



# YAVAPAI SIGNAL



The Yavapai Amateur Radio Club • Prescott, Arizona • DM-34 • Volume 22 – No.6 • June 2007

## Whiskey Row Marathon - 2007

By Lloyd, WA6ZZJ



**Y**ARC in cooperation with Yavapai County ARES/RACES once again provided public service communications for Prescott's Whiskey Row Marathon put on by the Prescott YMCA. This was the 29<sup>th</sup> annual running of this event and the 10 year anniversary of YARC becoming, for lack of a better word, re-involved with communications for the YMCA. I understand from some of the club members who have been around for a while that the club did work this event some years before. When I moved to Prescott in 1994 the communications was being handled by the Yavapai County Jeep Posse. In 1997 I once again got ARES and YARC involved and we worked it in conjunction with the Jeep Posse that year with the Posse taking the forest water stations and YARC handling the in town water stations. Then in 1998 the Jeep Posse asked us to assume the communications for the full marathon route.

This year there were over 1000 runners not including the 2 mile Fun Run Walk with the full marathon starting at 0600, the half marathon at 0700, the 2 mile Fun Run Walk at 0715 and the 10K events at 0730.

We had a total of 19 YARC and ARES/RACES members involved with communications from 8 water stations, a shadow operator for the race director,

*See Whiskey Row , Page 6*

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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. 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, KB7TRE  
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

## Minutes of May 3, 2007 Board Meeting



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

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

### • Swap Meet:

Vendors for Swap Meet signs were discussed regarding quality and price. The design, number of signs and their placement also were gone over. John and Patti have both sent out fliers. However, the fliers will be updated to better direct individuals to the school. Directions and maps will be on the YARC website. The name "Swap Meet" will be changed to "Hamfest".

A new ramada, built on the basketball court, will be used for a command center, a PA, and refreshments.

Board members were asked to volunteer for setup on Friday and for help on Saturday. Richard and Walter will help on Friday. Patti and Ken will help on Saturday.

### • Other Agenda Items:

We will get a report on the joint Field Day at the General meeting.

HB2595, the Amateur Radio Restriction Bill is dead for the year.

Fred, N7PJN will give an update on the club Family Cookout.

Programs are needed for September, October and December.

The Ham Radio Video cost, tapings,

and production were discussed.

IRLP issues are well on their way to being solved. Jack, W7JLC will discuss this at the General meeting.

The meeting was adjourned at 1855 MST.

Respectfully submitted,

Pat, K7DUC  
Secretary

## Minutes of May 3, 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; Jim Peoples; James Ellzey, KE7JEQ; Roger Nash, KD5VRW; Colleen Perkins, KE7GNR and Mark Parthe, KD7KJL.

**Meeting Minutes:** A motion to approve the General Meeting minutes of April 5, 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 \$2036.54. The balance for the end of the month in the General fund was \$1732.92. The Repeater fund has \$1070.00.

A motion to approve the report was made by Mary, AB7NK and seconded by Neil, KA7JAS. The Treasurer's Report was approved.

### Committee Reports:

• **ARES/RACES/Public Service:** Lloyd, WA6ZZJ reported that the Whiskey Row Marathon will be on Saturday, May 5th. ARES/RACES May 19th meeting will concentrate on packet radio.

Lee, KC7CBK stated that the Whiskey Off Road bike race will take place on May 19th. They are



## Plan to Join the ARRL or Renew Membership ?

Ask our Treasurer for a special ARRL Club Membership Application or download the Application from the YARC Website. Complete the Application and return it to the Treasurer with the application fee.

There is no extra cost to you, and our club gets to retain a portion of the dues.

## Membership Count:



1st Thurs. in Apr....**103**

Gain/Loss.....+2

1st Thurs. in May....**105**

looking for volunteers and help. The event will be on the schedule for next year.

- **Public Information:** Bob, WB7RRQ said that a new website called American Towns is now available. If you send Bob information, he will send it to the site.
- **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.
- **Club Repeater:** Bob, WB6ODR is still studying new repeater stations and is looking strongly at the most popular Vertex Standard VXR-7000.
- **VE Testing:** Mary, AB7NK stated that the next testing will be on June 2 and on June 30, 2007.
- **School Club:** Terry, KB7TRE stated that on May 19, the GMMS students are going to Verde Valley to have a picnic with the students from there.
- **Elmer/Technical Specialist:** Terry has a job for Neil, KA7JAS in Prescott Valley.
- **Refreshments:** David, K6UWV thanked Erica, KI7JZ for bringing some refreshments this evening. Terry thanked Ken, WA6AQK and his parents for donating a coffee pot for the club.

**Old Business:**

- **Hamfest with VVARA:** The placement of signage was discussed. New flyers will be distributed. Helpers were asked for and spots for vendors and parking also were discussed. One table for YARC and one for VVARA will be available. Publicity will be in the paper and on the radio. We need approximately \$150 for

signage. John, WB9VGJ made a motion to allot up to \$150 for the Hamfest. Walt, KF6SPS seconded the motion. Discussion was held. The motion passed.

- **HB2595:** - John, WB9VGJ indicated that the bill has failed for this year.
- **Club Family Cookout:** - Everything is going well so far. It will be discussed again next month.
- **Production of Ham Radio Video:** Jim, N5RO asked for information regarding what the club did in the past. Lee, KC7CBK gave further ideas for the rest of the video. We need good digital tapes and batteries.  
A motion was made by Doug, KV8TD and seconded by Jack, W3IVQ, to allot \$50 for the tapes and batteries. The motion carried.
- **IRLP Interference Issues:** Jack, W7JLC stated that the 146.880 machine is not compatible and does not transmit a tone, which is needed for the IRLP. At present, we are still on 442.350. The interference problem has lessened, but is not gone. If the repeater is shut down, the IRLP will go to simplex.
- **Volunteer Instructors:** Jack asked for more License Class instructors. Four members have the material so far.
- **Balloon Flight:** The next balloon flight will be on Aug. 4th. This will be a teach the teachers flight.

**New Business:**

New Members were voted in. They were Dan Beezley, KE7MQB; Art Demlong, call sign to be determined, and Ellis Rackoff, KE7NAP. John, WB9VGJ made a motion to approve the members and Ken, WA6AQK seconded the motion. The new members were approved.

The Program tonight will be given by Lloyd, WA6ZZJ on ARES/RACES.

A motion to adjourn the business meeting was made by Lloyd, WA6ZZJ and seconded by Lee, KC7CBK. The meeting was adjourned.

The 50/50 drawing was won by David, K6UWV, who received \$21.

Respectfully Submitted,  
Pat, K7DUC  
Secretary

### Upcoming Events of Interest

- ➔ **June 2, 2007 -**  
**Joint Hamfest with VVARA - Granite Mountain Middle School Parking Lot. VE Testing from 9:00 - 11:00 a.m.**
- ➔ **June 23/24, 2007 -**  
**Joint Field Day/BBQ with VVARA on Mingus Mountain.**
- ➔ **June 30, 2007 -**  
**VE Testing at 9:00 a.m. in Orchard Ranch Activity Room, 11250 E. Hwy 69, Dewey, AZ**
- ➔ **July 6/7, 2007 -**  
**Williams Hamfest/AZ State Convention, Williams, AZ**
- ➔ **July 14, 2007 -**  
**Club Family Cookout at Watson Lake Ramada.**

# Treasurer's Financial Reporting Sheet



Club / Group Name: YARC  
Reporting Date: May 2007

By Patti Halgunseth, KD7VBG  
Treasurer

Members Name	Dues Paid	Repeater Fund	Donations	Prize Money Paid Out	Net Cash In per Member
Ray Tyrrell/R-N6MY	\$18.00	\$2.00			\$20.00
Doug Nicholson/R-KB6TWC	\$18.00	\$2.00			\$20.00
Roy Jackson/R-AD7FW	\$18.00	\$2.00			\$20.00
Jim Zimmerman/R-N6KZ	\$18.00	\$7.00			\$25.00
Arnold Watson/R-KC7FPM	\$18.00	\$2.00			\$20.00
Doug Freeman/R-KV8TD	\$18.00	\$2.00			\$20.00
Doreen Freeman/-KVDRV	\$0.00				\$0.00
Ken Hanson/R-KE7KWH	\$18.00	\$2.00			\$20.00
Fred Zimmerman/R-N7PJN	\$18.00	\$2.00			\$20.00
Adolph Demlong/N-?????	\$18.00	\$2.00			\$20.00
Ellis Rackoff/N-KE7NAP	\$18.00	\$2.00			\$20.00
Don Beezley/N-KE7MQB	\$18.00	\$2.00			\$20.00
Doug Freeman/Fam-ARRL	\$44.00				\$44.00
Don Beezley/ARRL	\$39.00				\$39.00
Ken Hanson/ARRL	\$39.00				\$39.00
50/50	\$42.00				\$42.00
David Passell-K6UWV~				\$21.00	(\$21.00)
<b>Total:</b>	<b>\$362.00</b>	<b>\$27.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$368.00</b>

Miscellaneous Club Expenses	Cash Out	Check Number
David Passell/Refreshments	\$16.15	937
Joe Oliver/Stamps	\$7.80	938
ARRL/Don Beezley	\$24.00	939
ARRL/Doug Freeman	\$42.00	940
ARRL/Ken Hanson	\$24.00	941
Patti Halgunseth/Copies-Fly	\$8.65	942
Insty Prints/Newsletter	\$27.38	943
Repeater Fund	\$27.00	Cash
<b>Total:</b>	<b>\$176.98</b>	

Club Funds Summary	Totals
Starting Balance	\$1,732.92
Net Expenses	\$176.98
Net Income	\$368.00
Repeater Fund	\$1,097.00
Cash Flow	\$191.02

## DID YOU EVER NOTICE

Those who think they know everything are very annoying to those of us who do.

## This Month's Featured Ham

By Pat Oliver, K7DUC

**Bud Semon, N7CW**



Bud, who was interested in shortwave listening, earned his Novice license in 1965, and on a 75 watt, crystal controlled transmitter worked CW on 80, 40, and 15 meters. He upgraded to Extra Class in 1971. At present, he works 160 meters through 70 cm.

He states that he enters every contest he can. He has several plaques on his wall attesting to this and has a drawer full of certificates.

Bud claims he has not worked anyone famous, but has had 42,000 QSOs since 1994 and more than that prior to that time. He has worked all entities except for Yemen and Mt. Athos.

His last CW contact occurred during our interview. Bud took time out to work North Cook Islands' Suvarrow Atoll.

Of course Bud has built several pieces of equipment, including a wattmeter, QRP rigs, and antenna tuners.

He has received many QSL cards – 1,400 since moving to Prescott.

Bud is presently involved in ARES/RACES and has promised Jack, W7JLC that he will help with further license classes.

The equipment in Bud's Ham Shack includes an Orion II, an FT-1000MP, an FT-100, an Alpha 91B and an SB200. He

also has a very impressive antenna system, which includes a 2 M/70 cm vertical at 117 feet, a 7 element Yagi for 6 M, a 20/15/10 M Yagi, a 30/17/12 M Yagi, a 3 element 40 M Yagi at 90 feet, and wire antennas for 80 M and 160 M.

Bud prefers contacts on CW, but also works most of the other modes, such as RTTY, PACTOR, Packet, SSB, and FM.

He has been on a DXpedition to Antigua in 1979. He also has operated from France, Grand Cayman Islands, and New Zealand.

Bud was born in Boston and grew up in the northeastern U.S., but moved to Phoenix when he graduated from college. He lived in San Diego for about 20 years before moving to Prescott last August.

Bud received his Bachelors degree in Electrical Engineering from Syracuse University and earned his Masters from ASU. At present, he is working part time as a Program Manager for SAIC, as a consultant. When he was working full time, he managed many other major contracts.

Bud thinks the direction in which the club is progressing is generally good, but would like to see more HF activities. He is looking forward to the YARC/VVARA Hamfest.

Bud is a very energetic and active member. We are fortunate to have him in our club. ■



**Bud's Yagis and Vertical stacked on a 90 Foot Heavy Duty Telescoping Tower**



By Lloyd, WA6ZZJ

**ARES/RACES...**

Yavapai County ARES/RACES held its second quarterly training meeting of the year on Saturday, May 19<sup>th</sup> with simultaneous meetings in Prescott and Cottonwood. There were close to 30 members in attendance between the two locations. The meeting concentrated on packet operations and the use of different terminal node controllers (TNC'S) in packet communications. Our goal was to have packet communications between the two locations and send messages back and forth to give some hands on operating experience. Touched on, but not gone into in detail was the ARESPack message managing system. This was written some years ago and is a DOS based program that does not perform too well on newer computers and operating systems. We are currently exploring some newer programs that hams have developed for newer windows based operating systems. One of these is **Outpost Packet Message Manager** featured in the June issue of QST on page 85 (www.outpostpm.org/).

Thanks to all of the ARES/RACES members who took the time to attend these important meetings. Packet radio is having resurgence here in Arizona with nodes that have been inactive for sometime springing back in to operation. Packet radio is still a very viable means of emergency communications and is used extensively in many areas of the United States and around the world.

The next ARES/RACES training meeting is scheduled for Saturday, August 4, 2007 with location (s) yet to be determined. This meeting will be on Winlink and the use of the Airmail program for email via packet radio.

\*\*\*\*\*

We are still obtaining and installing equipment in the new ARES/RACES communications vehicle (MARC) and plan to have it ready for display at the June 2<sup>nd</sup> Hamfest at Granite Mountain Middle School. The graphics are scheduled to be applied on May 29<sup>th</sup>.

**Public Service Communications...**

As seen elsewhere in the newsletter, communications were provided for the 29<sup>th</sup> annual running of the Whiskey Row Marathon.

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At this writing it looks like the Loop Challenge Bicycle Ride scheduled for Sunday September 16, 2007 will be our next public service communications event. Details on this will be coming at a later date.

Other events on the calendar as of now are:

The Prescott Road Rally on Friday and Saturday October 5 and 6, 2007.

The Walk for Diabetes on Saturday October 20, 2007.

Please plan to work these events.

Until next month.... ■

Lloyd, WA6ZZJ

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● **Whiskey Row (Continued from Page 1)**

a portable operator in the YMCA van that traveled the route and net control from the new ARES/RACES mobile communications vehicle (MARC). Water station #1 was manned by KI7JZ, KE7HWP and KE7NOP where they were served coffee and sweet rolls while listening to soft rock music provided by the MAGIC Radio Van at their location. Water #2 had KF6SPS and WA6AQK at their usual location (I think that spot has their name on it). Water #3 at the corner of Copper Basin and Angelita had K6UWV and KE7IXS doing the duties. KV8TD at water station 4 uses his head and takes his motor home out the night before and stays there so he doesn't have to get up so early in the morning. Water 5 was manned this year by W6CCD and KD7IOG with Dick being the veteran operator and Ernie working his first marathon. KC7CBK, after helping set up net control, drives the route to his position at Water #6 which is the Sierra Prieta overlook (I think Lee has his name engraved on one of the rocks at that location too) where he is joined by N7CW. Water #7 was manned by N6LSA who took the assignment at the last minute. Water #8 had the usual crew at that location also with N7PJN and K7CJW handling the communications. Laura, the race director, as always, requested that WB9VGJ be her shadow operator and Amy in the YMCA van said it had to be KD7VBG that provided communications for her. Net control was held down by WA6ZZJ assisted by his wife, Jan, who took charge of getting the Race T-shirts ready for distribution.

*See Whiskey Row, Page 7*

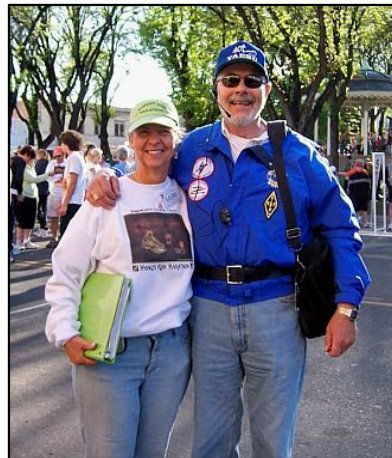
## • Whiskey Row (Continued from Page 6)

Terry, KB7TRE, was busily traversing the route putting together video footage for the upcoming YARC video.

As per normal, communications start out a bit hectic with operators reporting to their locations, some as early as 0500, and checking to be sure the YMCA volunteers are at their stations. Water #2 ran out of cups earlier than normal this year, but it was determined to be a YMCA oversight in marking the boxes and has already been put in their notes to be corrected for next year. Once the races are all started and the leaders are being sorted out, the communications slacks up a little and then settles into keeping track of the lead runners after which we begin to track the last runner (s) so we know when water stations can be secured. In between we have a few stations running low on supplies and direct the YMCA van for replenishment. Somewhere along the line we always seem to have a water pump that breaks or malfunctions and replacements are needed, but the reason we are there is to keep things running smoothly as possible and the YMCA values our services enough that we are considered a Gold sponsor of the Marathon. This year we even managed to arrange for some snow to fall as the Marathon was wrapping up.

We're already looking forward to next year for the 30<sup>th</sup> annual running of the Whiskey Row Marathon on Saturday, May 3, 2008. Circle the day on your calendars and we will do it all again.

Thanks to all of the operators who got out of bed in the wee hours of the morning to take part this year. It could not be accomplished without your help. ■



**Race Director, Laura Winniford  
With John Broughton, WB9VGJ**

For additional Marathon pictures, go to John, WB9VGJ's website at:

<http://tinyurl.com/2mcsk8>

or

YMCA's Main Page at:

[www.prescottymca.org/](http://www.prescottymca.org/)

## CQ DX de YARC – June 2007

By Dick Diddams – W7QHE

The latest IARU report lists a total of five (5) amateur radio stations in Maldives (8Q). On the current 100 Most Wanted Countries list, Maldives is not listed. Last year they were ranked 75/100. Many amateurs through-out the world visit Maldives, thus, keeping it very active and “off” the 100 Most Wanted Country listing.

The Republic of Maldives is an island nation consisting of a group of atolls in the Indian Ocean. It is located south of India's Lakshadweep islands and about seven hundred kilometers (435 mi) south-west of Sri Lanka. The twenty-six atolls encompass a territory featuring 1,192 islands, roughly two hundred of which are inhabited by local communities. The area is 298 sq. km. (115 sq. mi.) and is twice the size of Washington, DC. The population+ is less than 300,000. Originally Buddhists, Maldivians were converted to Sunni Islam in the mid-12th century. Islam is the official religion of the entire population. Strict adherence to Islamic precepts and close community relationships have helped keep crime low and under control.

Maldives holds the record for being the flattest country in the world, with a maximum natural ground level of only 2.3 m (7½ ft), though in areas where construction exists this has been increased to several metres. Over the last century, sea levels have risen about twenty centimetres (8 in). The ocean is likely to continue rising and this threatens the existence of Maldives.

A tsunami in the Indian Ocean caused by the 2004 Indian Ocean earthquake caused parts of Maldives to be covered by sea water and left many people homeless. After the disaster, cartographers are planning to redraw the maps of the islands due to alterations by the tsunami. The people and government are worried that the Maldives could be wiped from the map eventually.

DX operations for June are located in NG3K Amateur Radio Contest/DX Page at <http://www.ng3k.com/Misc/adxo.html>

## My 2007 Whiskey Row Marathon Experience

By Dick Hughes, W6CCD

Saturday morning didn't start out well at all. I knew we had to be on station at 0600 hrs, so I set the alarm for 0445 so we would have a little over an hour to get ready before we left at 0500 from the Prescott Country Club. Wrong! It wasn't until I was in the shower that I realized that we should have gotten up at 0345, not 0445! Not a good way to begin our seventh year helping with the marathon. To make matters worse, Ernie, KD7IOG was counting on me to get him started with his first marathon.

Thanks to green lights all the way from Dewey to Prescott, we arrived at Water 5 at 0625 hrs. Not too bad considering our late start. There was Ernie, waiting for his mentor. Good thing he didn't over-sleep. The volunteers were already there. It was a different crew than what we usually had at Water 5. The last few years it was Boy Scouts and their mothers. This year it was older people, closer to our age. One thing we noticed immediately was that there was no water running across the road at Water 5. First time for that. Not a good sign, but at least the runners wouldn't have to find their way through it.

The temperature was close to freezing, and we were plenty cold. Ernie finally gave in and got in his truck with the heater going. I had to return to the Jeep a few times to thaw out. The volunteers weren't so lucky. They just endured the cold without complaint.

The early runners were already arriving. They are the types that don't even want water. They just keep on truckin' toward the end of the 13 mile turn-around. Hardy souls. The half-marathoners started arriving at about 0740. That's when the flood begins. Of course we only see the full and half-marathoners at Water 5.

One thing we saw that was a first for us was a runner smoking a cigarette while running. Seems counter-productive. Also seemed like a really bad idea with the forest so dry, and not being inside a vehicle. Should be against the law. And what's with the cup shortage at Water 2? It happens every year! It can't be that difficult for the YMCA to realize they need about 2,000 cups at that location. Maybe they just like running back and forth with the van.

The last in-bound runner came through our location at about 1030. Time to leave. Just can't praise the volunteers

enough this year. They were outstanding! Even washed the table off before leaving. And to top it off, one of the couples picked up cups all the way from Water 5 back to Water 4! We need more people like them.

It was around 1100 when we arrived at the communications van to pick up our t-shirts. Inside were Jan, Lloyd and John enjoying the heated MARC. Lloyd was sitting there in his t-shirt working as net control. It was a stark contrast to our freezing up in the mountains. At least some of us were comfy.

We left the van and drove to Casa Sanchez, our favorite Mexican restaurant, for lunch. While sitting inside, it started snowing (sleeting?) so hard you would have thought we were in Alaska. Should have taken a picture. "Blizzard Strikes Prescott on Cinco de Mayo." All in all it was a great day. See you all next year. ■



## Computer Tips

By Joe, AC6AA

For those of you who do a lot of printing and often have to replace ink cartridges, you may want to try refilling them.

I have had good luck over the years refilling black ink cartridges for our HP deskjet printers, and varying degrees of success refilling color cartridges. Yes, it can get messy if you are not careful, but considering the cost of replacement cartridges, a little extra effort can result in substantial savings.

A kit for refilling a black ink cartridge typically consists of a large syringe with needle, a bottle of ink, a pair of plastic gloves, and illustrated directions. After you have purchased the refill kit, you need only buy bulk printer ink to bring your cost per refill down even further.

There are several suppliers of refill kits and cartridge ink to be found on the Internet. For several years, I have been purchasing bulk, black ink from The Printer Filling Station at: [www.printerfillingstation.com](http://www.printerfillingstation.com), with consistently good results. The cost (including shipping) of an 8 oz bottle of black ink (16 refills) is \$18.00.

I suggest you try your hand at refilling a black ink cartridge. Refill before the cartridge is fully empty if possible. The refilled cartridge will then print without problems and the cartridge will last for many more refills. ■

# First Annual

## YARC / VVARA AMATEUR RADIO HAMFEST



Donuts and Coffee

Available For A  
Nominal Fee



**TALK IN FREQUENCY**

**146.880**

### WHERE:

Granite Mountain Middle School  
Parking in the upper parking lot.  
Set up on the basketball court.  
Bring your own tables.  
Sellers Fee: Donations encouraged.

### WHEN:

Saturday, June 2, 2007  
Gates open at 6:00 am.  
Swap meet starts at 8:00 am  
and ends at 2:00 pm.

VE Testing from 9:00-11:00 am

### HOW:

Check our website for directions.  
W7YRC.org

### WHY:

Meet friends, make friends,  
swap stories and gear.

### ATTENDANCE FEE:

Leave no cash.....Leave no trash



## Program Speakers

June - Dick, W6CCD -- "Navajo Move Into  
The Electric Age"

July - Lee, KC7CBK --- "Grounding"

August - Bud, N7CW -- "WINLINK 2000"



Many thanks to Bob Smith, WB6ODR. He was a great help in soldering the parts for a code practice oscillator for me. I also would like to thank all the others who volunteered help.

73, Bob Ower, WA7YUL

## HUMOR

A ham and his wife walked into a dentist's office. The man said to the dentist, "Doctor, I am in one hell of a hurry! I have an NTS schedule in just a little while and then the QRP CW contest starts right after that. So forget about the anesthetic and just pull the tooth and be done with it. I don't have time to wait for the anesthetic to work.

The dentist thought to himself, "My goodness, this sure is a brave man, asking me to pull his tooth without using anything to kill the pain."

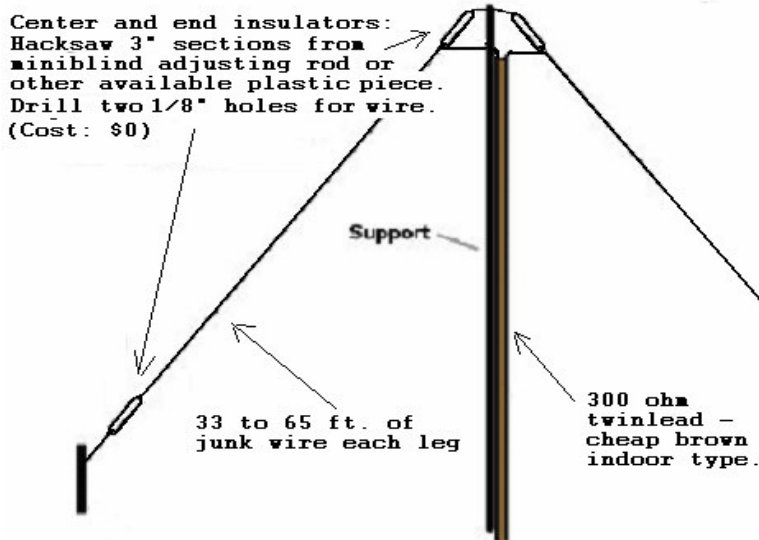
So the dentist asked him, "Which tooth is it, sir?"

The ham turned to his wife and said, "Open your mouth` honey, and show the doctor which tooth hurts." ■

# Wire Antennas for the Newly Upgraded

By Jim Clark, N5RO

With changes to the FCC rules, license upgrades are rising. Many in our club may be getting on HF for the first time and need an antenna. The magazines are full of ads for "all-band" wire antennas costing over \$150 but generations of hams have fashioned their own long before ready-built G5RV's were around. Constructing your own antenna may be your only chance to build something and actually see it work on the air. By using balanced line and a tuner (we used to call them transmatches) instead of coax you can have one, single-element antenna that works well on all bands. The basic antenna shown below is a variation on the type of versatile skyhook used for years - a dipole fed with twinlead and used with a tuner, made from low-cost materials.



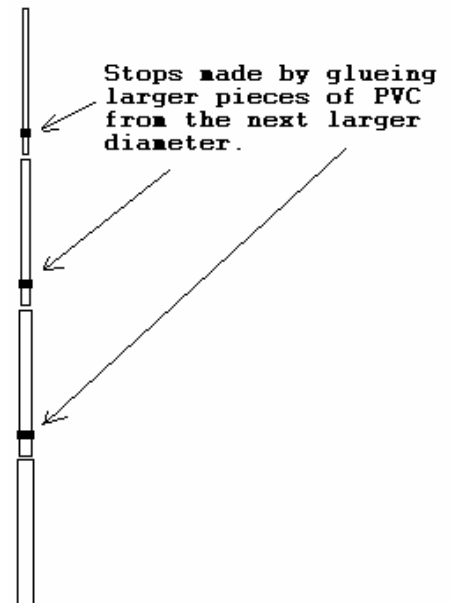
Without going into the theory, balanced feedline, properly used, does not "leak" RF and is less lossy than coax - AS LONG AS YOU KEEP IT A FEW INCHES FROM METAL like drainpipes, gutters, etc. (don't forget stucco has metal wire mesh inside it). Commercial 450-ohm ladder line works well, but 300-ohm TV twinlead is often cheaper and works just as well - Radio Shack TV twinlead or that sold at Home Depot.

Don't get super excited about standing waves, impedance and velocity factor. If you use twinlead and an antenna tuner, it's not going to be a big deal as we'll see below. Right now you need to figure out how you're going to hang

the dad-blamed thing. If you don't want to pay \$5 apiece for the crummy plastic insulators sold at Radio Shack, you can make your own from a discarded miniblind adjusting rod or similar things you stashed hidden away from your house-cleaning spouse 'cuz you knew you'd need them someday.



Hang the center of the antenna from a tree limb, or use a support. I found a fiberglass push-up pole for my center-fed Inverted "L" (I know they're usually end-fed) so I don't have to worry about running wire next to it, but wood or any non-metallic material works just as well. You can use gradually-diminishing diameter sections of PVC with "stops" as shown so you can take it apart. Make sure the material is heavy enough gauge so as not to bow in the middle, or use rope guys midway up the pole.



The exact height of the antenna's feedpoint is not crucial. The higher, the better. 20 feet might be a minimum. 60 feet is ideal, but in the real world, 30-50 feet is average. At my place, they only allow me about 25 feet - hence the shortened inverted L.

For the antenna wire itself, virtually anything will work, but something close to #18 stranded/insulated is ideal. A good STEALTH antenna material is magnet wire. You can dig this out of an old transformer or even a broken loud-speaker coil. This ultra-thin stuff is truly INVISIBLE to neighbors and spouse alike, and it'll easily handle 100 watts.

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If you need to keep a low profile, try it as a long longwire, end-fed from your tuner's "wire" terminal. (MAKE SURE EVERYTHING IN YOUR SHACK IS GROUNDED RIGHT OUTSIDE THE SHACK WITH AN 8 FOOT GROUND ROD CONNECTED WITH AT LEAST # 4 GROUND WIRE). Lots of folks using a random wire mistakenly call it a longwire, which only qualifies if it's several wavelengths long. If you don't have room for this, you might have to make a deal with your neighbor to use his trees and/or roof. I once had two 600-foot longwires up in my trees in the Rockies, which outperformed every 6-element beam I've ever owned on 50+ foot towers.

If you can't arrange to get your wire more than a dozen feet off the ground, try spreading a few hundred feet of the magnet wire all around the yard in a big loop (get the measurements in the ARRL Handbook or Internet search "80 meter loop antenna"). Magnetic loops can perform satisfactorily at low heights.

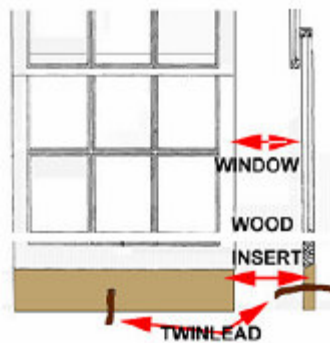
The ends of the antenna will be "hot" with RF, so it's a good idea to keep them out of reach of people and pets, say, at least 10 feet above ground. However if you bring the ends down closer to the ground – just put warning signs up or arrange to keep people/pets away. (Dog's don't read very well.) If you have one of those "electric fences" remove or loosen your pet's electronic collar when you're transmitting, if the animal is outside. My dog got an unpleasant surprise once – and he got zapped from the horizontal loop wire antenna at the edge of the roof, which is my NVIS antenna used for the Arizona HF nets.

### Your Tuner is Key

An antenna tuner with a balanced output is a necessity. Begin adjustments at low power, increasing to full power only when you have a reasonable match. You can usually find small MFJ or similar brands of "mobile" tuners at hamfests for \$10 - \$15 that work. Just make sure YOUR tuner is an outboard manual type antenna tuner and not an "automatic" or internal tuner that is a pushbutton feature on many modern rigs. They must use small, light-duty components & these built-in tuners are typically limited to handling mis-matches of 10:1. If your radio has one built in, use the switch to by-pass it.

### Twinlead & Wire

The feedline comes straight in thru a window sash arrangement first used by hams in the 1920's. (See drawing ). Alternately, you can attach the wires to feed-through bush-



ings (which) can be anything from two steel bolts...to a pair of banana jacks end-to-end) set into holes in the wood sash or a plexiglass panel. 300-ohm twinlead only needs about 2" separation from metal objects in its path but don't coil it up, kink it, bury it, or lay it on the ground. You can use an external

4:1 balun to make the transition from your twinlead feedline to a short length of coax, then bring the coax into the house via a single feedthrough hole if you'd like.

If you want to be adventurous, try using 110VAC lamp cord ("zip" cord) as a feedline. It'll work as a crude balanced line, believe it or not. Impedance varies, but is usually "close enough" to work. You can even split it at the end and continue each leg out as your antenna, thus avoiding that connection altogether. When my 9-year old son first became a ham, that's exactly what he did for his first antenna and he worked plenty of DX with it. He's now a rocket scientist in the Mars program – hopefully they've improved their antennas

### Feedline Lengths.

Some feedline lengths will present an extremely high impedance to the tuner on certain bands. Here are some rough guidelines: Start by trying a length below. It may take some trimming or adding of feedline to work well on the range of bands you want. Worst possible feedline lengths are shown in brackets:

If the antenna is 120 ft per leg it covers 160 thru 10 meters. A feedline of 40-70 or 150- 190 feet is suggested. [Avoid lines around 120 or 240 ft]

If the antenna is 65 ft per leg it covers 80 thru 10 meters. A feedline of 25-40, 80-100 or 140-160 feet suggested. [Avoid lines around 60, 120, or 180 ft]

If the antenna is 33 ft per leg it covers 40 thru 10 meters. Feedline of 40-50, 70-80, 100-110 or 130-140 feet suggested. [Avoid 30, 60, 90, 120 ft]

Note: A freeware program to design different wire antennas is available for those who wish to get into the more varied designs. While it is a DOS program, it runs from Windows XP or Linux Win4Lin and does not require a start-run-command.

Contact Jim, N5RO at [n5ro@arrl.net](mailto:n5ro@arrl.net) for a copy of the Wire Antenna Design Program. ■

## 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,

2<sup>nd</sup> Floor; above Bank of America)

*informal – all are invited*

\* Location data (per WGS84) provided

by Fred Zimmermann, N7PJJ

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

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Many thanks to Bob Smith, WB6ODR, our Webmaster

