



YAVAPAI SIGNAL



The Yavapai Amateur Radio Club • Prescott, Arizona • DM-34 • Volume 24 – No. 5 • May 2009

From The President's Desk ...



I was sitting here at my desk thinking about the Prescott Hamfest coming up on May 30th, next month. The term “Hamfest” has certainly undergone quite a change in meaning since I attended my first one back in 1958 as a 14-

year old studying for my Novice Class license.

It was, in fact, the Dayton Hamfest. I lived in Indianapolis, Indiana at the time, and I had missed the local Hamfest the previous month. My Elmer (K9CTP), now a Silent Key, suggested that it might be fun to attend the one in Dayton, especially if I could get permission from my parents to stay over night in Dayton in a hotel. My parents relented, and I had a very memorable experience for a 14-year old soon-to-be-ham.

The thing I remember most was that everyone that had anything to do with ham radio in any way, shape, or form, was there. The convention floor was a sea of manufacturers, large and small. Companies such as Hallicrafters, E.F. Johnson, Collins, National Radio, Ham-

marlund, Millen, and yes, even Heathkit. None of those companies are even around today, but they were the big guns back then. Nobody had heard of Icom, Yaesu, and Kenwood yet. They all had freebie giveaways too, so by the time I got done roaming around the convention center floor, I had a heaping shopping bag overflowing with commercial trivia from each of the manufacturers.

The other thing I remember was that there were two sets of conference rooms/auditoriums built into the convention center, and there was a continuous list of speakers with ham radio call signs scheduled to give ham radio related talks throughout Saturday and Sunday Right up until the close of the Hamfest. It was unbelievably awesome for a 14-year old to digest.

But that’s what the term “Hamfest” meant ... the whole ball of wax with all of the trimmings. Today, of course, the term Hamfest means something much, much less than what it did back then, and now applies to even the most modest scheduled gathering of hams, with used equipment to sell, such as ours at the end of May. But not to dismay, because we can all aspire to have the Prescott Hamfest someday be what the Dayton Hamfest is, and The Prescott Hamfest has indeed grown from its modest start to what it has become today. And all of that growth is directly attributable to all of you club members that have tirelessly planned, supported, and worked at past Prescott Hamfests to make them what they were. The upcoming one appears to be bigger and better than the last one, so we’re certainly headed in the right direction, especially with Terry, KB7TRE, and his crew at the controls.

Thanks to all who have made the Prescott Hamfest what it has become. I’ll see you there!

/Bob – W7TQJ

President, Yavapai Amateur Radio Club

Inside This Issue ...

- Meeting Minutes.....Page 2, 3*
- Membership Count.....Page 3*
- Treasurer’s Report.....Page 4*
- VE Test Results.....Page 5*
- May Program.....Page 5*
- ARES/RACES.....Page 6 & 7*
- Prescott Hamfest.....Page 7*
- Lloyd, WA6ZZJ Receives Life Membership. Page 8*
- My 6M DF Unit.....Page 9*
- To crimp or not to crimp? Page 10*
- Upcoming Events.....Page 11*
- Hualapai Amateur Radio Club Hamfest....Page 11*

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 April 2, 2009 Board Meeting



Meeting was called to order at 1825 hrs. by the President, W7TQJ. Also in attendance: KB7TRE, KE7DTR, K6VVR, AB7NK & WB7RFY.

Additional certificates to be distributed. Awards reviewed. Special Service Club certificate has been framed for display in the meeting room.

Meeting program ideas discussed; KE7DTR will again solicit from membership.

On motion of KE7DTR, second by AB7NK and no dissenting, W7TQJ will coordinate proposed revamp of club website.

Post Holiday Party: Reservation for January 16, 2010 has been made; new format suggested. Lead person to be requested from membership again tonight.

Hamfest planning reviewed; WN7L to co-chair with KB7TRE. Committee volunteers (many needed) to be published in Newsletter. Pricing and sizes finalized. No vehicle movements between 8:00 am & 1:00 pm required for safety.

Field Day: WA6ZZJ is reviewing rules; will have sign-up sheets.

IRLP node required a new monitor; W7JLC installed right away. Reimbursement approved to receipt.

Respectfully submitted,

Jeff Hanna, WB7RFY

Secretary

Minutes of April 2, 2009 General Meeting

Meeting was called to order at 1903 hrs. by the president, W7TQJ. Following the Pledge of Allegiance, introductions were made.

Attendance: 62 of whom 44 signed in. Visitors included Dave Short, N7NGM, Rick & Logan, KE7TWQ.

Minutes: of March 05, 2009 meeting, on motion of WA6AQK, second of KV8TD, were accepted as published.

New Members: On motion of WB6ODR, second of KE7DTR, and no dissenting votes heard: Art Lewis, KI6LWO; Bruce Jaeger, KE7TDR; & Richard Von Aschen, N7RIS were voted into the membership. Later, discussion by W7JLC questioned practice of voting in new members. Board to research and discuss.

Treasurer: AB7NK reports beginning balance of \$ 2301.15, ending balance of \$ 2391.71 and repeater fund balance of \$ 530.92. Report accepted as read. Later question from the floor as to safe-keeping and legal reports was satisfied in discussion.

With respect and appreciation, **LIFE MEMBERSHIP** was conferred to LLOYD HALGUNSETH, WA6ZZJ in recognition of leadership, dedication and loyalty to YARC, ARES/RACES and the community.

COMMITTEE REPORTS:

ARES/RACES: WA6ZZJ updated the spring training, exercise & busy public service schedule.

VE: AB7NK reports March 13th testing of 13 applicants resulted in 7 new Generals and 2 extras. Next sessions are April 4th and May 30th. AB7NK@arrl.net.

Newsletter: Editor AC6AA requests any corrections or updates to the back page references be forwarded to joliver@cableone.net.

Patches: Treasurer has both sizes available (\$3.00 ea) and club 'stickers' are available for \$ 1.00 each.

Shirts: W6CCD has a few on hand. Contact W6CCD@arrl.net.

Badges: Orders are being accepted by WB6ODR for club badges at \$ 6.75 each. Contact at meeting or lrsmith@cableone.net.

Repeater: WB6ODR reports all working well; no current plans.

IRLP: W7JLC may be updating software this summer. New monitor for node to be reimbursed.

Classes: W7JLC reports series of Tech., General, & Extra classes has concluded with great success.

Grateful thanks to Volunteer Instructors: KC8BOB, KB7CBK, N7CW, WB9VGJ, WN7L, KE7WOU & W7JLC.

School Clubs: KB7TRE reports active members at K7GMG (2 attending tonight). W7BMB club reports equipment from ARRL grant is being installed; antennae will be up soon. Station that was assembled previously will be passed to future club at Bradshaw High School. Still need occasional volunteers to assist, N5RO@arrl.net.

Elmer: KA7JAS reminded all that he can assist, or refer to one of many volunteers in the club to address your needs, please utilize club resources. Can help with most any question or need. Contact KA7JAS@arrl.net or phone.

Refreshments: K6UWV says enjoy selection of cookies, drinks, coffee, & please recycle.

Young hams net: Sundays, 7:00 pm, 147.22+ 162.2pl. encourages all to check-in.

Slow code net: Sundays, about 7:30 pm on 146.88-100hz pl. Participation variable, but many copying.

Programs: KE7DTR again requests your input for interesting programs. richbozeat@cableone.net.

Hamfest: KB7TRE has contacted WN7L (new co-chair); needs many volunteers to staff prep, striping, parking, table monitors, club booth, refreshments, talk-in, raffle, cashier, publicity, shopping, cooking, etc... Takes a lot of efforts by many, KB7TRE@cableone.net. Reminded that there are limited tailgate spaces and wheel-chair parking for those who require, but for safety no vehicle movements inside will be allowed between 8:00 am and 1:00 pm.

SSC: Special Service Club certificate has been framed by W7TQJ, suitable for display in the meeting room.

Post Holiday Party: Format has been reconsidered; reserved date is January 16, 2010 at St. Michaels. Carol, KA7LKW & Patty Erdmann volunteered to chair & coordinate the luncheon.

Certificates of Appreciation: were presented to: KC8BOB, Bob Thompson, for Fair booth & Prescott rally; KE7DTS, Starla Thompson, for contributions to Prescott rally & Hamfest; KV8TD, Doug Freeman, for leading County Fair activities; KE7NSB, Jo Keener, for advancement of community awareness;

N7KPU, Jim Ogden, for making repeater available for IRLP link; KC7CBK, Lee Cunningham, for ARES/RACES & public service contributions; KI7JZ, Erika Schiltnick, for delicious treats and support; N7CW, Bud Semon, for contributions to ARES/RACES; WB6ODR, Bob Smith, for service as club webmaster, badges, patches, & repeater committee. Certificates for those not in attendance will be mailed

Field Day: Planning by WA6ZZJ & KD7VBG for WILLOW LAKE activity is underway.

NEW BUSINESS:

Tower: Club will offer via silent auction a 60' Rohn 25 tower. Look for more info via e-mail. \$ 100.00 minimum.

For info, KA7JAS@arrl.net. Bids to AB7NK@arrl.net.

Anchors: Box of cables and connectors; take what you can use. HF rig offered for \$ 100.00 (sold).


Tonight's Program: K6VVR & W6CCD on 'the art of foxhunting'.

50/50 drawing: \$ 57.50 was won by KE7WOQ.

Respectfully submitted:

Jeff Hanna, WB7RFY
YARC Secretary

Membership Count:	
1st Thurs. in March....	175
Gain/Loss.....	+2
1st Thurs. in April.....	177*
* Includes 21 3-Month Memberships	



Yavapai Amateur Radio Club

Treasurer's Summary

April 2009

By Mary Vince, AB7NK
Treasurer

Income

*Membership New/Renewals/Students (8 renews & 2 student)	\$ 170.00
Repeater Fund (New/Renewals)	20.00
Additional Repeater Fund	15.00
ARRL - Renewals	78.00
Fifty-fifty	<u>115.00</u>
 Total Income	 \$ 398.00

Expenses

Ck #1071	Award Etc LTM Plaque WA6ZZJ	\$ 70.02
Ck #1072	WB6ODR Bob Smith – website hosting	75.00
Ck #1073	AC6AA Joe Oliver – stamps	42.00
Ck #1074	K6UWV David Passell - refreshments	45.11
Ck #1075	Allegra Inv #42040 Newsletter	30.18
Ck #1076	W7JLC IRLP Monitor	151.68
Ck #1077	ARRL – AD7YR & KF7ANV New membership	48.00
Cash	KE7WOQ 50/50	57.50
Cash	Repeater Fund	<u>35.00</u>
 Total Expenses		 \$554.49

**Beginning Balance 3/19/09	\$ 2,391.71
Income	398.00
Expenses	<u><554.49></u>
 General Fund Balance 4/10/09	 \$ 2,235.22
 Repeater Fund Balance 4/10/09	 \$ 565.92

*Itemized copy on file

AB7NK - Treasurer
4/10/09

YARC Officers for 2009

President

Bob Erdmann, W7TQJ
W7TQJ@cableone.net

Vice President

Pete Morrison, K6VVR
pm_service@earthlink.net

Secretary

Jeff Hanna, WB7RFY
jeff668@commspeed.net

Treasurer

Mary Vince, AB7NK
ab7nk@ARRL.net

Board of Directors (includes Club Officers)

Terry Pemberton -- KB7TRE

Tom Griswold -- N6LSA

Richard Bozeat -- KE7DTR

Walter Schumann -- KF6SPS

Newsletter Editor: Joe Oliver, AC6AA
joliver@cableone.net

May Program

"Senior Citizen Ham Continuing Education At The College Level" presented by Bob Kane, K7KOL



From: Jo. L. Keener

To: Members of the Yavapai Amateur Radio Group.

Subject: Certificate of Appreciation

Just a letter to express my gratitude for your certificate that I received today. I feel very honored and wish I could have done more. However, The Daily Courier cut my career short in October as a photojournalist.

Thank you all for a wonderful fellowship and may the good Lord watch over you and your airwaves, keeping you and your families safe.

I currently am working with Fountain Firearms on Highway 6 in west Houston and helping to keep honest Americans free with responsible ownership of firearms.

Thank you again, 73

Jo. L. Keener

KE7NSB jo.l.keener@juno.com

VE Test Results for April 4, 2009

by Mary Vince – AB7NK

2 – Technicians

1 – General

7 – Extra's

Congratulations to the new licensee's and upgrades!

Silent Auction

60' Rohn 25 tower has been donated to the club.

Sections include 5 -10' sections, 1 – 7' section and a 9' tapered top section.

This tower will be sold by silent auction – minimum bid is \$100.00

Please e-mail your bid to ab7nk@arrl.net.

You can also mail your bid to AB7NK.

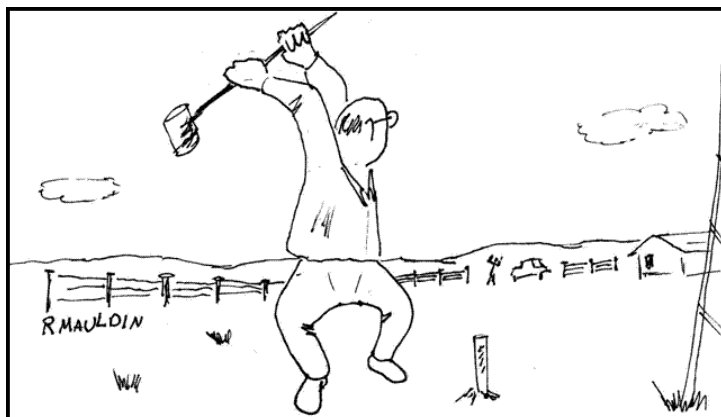
Address is current in the YARC roster or on QRZ.

Phone bids will NOT be accepted.

Bids must be received no later than midnight Thursday, May 21st. The winner will be notified by phone Saturday, May 23rd and appear in next month's newsletter. All proceeds go to Yavapai Amateur Radio Club.

Please note: • Base plate not included

• No crank up or tilt over feature



ED! I WAS ONLY KIDDING. YOU DON'T HAVE TO SINK YOUR GROUND ROD 1/4 WAVELENGTH OF THE BAND YOU OPERATE ON!



By Lloyd, WA6ZZJ

ARES/RACES.....

WILDFIRE EXPO.....

This year's annual Wildfire Expo was held on Saturday, April 18th. The event was lined up on Cortez Street on the East side of the Courthouse Square. Like last year, there were a few thousand people that visited the display area.

ARES/RACES had the Mobile Amateur Radio Communications (MARC) vehicle on display to show people about the group and just what we do in emergency communications. Several people stopped by to take a tour of the vehicle. Some were Amateur Radio operators who were interested in getting involved and then there were some who were interested in getting into Amateur Radio. We should see some new faces at the next club meeting as they took the flyer on YARC and one on ARES/RACES also.

Thanks to the members that helped with the event. KE7WOQ on setup and KI7JZ, KD7VBG, KB7TRE, KC6ZHG, KE7TDR, WB7UZV and WA6ZZJ on getting the word out to the visitors.



Mobile Amateur Radio Communications (MARC) vehicle at Wildfire Expo



Display at Wildfire Expo

WILDFIRE SEASON.....

This years Wildfire Season is upon us with the winds we have had to dry out the vegetation. There have already been a few small fires, but fortunately our capable firefighting agencies have gotten a handle on them relatively fast.

It's a reminder for ARES/RACES members to check over their equipment to assure it is operating properly and that their batteries are charged and 'go-kits' ready. It could be not if, but when we may be called out on an emergency.

SPECIAL EVENT COMMUNICATIONS.....

RAGNAR DEL SOL.....

The following is an excerpt from an email sent me by one of the Ragnar organizers with the MCECG:

"I've been remiss in closing back with you following the Ragnar. You and your crew did well, by all reports. Those of your crew who participated on our main net (I think X-RAY 6 and maybe a couple others did) climbed the learning curve rapidly. They became indistinguishable in protocol and situation awareness from our long-timers in the Valley. I'm very impressed!

Your liaison from ALPHA CONTROL was invaluable. Though we had two separate communications groups with no experience together working the event, the support was seamless and effective. Traffic and reports flowed smoothly back and forth, and the runners, teams, volunteers, and staff never knew when they moved from your crew's care

to ours. All they knew was that "those radio guys" had their backs the entire race.

The lead runner information that we collected allowed us to accurately project the event 3~6 exchanges down route, and even to forecast the winning team hours before they overtook the lead team. That knowledge allowed the staff to ensure that volunteers and supplies were in place ahead of the lead runners... not a trivial task for so major an event.

So... Many thanks for your help, co-operation, and professional operation."

I replied that I think everyone enjoyed doing the event and even though it was a first for us, working in conjunction with another group, that all went really quite well in our 'mutual aid' operation.

Thanks to all of you who participated in this event. I think I overlooked thanking you last month. It is your participation in Special Event Communications that helps the Yavapai Amateur Radio Club maintain its ARRL Special Service Club status.

Next month I will have reports on our next two events: The Whiskey Off Road Bicycle Event on April 25th and the Whiskey Row Marathon on May 2nd. ■

ANNUAL



PRESCOTT HAMFEST HOSTED BY YARC / VVARA

**HURRY!
HURRY!
HURRY!**



*DONUTS, COFFEE,
HOTDOGS & SODA
FOR A NOMINAL FEE!*



**TALK IN FREQUENCY
146.880- PL-100 HZ**

WHERE:

Granite Mountain Middle School
1800 Williamson Valley Rd.
Prescott, AZ 86305
Set up on the basketball court.

Bring your own tables.

Sellers Fee: \$10.00 per Space.

WHEN:

Saturday, May 30th, 2009

Gates open at 6:00 am.

Swap meet starts at 8:00 am
and ends at 1:00 pm.

VE Testing Promptly at 9:00am

HOW:

Check our website for directions.

W7YRC.org

WHY:

Meet friends, make friends, swap stories and gear.

Wire Glue uses the latest advances in microcarbon technology to produce a highly conductive glue intended for hobby and repair applications.



Wire Glue may be suitable for unique or difficult applications, such as securing aluminum to steel, attaching wires to glass solar panels, R.F. shielding, surface mount, etc. Makes electrical connections without heat or solder. Wire Glue is made by Anders Products Division of Idolon Technologies. ■

Look What Wire Glue Built

Electrically Bonds
Aluminum to
Steel Tool



LLOYD HALGUNSETH, WA6ZZJ Receives Life Membership in YARC

By Patti - KD7VBG

On Thursday April 2nd 2009, Lloyd Halgunseth was presented with a plaque for Life Time Membership to the Yavapai Amateur Radio Club. Joining him was his wife Jan along with fellow members and friends.

Lloyd has been a member of YARC in good standing since 1994 when he and his wife moved to Prescott from California after retiring from UPS after 33 years of service. While In California he was re-licensed (in 1962) at the FCC office with the call sign WA6ZZJ which he has kept to present day. His first license (which was in North Dakota) WNØIRQ had expired in 1953, due to Novice licenses only being good for 1 year and not renewable. While in California, he was mainly involved in emergency communications with the Los Angeles County Disaster Communication Services and also with San Gabriel Valley ARES.



LIFE MEMBERSHIP was conferred to **LLOYD HALGUNSETH, WA6ZZJ** at April's meeting, in recognition of leadership, dedication and loyalty to YARC, ARES/RACES and the community.

Lloyd has been very active in YARC, and upon his arrival he served as Vice-President for 2 years in 1997 & 1998; also serving during those years, and several others, as Emergency Service Coordinator for the club. Lloyd is also very active with coordinating some of the public service events for the club -- this is part of what makes the YARC club a Special Service Club for the ARRL. It was in 1998 that the Yavapai Club handled communications on its own for the Whiskey Row Marathon; from this day on, YARC has done the Marathon for the YMCA. To quote the YMCA, "We cannot do it without you". Some of the other events YARC provides communications for: The Whiskey off Road; Diabetes Walk; March of Dimes Walk; Groom Creek Classic and the Prescott Road Rally. There are others YARC has done that are not on a regular basis, due to the events not being handled annually.

Lloyd became active in ARES upon his arrival in Prescott. In the early years, RACES was run separately. In 1998 was when they were reorganized and became ARES/RACES, which it is to this day, working with the Office of Emergency Management for Yavapai County. This affiliation is rare when you talk to other counties. ARES/RACES has major radio installations in all EOC's in the County and several Fire and Police stations in the county. ARES/RACES has two communications vehicles, one that is stationed here at the EOC in Prescott and the other soon be stationed in the Verde Valley. Both vehicles are ready and can be stationed any where they are needed. MARC (Mobile Amateur Radio Communications) helps out at most of the public service events that YARC handles.

Lloyd is very active in several aspects of Amateur Radio, which he promotes to all he talks to. For several years he just wanted me to get my license, and in 2003 I finally did. He was a very big influence, and I am happy that I am able to enjoy this hobby with him. I remember when a friend came out to see me and we were at my parents house. I had brought my CB Radio and suggested to Dad that we need to install it in my Jeep. To quote "Well we will think about it, but you just need to get your license." When I bought my first Ham Radio for the Jeep it was mounted the first weekend I had it.

Lloyd is and always will be a big promoter for Amateur Radio, and encourages all to get their license. He really enjoys seeing young people become involved with the hobby and hopes that more will in the years to come. ■

My 6M DF Unit

By Rex Mauldin/N7NGM

This article was inspired from the excellent talk at the April meeting regarding direction finding and from an article found in the latest CQ magazine on the same subject. Typically, such talks and articles cover the commonly used bands, namely 2 m and 70 cm with references to other bands, but without specifics as to antenna dimensions. For several years now, I have been in possession of a commercially made DF loop antenna made for the U.S. Army Signal Corps by Phoenix Electronics, Inc., a unit designated as AT-339 PRC, with no specific year of manufacture. This unit can tune from 39 to 55 MHz, can attenuate the signals received, and has a third switch labeled SENSE, which allows for further direction finding ability by adding an omni antenna which when combined with the loop antenna, provides for an improvement in directivity.

In my case, as trustee for the Mt. Union 52.56 repeater, I am mainly interested in listening for signals on its input, so I usually have it set to 52.06 MHz. To enable myself to operate the device effectively, I strap my 6m Azden HT around my neck along with my Hockey Puck com-



Sniffing Interfering Signals

pass. Once I receive a signal and get a direction, I note my position with my GPS unit and plot my position on a map. I then move on to another area and take another reading and continue this process for however long it may take or how long the signal may occur.



AT-339 PRC

I have learned that it is best to hold the device away from myself while slightly swinging it left to right so as to sweep the area towards the signal being heard. I have learned to trust the direction this device can give me. Such a system should work well on other bands.



Close up of the AT-339 PRC

whereby I started out in the northwest portion of Phoenix and upon hearing the signal, I immediately was directed to a location towards the southeast. Since I didn't have to attenuate the signal much, that told me that the source was quite some distance away.

Meanwhile, my 6m friends called friends of theirs as far away as Tucson whereby we learned that a remote base on Mt. Lemmon was being turned on by a faulty controller and since the owner was not monitoring his remote as you are required to do, he had no idea the controller was turning the transmitter on and doing so throughout the day at no set time.

This is one reason why remote bases are discouraged by many people, because if you are not aware of its existence and it is turned on by some means, you as the repeater owner/trustee are at a huge disadvantage to do much about it. In our case, we were working on finding the source and contact the person responsible. Once the person responsible was contacted, he shut it off and must have replaced the controller as we have not had this problem since.

To solve this problem, DFing the signal was the first step and the same techniques can be used to locate other signal sources such as the beacon of a balloon. While it was not fun to spend time searching for this remote, it was fun to do my part with my DF unit and can be a hobby in itself as you can apply this ability to other signal sources in many other bands, both amateur and non-amateur. ■

http://home.att.net/~jleggio/projects/rdf/tape_bm.htm

<http://home.att.net/~jleggio/projects/rdf/tdoa2.htm>

To crimp or not to crimp? That is the question.

By Paul Honore' W6IAM

After spending three frustrating days trying to isolate an intermittent electrical problem in my 1968 VW truck, the "Red Baron", it revealed itself, finally, as a corroded crimp terminal fiendishly hidden behind layers of dirt encrusted pipes and hoses in the way only automobile makers can hide things. Actually, I shouldn't blame the mechanics at Wolfsburg. Their original wire was probably attached securely enough, both electrically and mechanically, but it had been reworked by a previous owner who used one of those Mickey Mouse crimp terminals that are sold at WalMart and the like.

Don't get me wrong. I'm not down on crimp terminals in general, just on an industry that tries to foist a poorly conceived imitation of a superbly designed product on a trusting and unsuspecting public. I buy the things by the bushel, but I don't crimp them onto wires, I pull off the plastic sleeve and solder the terminals securely. Why? Well, let me explain. The crimp terminal, in its original form, is a wonder of mechanical engineering. It was designed primarily for the aerospace industry and quickly adopted by the electronic industry in general, and the military in particular, as a way to achieve reliable solder-free repair in the field by semi-skilled personnel. AMP was among the first to develop a workable system. Even the name AMP, *Aircraft Marine Products*, conjures up visions of reliability under severe environmental stress.

A modern aircraft has been described as "several million parts flying together in close formation," each of them trying its best to become an independent agent. And as a former Navy Electronic Technician and foul-weather sailor, I won't begin to describe what salt water can do to the best electrical connection! My hat's off to anyone who can overcome these difficulties with a product that actually works.

At the heart of the AMP system, and also all of its many copiers, is a hand grip of hardened steel with a compound ratchet that applies tons of pressure to its jaws and doesn't release until a precisely calibrated pressure has been achieved.

The working end of the device contains two pair of precision ground dies - one pair to crimp the terminal to the wire and a second pair to crimp a plastic strain relief at the junc-

tion between the stripped wire and the shoulder of the terminal. This ensures that the wire won't flex back and forth under vibration and break off. Simple? Yes, but here's the catch: As I mentioned earlier, it's not just a hand-held crimping tool, it's a system. You have to have dies and precisely dimensioned terminals for each wire size you intend to crimp. That can get into some big bucks! The handle alone sells for \$238 at *Mouser Electronics* and the die assemblies are \$131 each. That's \$131 for each wire/terminal size.

Why so much expense to accomplish a simple task? The answer is also simple - beautifully simple. With a precisely dimensioned terminal and the correct pressure, you can produce a "cold weld" of the terminal to the wire. The two literally fuse together into a single metallic mass with no gaps to allow corrosion. The connection is actually better than if it were soldered. It can't be done with the WalMart special. I doubt Gov. Schwarzenegger has enough strength to do it. Besides, the tool would probably break before the jaws reached a fraction of the pressure needed to weld a proper connection.

So, unless you can afford a professional set of crimping tools and can have them periodically calibrated and certified, stay away from crimp terminals altogether. They look pretty and work for a spell, but they deteriorate with time, and in our Northwest salt air environment that time is short indeed. Don't rush to throw away your old hand crimper just yet though. Most contain a nifty set of cutters for 4-40 through 10-32 machine screws.

Oh yes, I did get the "red baron" back in the air - well, taxiing along anyway. I replaced the faulty wiring with crimp terminals from WalMart, properly soldered of course!



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



OK, MAYBE I SHOULD READ THAT MANUAL

Upcoming Events

- April 25, 2009 - Whiskey Off Road 2009
- May 1 - 3, 2009 - Pacificon 2009 in Reno, NV
- May 2, 2009 - Whiskey Row Marathon
- May 30, 2009 - Annual Prescott Hamfest & VE Testing

Tech Trivia: The First Cellular Phone

Life would not be the same without the now ubiquitous cellular phone. But do you know anything about its origin?

Q: Who invented the first cellular phone?

A: Martin Cooper. Cooper is co-founder of Array Com.

Q: What was Martin Cooper's inspiration for inventing the first cellular phone?

A: Captain Kirk's communicator on Star Trek.

Q: In what year was the first cellular phone invented?

A: 1972

Q: How much did Cooper's first cellular phone weigh?

A: Two pounds!! It took ten years before cellular phones broke the one-pound mark. ■

Hualapai Amateur Radio Club

Kingman Arizona

W B 6 R E R

HAMFEST

2009

Saturday

May 2nd 2009

Time 9: am until 5: pm

Frontier Communication's

Parking Area

3124 Stockton Hill Road, Kingman Arizona, 86401

Stockton Hill Road **EXIT # 51** on Interstate Hwy # **40**

Southside of Hwy # **40**, appx. 1/2 block south.

Raffle Tickets

(1) = \$ **2.00** or (6) = \$ **10.00** [U.S. funds]

Prizes are :

1st Prize = IC 7000 (Base / mobile)

2nd Prize = IC 92 AD (hand held)

(D-Star ready)

WINNERS NEED NOT BE PRESENT TO WIN PRIZES

To Buy Tickets by Mail :

Send a check to :

Hualapai Amateur Radio Club

PO Box 4364

Kingman Arizona 86402

CONTACT :

Club President Eric Smith **N7FFL**

@

[Email: N7FFL@n7ffl.us](mailto:N7FFL@n7ffl.us)

Weekly Breakfasts



Tues. Morning Breakfast:

7:00 a.m. at

Back Burner Cafe

8400 E. Long Mesa Drive
& N. Robert Road
Informal – all are invited.

Wed. Morning Breakfasts:

7:00 a.m. at

Iron Horse Restaurant

(Hwy 89 in Chino Valley)
(N 34°43'56.5" W112°27'15.4")*
informal – all are invited

8:00 a.m.

Masonic Lodge

(1280 Willow Creek Road,
2nd Floor; above Bank of America)
informal – all are invited

* Location data (per WGS84) provided
by Fred Zimmermann, N7PJN

Area Repeaters

Frequency	PL	Location	Owner/Club	Auto-Patch	Rem. BaseOr Linked	Vo IP	Notes:
52.560-	100.0	Mt. Union	N7NGM			Echo	-500KHz Offset
53.040-	None	Prescott Airport	WB7BYV				-1MHz Offset
145.290-	127.3	Mingus Mtn.	ARES/RACES				
146.780-	91.5	Williams Mtn.	BWARC			IRLP	
146.880-	100.0	Prescott	YARC				
146.980-	162.2	Flagstaff	CARC				
147.000+	162.2	Mingus Mtn	MMRG				
147.040+	107.2	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				
224.080-	156.7	Mt. Union	WA7JC				
442.150+	100.0	Mingus Mtn	W1OQ/Northlink				
442.350+	100.0	Glassford Hill	N7KPU			IRLP	
445.300-	100.0	Prescott	WINSYSTEM		Node 3727	IRLP	
448.475-	100.0	Flagstaff-Elden	ARA	Yes			
448.500-	100.0	Prescott	K6JSI				
448.875-	100.0	Flagstaff-Elden	Northlink		Linked		
449.175-	100.0	Towers Mountain	Northlink		Linked		
449.675-	88.50	Prescott Airport	WB7BYV		Linked to P Mtn. 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/
- www.azrepeaters.net
- www.azfreqcoord.org/listings.htm

YAVAPAI AMATEUR RADIO CLUB

P.O. BOX 11994

PRESCOTT, AZ 86304

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

Many thanks to Bob Smith, WB6ODR, our Webmaster

