be held from **Oct 9th, 1600Z to Oct 10th, 0600Z and Oct 10, 1400Z to Oct 10, 2359Z**. Phone, CW and Digital modes on 80 thru 2 meters. Exchange RST and location (AZ County, State, Province, or DXCC Prefix). Suggested Frequencies (kHz): CW: 3548, 7048, 14048, 21048, 28048, 50048. SSB: 3848, 7248, 14248, 21348, 28448, 50148. FM Simplex: 146.48MHz. Mail logs no later than Oct 31 to Catalina Radio Club, C/O Gary Keck, PO Box 18135, Tucson, AZ 85731 or via email to logs@azqsoparty.org

Announce Your Planned Operation in the Arizona QSO Party!

To announce your planned AZQP operation, please send details to info@AZQSOParty.org This e-mail address is being protected from spambots. You need JavaScript enabled to view it. Please help us keep the list current -- email updates to info@AZQSOParty.org . Include "/m" for mobile, "?" if uncertain, and operator call signs.

For full rules, along with log and summary sheets, Cabrillo electronic file format, and Award information, see <http://www.azqsoparty.org> .

Help make Arizona "radio-active" on October 9 – 10!

Do you know what the Ham Population is in our area?

According to information found on the FCC Universal Licensing System (ULS) database, the number* of licensed Radio Amateurs having active licenses is as follows:

<u>Location</u>	<u>No. of Amateur Radio Operators</u>
Prescott	491
Prescott Valley	199
Chino Valley	92
Dewey	55
Paulden	19

* As of August 14, 2010

Need Cards Checked for ARRL Operating Awards?



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

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

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

2010 ARRL Southwestern Division Amateur Radio Convention

September 17, 18, & 19 ...2010

Four Points by Sheraton Hotel, San Diego, CA

<http://www.sandarc.net/>

Convention2010.html

Register Early!

Noisy world

Reprinted from the "PCARA Update" courtesy of Malcolm Pritchard, NM9J

In the "Technical Correspondence" section of *QST* for March 2010, Steve Johnston, WD8DAS has an interesting letter. Steve suggests that HF stations might be having less success in recent years because of the ever increasing noise level in their localities.

Steve goes on to describe how he made an informal study of Wisconsin Public Radio listener and staff homes using a portable spectrum analyzer, checking MF, HF, and VHF. In this regard, it's interesting to note that the AM station for Madison, Wisconsin WHA-AM runs 5 kW on 970 kHz by day but only 51 watts at night, resulting in significantly less coverage. WD8DAS describes how the apartments he investigated were full of RF noise, with the worst offenders being switch-mode power supplies for cell phones and digital cameras. HDTV receivers and DVD players were also noisy. Things were less crowded in larger sized homes and offices, but the interiors were still 20-30 dB noisier than outside.

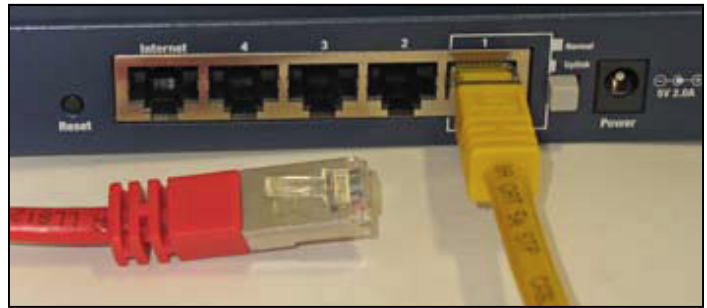


Steve Johnston, WD8DAS at the tower site for WHA-

Our homes have far more digital devices than ten or twenty years ago. I don't have a portable spectrum analyzer, but I thought I would investigate noise sources in my own home with a Radio Shack DX-398 LW/MW/SW/VHF portable radio, which has a helpful S-meter. Here is my list of worst offenders, with the strongest sources at the top:

- | | |
|------------------------------------|------------|
| GE Energy Smart LED Lamp 10 watts | MF and VHF |
| Laser printer | MF and VHF |
| LCD TV | MF |
| Compact fluorescent lamp | MF |
| AT&T answering machine | MF and VHF |
| LCD computer screen | MF and VHF |
| Canon copier | MF and VHF |
| Hi-Fi receiver fluorescent display | MF and VHF |
| Alinco VHF/UHF transceiver | MF |

There were many other devices generating noise at lower levels. We really are surrounded by an electronic smog of RF pollution. One noisy item that I had already



To minimize noise from Ethernet connections, use shielded twisted pair Cat 5E cable. The cable shield is grounded by spring contacts within the RJ-45 socket

eliminated from my own home is Cat 5E unshielded twisted pair cable. As reported in the May 2004 issue of *PCARA Update*, I would recommend substitution of shielded Cat 5E for any cable runs that are close to radio equipment.



GE Energy Smart LED lamp is a potent generator of RF interference

The GE 10 watt LED lamp was a shocker - it produced strong MF and VHF noise that could be heard on the other side of the house. I won't be buying any more of those! Noise from the other devices could be reduced by moving further away. Low power LED lamps made by Lights of America were completely quiet. The one I took apart after it had failed, features a conventional power supply with capacitive voltage dropper, bridge rectifier and three long strings of 20 small, white LEDs in series to build up a suitable voltage.

One of the surprises was how much noise is thrown out by modern Hi-Fi radio receivers - most of this noise seems to be generated by the fluorescent / LCD display plus the control circuitry located behind the plastic front panel. You would think the manufacturers would try to control these emissions to avoid pickup up by the external AM or FM antenna nearby.



The plastic front panel of a modern AM/FM stereo receiver can be a source of RF interference.

My Kenwood TS-870 transceiver has a similar noisy front panel that also radiates strong harmonics from its 20 MHz master oscillator.

For amateur radio equipment there is a clear solution to the problem - make sure that your antenna is well outside the building, clear of all the RF pollution within the home, and make sure the antenna feed that enters the house is via shielded coaxial cable. If you mount antennas in the loft space, bear in mind they may be much closer to sources of noise! This might be especially true for the antennas that PCARA mounted in the roof space at Cortlandt Town Hall - see *PCARA Update* October 2004.

A similar approach can be taken for VHF-FM broadcast antennas. Provided the radio receiver has a coaxial input, locate your FM antenna outside or up in the loft, and use 75 ohm coaxial cable rather than 300 ohm ribbon to feed the signal into the home.

Use of an outside antenna is not so easy for MF-AM broadcast reception. Some radios only have a ferrite bar antenna built-in to the radio for AM. If there is local interference, the best you can do is move the radio away from the noise source and orient



Small frame antenna included with some HiFi AM/FM receivers.

the ferrite bar antenna so it is end-on to the noise. Other radios may have terminals for an external AM antenna. Sometimes this has to be a specific loop antenna provided by the manufacturer, which only has a short feeder and cannot be mounted very far away. One solution I have employed is to extend the loop's twin-wire feeder with some shielded cable, then place the loop antenna on a metal radiator near a window for improved signal strength.



Terk AM Advantage tunable loop antenna.

Instead of using the Terk antenna's twin-wire cable, you can substitute a length of shielded cable connected to a 3.5mm mono jack. This will help avoid noise pick-up from the radio receiver itself.

Radio Shack sells a similar tunable loop antenna as the "Grundig" AN200 model.

The bottom line is that almost everything electronic sold today pollutes the electromagnetic spectrum to some extent. I think it is time the FCC drew up stronger rules to prevent radiation of interference by *all* domestic electronic devices, whether through the air or over the attached cables. It isn't a difficult problem to design switch-mode power supplies that don't pollute the airwaves - it just needs some incentive. ■

- NM9J

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

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				
147.140+	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	
448.475-	100.0	Flagstaff-Elden	ARA	Yes			
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
449.725	110.9	Mingus Mtn	WA7JC				
449.750	91.5	Williams	K7NAZ		Linked to Win-Sys		
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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Many thanks to Pete Morrison, K6VVR, our Webmaster

