MONTHLY CLUB MEETING LOCATION
Ascension Lutheran Church
1220 W Magee Rd
Tucson, AZ 85704 (east of LaCanada on Magee)
Third Friday of each month at 7:00 pm

2015 BOARD MEMBERS:
Bob Molczan, KA7VPR -- President
Ron Herring, W7HD -- Vice President
Scott Boone, K7ADX -- Treasurer
Howard Chorost, KC7AC – Secretary

Board Members:
Dave Coccio, N7AKC
Carl Foster, KB7AZ
Gary Schmitz, KT7AZ
Bob Stephens, AF9W
Steve Wood, W1SR

How to email your officers:
president@tucsonhamradio.org
vicepresident@tucsonhamradio.org
treasurer@tucsonhamradio.org
secretary@tucsonhamradio.org

DUES INCREASE FOR 2015
On January 1, 2015 the membership rates went up to $25 for regular members and we are adding a discounted rate of $15 for members who are in the same household as a paid regular member. A household member is defined as someone who resides at the same address as the regular member.

See http://tucsonhamradio.com for details and paypal links.

Sunday Night Net      19:00 MST      OVARC Repeater System
Join the group every Sunday night at 19:00 MST (7:00PM) on the OVARC repeater system for the Sunday Night Net. We also have our Radio Tradio on this net where you can list ham radio items for sale. Everyone is welcome on the net regardless of club affiliation.
We are always looking for Net Control Stations so if you would like to try your hand at being NCS, contact Lanny, KF7LV our Net Manager.

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**OVARC LINKED REPEATER SYSTEM**

The Oro Valley Amateur Radio Club currently has five wide area repeaters. All of our repeaters are normally linked via VOIP over internet connections, with the exception of the Dstar repeater (the newest of the five).

All of our repeaters are open to ANY licensed ham. We invite you to use these repeaters as often as you like. If you can monitor the repeater system for a few hours each week to respond to calls, it would be very much appreciated.

### 2 Meters

**146.620(-) PL 156.7 - Callsign WØHF**

Located on Keystone Peak  (Map: [http://g.co/maps/5tdig](http://g.co/maps/5tdig))

- Antenna Height: 40+ Feet  
- Elevation: at nearly 7,000 feet  
- Power Output: 100 Watts  
- Antenna: Decibel DB-224  
- Feedline: 7/8" Hard Line  
- Repeater: Kenwood TKR-720

**147.320(+) PL 156.7 - Callsign WØHF**

Located on the Oro Valley Police substation tower on Oracle Rd at Magee Ave, Tucson, Arizona

- Antenna Height: 57 Feet  
- Elevation: 2584 Feet  
- Power Output: 40 Watts  
- Antenna: Tram 1491  
- Feedline: LMR-600  
- Repeater: Kenwood TKR-720

### 70cm

**444.100(+) PL 156.7 - Callsign WØHF**  
(MOVED to OVPD Main at Tangerine and LaCanada)

WIDE Northwest coverage and additional Tucson Coverage (including Sahuarita)

- Antenna Height: Feet (adi)  
- Power Output: 50 Watts  
- Antenna: JetStream JTB3  
- Feedline: LMR-400  
- Repeater: Kenwood TKR-820

**440.400(+) PL 156.7 - Callsign WØHF**

Located on the Golder Ranch Fire District tower on Golder Ranch Road in Catalina, Arizona.

- Antenna Height: 67 Feet  
- Elevation: 3081 Feet  
- Power Output: 50 Watts  
- Antenna: Diamond X-30  
- Feedline: Andrews 1/2" Hard Line  
- Repeater: Kenwood TKR-820

**445.800(-) DSTAR WØHF**

Located at Magee and Oracle with the 147.32 repeater

- Antenna Height: 50 feet  
- Elevation: 2584 feet  
- Power Output: 20 watts  
- Repeater: Icom V4000  
- Controller: Icom RP-2  
- Computer: Dell Dimension running CentOS 5.10 Linux and Icom RP-2 Gateway software
Another DSTAR repeater is now online.

KG7PJV DStar repeater. Howard KC7AC has the new repeater in a drawer at his QTH on 445.1375 MHz.

Illustration 1: Dstar in a drawer
15 watts. Running cool and running quiet.

Another new Dstar repeater will soon be available on the east side sponsored by Gary AE7GP. It is in the testing phase at the moment. The call will be KG7RWN.


Public Service Opportunities

There are many opportunities to provide public service in Southern Arizona. Specific requests for help will be communicated via email. If you would like to volunteer for any of these events contact public_service@tucsonhamradio.com

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ARRL ACTIVITIES (excerpted from ARRL Newsletter Jan 2015)

ARRL Arizona Section

Section Manager: Rev Robert J Spencer, KE8DM
ke8dm@arrl.org

Full color copy of the newsletter with pictures and hamfest flyers can be found at http://www.arrl.org/Groups/view/arizona
HAMCON 2015--also the 2015 ARRL Southwestern Division Convention is September 11-13, 2015, at the Torrance Marriott South Bay Hotel, 3635 Fashion Way, Torrance, CA 90503

NETS:

-Arizona Traffic And Emergency Net (ATEN) meets in the winter from October 15 to April 15 at 5:30 PM and in the summer from April 15 to October 15 at 7:00PM on 3986 kHz daily. Tommy Ivan KF7GC Net Manager, Arizona Section Traffic Manager kf7gc@arrl.net www.atenaz.net -

Arizona Emergency Net – Maricopa (AEN-MAR) meets every Monday at 9:00 PM local time, for training and exercise in the public service communication arts on the Mt. Ord 146.92(-), Shaw Butte 147.24(+) or Scottsdale Airpark 146.760(-) repeaters. The repeaters require a 162.2 Hz tone. The repeaters are linked and cover most of Maricopa County and portions of Pinal, Gila, Coconino and Yavapai Counties in central Arizona. http://www.aen-mar.org -

Saguaro National Traffic System (NTS) Net (www.saguaronts.net ), meets daily at 6:30 PM MST (0130Z) on the Eastern Arizona Amateur Radio Society (E.A.A.R.S.) (http://www.eaars.org/) repeaters. We are always looking for people to take messages and deliver them via telephone to hams and non-hams. The net is open to all ham operators regardless of license level and there’s no membership requirement associated with this net. Traffic is not required to check into the net. Training is conducted as needed or when someone asks. This is GREAT way to get involved with Emergency Communications (EMCOM) and learn how it’s done prior to an actual emergency. The repeaters are; 146.86 and (440.700 Hub) Heliograph Peak; 147.28 Guthrie Peak - Greenlee County; 145.21 Jacks Peak, New Mexico. Between Lordsburg & Silver City; 145.41 Pinal Peak Near Globe, AZ; 147.16 Mt Lemmon Near Tucson; 146.70 Greens Peak Near Springerville – Showlow; 145.27 South Mtn. Near Alpine, AZ; 147.08 Mule Mtn. Near Bisbee in Cochise County. All E.A.A.R.S. network repeaters operate with PL tone 141.3. For more information about this net, contact Greg Peters (kc5zgg@arrl.net), Net Co-Manager. - There are many more nets in Arizona. Contact Tommy Ivan KF7GC for the full list.

VE TESTING TIMES AND LOCATIONS:

Tucson Area. Lighthouse YMCA/ARRL: First Thursday Contact Matt, AC7IL, veregistration@ac7il.org
Oro Valley/ARRL: First Saturday Contact David, AK2L, ak2l@arrl.net
RST/ Laurel (No Fee): Second Monday Contact Diane, AA3OF, dzimmerman2002@gmail.com
Jacobs Park YMCA/ARRL: Third Saturday Contact Fred, K7OFA, k7ofa@arrl.net
Graham / Greenlee County Area For VE testing on request, please contact Dave, N7AM, and he will arrange it.
Technician License Class - Tucson Every Tuesday, 6:30 - 9:00pm at TMC. Contact Dan, KC7VDA for info. kc7vda@gmail.com

HAM RADIO EVENTS -

March 21, 2015 -- Spring Fest Scottsdale Amateur Radio Club and ARCA hamfest Mountain Valley Church, 17800 North Perimeter Crive, Scottsdale, AZ, Talk-In Frequency: 147.18 PL 162.2, visit www.scottsdalearc.org contact Edwin Nickerson, WU7S -

March 28 2015 -- Radio Society of Tucson Spring Hamfest Golden Corral Buffet & Grill, 4380 East 22nd St, Tucson A. 7:00 AM to Noon Talk in 146.800 PL156.7 Contact dzimmerman2002@gmail.com or www.k7rst.org

April 2015 -- AARC DeVry Hamfest Phoenix. The exact date cannot be made until after January 2015. -

6 June 2015 -- Kachina / White Mountain Hamfest -

July 24 -25 2014 -- Arizona State Convention, Williams Hamfest, Williams AZ. Williams Rodeo Grounds, contact www.arca-az.org or call 602-881-2722 -
17 October 2015 CopaFest Maricopa Amateur Radio Association, Harrah’s Complex, located on Ak-Chin land, Ultra Star Multi Tainment Center 16000 Maricopa Road, Maricopa AZ 85139

HAMCON 2015—also the 2015 ARRL Southwestern Division Convention is September 11-13, 2015, at the Torrance Marriott South Bay Hotel, 3635 Fashion Way, Torrance, CA 90503 ON-LINE AMATEUR RADIO COURSE

Several new hams wrote to me about an online Amateur Radio Course put together by Andy KE4GKP. They have the Technician, General and even Morse Code courses. Check them out at http://www.hamwhisperer.com/p/ham-courses.html it is even available on YouTube.

NBEMS NET Wednesday nights and SGARN traffic bulletins

These programs require downloading and installing FLDIGI and FLMSG, if you don’t already have them. There are versions for MAC, Windows, Puppy Linux, and Linux. Note that fldigi and flmsg are also available through the package manager in Linux.

You can download them for free here:  http://w1hkj.com

If you want to set up FLDIGI for the NBEMS net at 7:00 pm on Wednesdays, check this URL: http://w7hd.net/nbems -or- http://w7hd.homelinux.net/nbems

Both MAC and Windows setups are provided at this link.

If you want to set up FLDIGI for the SGARN traffic, check this URL:

http://w7hd.net/sgarn -or- http://w7hd.homelinux.net/sgarn

This link will also show the schedule for the SGARN traffic bulletins when it becomes active.

NBEMS - Narrow Band Emergency Message Software

SGARN - Second Generation Amateur Radio Network

FLDIGI and FLAMP setup screens follow:
Be sure the RxID button in the upper right corner of the FLDIGI window is check marked, and its green light is glowing.
### Fldigi configuration

#### Reed-Solomon ID (Rx)
- **Receive modes**
- **Notify only**
- **Searches passband**
- **Mark prev freq/mode**
- **Disables detector**
- **Low** (`Allow errors`)
- **Send alert dialog**
- **Retain tx freq lock**
- **Disable freq change**
- **Squelch open (sec)**

#### Pre-Signal Tone
- **Seconds**

#### Reed-Solomon ID (Tx)
- **Transmit modes**
- **End of xmt ID**

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*The RsID notification message contents and display characteristics are configured on the "Notifications" configure dialog.*
The three screens above show the primary setup for copying SGARN and NBEMS files. In addition to these screens, the following settings should be used:

Receiving SGARN Multicasts
The Second Generation Amateur Radio Network (SGARN) transmits bulletins of interest to amateur radio operators. These bulletin transmissions are sent via AMP, Amateur Multicast Protocol, which allows an unlimited number of Client (receiving) stations to receive bulletins from a single multicast server at the same time, with 100% accurate copy.

This is very similar to what the ARRL's W1AW station does, the difference being that SGARN's AMP transmissions allow for errors in reception to be corrected for verified 100% accurate copy.
Software:
SGARN has adopted W1HKJ's programs FLDIGI and FLAMP as the best possible software for our use on HF. To receive the SGARN multicasts, you will need the current version of FLDIGI and FLAMP from the W1HKJ website.
<www.w1hkj.com>
At the top of the page there is a DOWNLOAD link. Go there and download FLDIGI and FLAMP for your operating system. There are versions available for Windows, Linux and OSX.

Software Setup:
To operate a Client (receiving) station, you must run FLDIGI, then FLAMP so that they run together. Consequently, the SGARN-specific setup for FLDIGI will be described first, then the setup for FLAMP, then a few notes about running them together to receive the SGARN multicasts.

FLDIGI:
You may already be using FLDIGI, as it is the most popular digital multimode program for amateurs at this writing. Many new users of FLDIGI can get started by placing their computer’s microphone close to the radio speaker in order to decode the digital transmissions, but best performance is obtained by using a ham radio sound card interface which connects your computer and radio together so that they may hear each other directly. Copy from a VHF/UHF repeater can be accommodated by simply setting a hand held radio near the microphone input of a computer running the Fldigi programs. Open the squelch on the handheld or receiver, and set the audio level to show the open squelch noise on the waterfall with the diamond at the bottom right of the Fldigi screen green and then close the squelch. Any of the popular sound card interfaces will do... Pick your favorite, what somebody you trust uses, what is cheapest, or what works best with your equipment.

When you first start a new installation of FLDIGI, there is a setup routine that all must go through, where you enter your callsign and choose your preferences. It is recommended that you set up and use FLDIGI normally in order to familiarize yourself with its use before going on to utilize it for receiving SGARN transmissions. It is a great program that will do a lot. Use it to read the mail on the NBEMS net on Wednesday evening at 7:00 PM as a good way to test your setup. Or better yet, use FLDIGI to participate in the NBEMS net to become familiar with the programs.

--- SGARN-specific setup recommendations for FLDIGI:
Be sure the RxID button in the upper right corner of the FLDIGI window is check marked, and its green light is glowing.

Click on Configure, then click IDs. In the resulting window, change the "Allow errors" box to 'Low', check the "Searches passband", do not check the "Disable freq change" box, then click Save and close. These settings help to ensure that the proper mode and position on the waterfall will be selected automatically for your receiving station.
FLAMP:
Setup of FLAMP for receiving SGARN transmissions is more involved than setting up FLDIGI - but not by much. It is still fairly simple. In FLAMP, click the "Configure" tab for the Configure menu. Here you enter your callsign and if you like, some brief info about your station. Below, there are a number of check-boxes, only one of which should be checked: Check the box that says "Auto sync flamp to fldigi mode selector" This will cause FLAMP to automatically follow FLDIGI's advice as to which mode to utilize, so that both programs work smoothly in concert. No other box should be checked.

Now, just click the "Receive" tab at the top of the FLAMP window – and assuming you already have FLDIGI running too, you are now ready to receive the SGARN transmissions.
A schedule for the SGARN transmissions will be published on the <www.tucsonhamradio.org> web site, and on the web sites maintained by Ron W7HD.
<http://w7hd.net/sgarn>
<http://w7hd.net/nbems>
<http://w7hd.homelinux.net/sgarn>
<http://w7hd.homelinux.net/nbems>

[ Editor's note ]
If you are using a Kenwood TS-2000 you must NOT use software PTT (denoted as PTT via hamlib command in FLdigi). The software PTT only enables the microphone input, not the rear-panel input on this specific radio. The rear-panel audio input is only enabled by the PTT lead in the 13-pin DIN connector. If you need rig control that does not auto-enable software PTT (this is not ALWAYS the case – you can sometimes unselect it), use the companion Flrig program for that in a separate window. Note that you can autostart Flrig in FLdigi using Configure/Autostart and Enabling the checkbox for Flrig after you “locate” it using the file display function in FLdigi by clicking on Locate. Unfortunately when you select the TS-2000 in FLdigi, it auto-enables the software PTT in some versions – make sure it is unchecked! If you can't uncheck it, use Flrig.

===========================================================
By the way, a really great Windows screenshot program is a free open source one called Greenshot. I use it when creating the newsletter in LibreOffice Writer to extract images from pdf files.

Get it at this URL:

http://sourceforge.net/projects/greenshot/
FCC “Paperless” Amateur Radio License Policy Now in Effect
Starting February 17 (Tuesday), the FCC no longer routinely issues paper license documents to Amateur Radio applicants and licensees. The Commission maintains that the official Amateur Radio license authorization is the electronic record that exists in its Universal Licensing System (ULS), although the FCC had routinely continued to print and mail hard copy licenses until this week.
In mid-December, the FCC adopted final procedures to provide access to official electronic authorizations, as it had proposed in WT Docket 14-161 as part of its “process reform” initiatives. Under the new procedures, licensees will access their current official authorization (“Active” status only) via the ULS License Manager.
The FCC will continue to provide paper license documents to all licensees who notify the Commission that they prefer to receive one. Licensees will also be able to print out an official authorization - as well as an unofficial “reference copy” - from the ULS License Manager.
“We find this electronic process will improve efficiency by simplifying access to official authorizations in ULS, shortening the time period between grant of an application and access to the official authorization, and reducing regulatory costs,” the FCC Wireless Telecommunications Bureau (WTB) said. According to the WTB, the new procedures will save at least $304,000 a year, including staff expenses.
IMPORTANT TO KNOW.. The ULS License Manager now permits licensees to change the default setting so that the Bureau will print and mail a license document.

From the ARRL
This is a Freeze Your Acorns Off setup from February 14th of 2015 by the PCARS radio club in Ohio (courtesy PCARS newsletter). A tarp wrapped around 3 sides of a pavilion to keep out the worst of the wind and snow. These guys are really dedicated!

SCOUTING AND YOUTH IN AMATEUR RADIO

A lot has been going on with Youth and Scouting this month. Raytheon had its Scout Day on Feb 7th. Over 400 scouts and their leaders attended the event. The merit badges offered were Aviation, Composites, Digital Technology, Electronics, Engineering, Invention, Nova (Energy MB), Nuclear, Programming, Radio, Robotics and Space Exploration. 21 scouts attended and got their Radio Merit Badge. The instructors for the Radio Merit Badge were Tom Fagan K7DF (Team Lead), Margie Fagan KE7LHY, David Holman AC7DS, Steve Park W4OEP and Greg Walker KA7BXA. The Class instruction was given in the morning and demonstrations were in the afternoon. The demonstrations included APRS, Morse code, D-Star, and radio direction finding. Each scout was able to get on the air using the Catalina Radio Club W7SA shack. 15m was open that day and a big thank you goes out to Kelly with the WW1USA station for talking to all they scouts. Other stations that helped a lot were KD8YPY Joe, K9BOO Mark, W2CSI Mark, N0RPI Dennis and VA7NLF Maria. Tom Fagan K7DF Assistant Section Manager Arizona / Youth and Scouting.

Section Emergency Coordinator

Are you a prepared ARES member? Have you updated your profile on the az-arrl.org/secure website in the last year? If not, do so this month by updating your equipment and training so we know your capabilities should an emergency arise where deployment would be requested out of your county. Speaking of county, do you know who your District Emergency Coordinator (DEC) is for your county? If not, ask a fellow ARES Member or contact me. Have you completed the ICS-100, ICS-200 and ICS-700 courses that are free of
charge at www.training.fema.gov/is? If not, set a goal to complete them by the end of March and then e-mail me the PDF of your Certificates. Let's make 2015 the year of preparation. / Dennis Bietry – KE7EJF / Section Emergency Coordinator / ke7ejf@arrl.net

On page 37 of the April 2015 QST is an interesting article on measuring frequency accuracy for the upcoming Frequency Measuring Test in April of this year. The methods describe in this article can also be used to determine the accuracy of your radios VFO (synthesizer) and the accuracy of the radios sideband generator.

For those that do not get QST, I'll summarize the procedure here:
The article was based on using a program called Spectrum Labs, but you can use your vanilla PSK program that has a good waterfall and FFT spectrum display. We will be using the WWV frequencies of 2.5, 5, 10, 15, 20 and 25 MHz for these tests. WWV, over the course of every hour transmits tones at 500Hz and 600 Hz. You can get the schedule at the WWV web site. Currently the 25 MHz frequency is experimental and could be non-operational at any time.

Part 1. VFO accuracy
1. Tune the VFO to 10.0 MHz and set the radio for AM.
2. In the PSK programs waterfall and spectrum display, find the 500 and/or 600 Hz trace and click on one of them. The program should fine tune on that signal and center the frequency. You should be able to read that audio frequency somewhere in the program.
3. You should now be able to compute the accuracy of your frequency determining device in the radio. For most recent radios this should be within +/- 5 Hz. In my Yaesu FT-920, it is dead nuts on frequency; as it should be with the Temperature Compensated Crystal oscillator I installed about 10 years ago.

Part 2. Sideband generator accuracy.
1. Set the radio for USB and tune the radio down 1 KHz (9.999000 MHz).
2. You should have a steady tone at 1000 Hz. Click on the tone to determine the exact frequency.
3. Set the radio for LSB and tune the radio up 1 KHz (10.001000 MHz).
4. You should have a steady tone at 1000 Hz. Click on the tone to determine the exact frequency.

Using these numbers, you can determine the accuracy of the radios sideband generator. You should conduct the Part 2 test at all of the WWV frequencies to get a good idea of the slope of your sideband generators. For my FT-920, I have determined that my error is -10 Hz/MHz. So If I am operating on 10 meters USB, then I have to add an addition 280Hz to the dial frequency to be “On Frequency”.

For single sideband operations with voice, this really isn't a big deal, but in the digital world, were band edges can come into play, I might have to consider doing some alignments to get the sideband generators touched up.

--
Jeff K. Steinkamp (N7YG)
Tucson, AZ
Scud Missile Coordinates
N32.2319 W110.8477

The same principle can easily be done with the PI4 decoder program called PI-RX: http://www.rudius.net/oz2m/software/pi-rx even if the beacon/signal does not come from a PI4 + CW + carrier beacon. In theory PI-RX can provide an accuracy of 0.1 Hz of any carrier transmitted transmitted every minute from mm:45 to mm.55. However, the path may distort that just like any other signals may.
The lucky winner of the Special Raffle for the ID-880 Dual Band DStar radio was Jon Lundberg, KF7WJC. Congratulations!

EXCERPTS FROM THE MINUTES OF THE MARCH 20, 2015 CLUB MEETING

KA7VPR reported that the OVARC system has become the largest part of public service communications in the area.

Webmaster and Emergency Coordinator Bob Stephens, AF9W, reported on Club Repeater usage for Public Service events and highlighted the Tour de Cure on March 1, which raised in excess of $90,000.00. The OVARC Logo was on T-Shirts for the event and the OVARC System was an integral part of the communication plan. Thanks to all who participated.

On Thursday, March 26th, AF9W and W8TK are going to the VA Hospital for a special operating event for WWII signal corps operators. They will be setting up a radio and antenna for the veterans to operate for a few hours.

Steve, W1SR announced that Patrick Stoddard will give a presentation next month on satellite communications. This is supposed to include a live demo! Steve said that at a recent event Patrick made it look easy! Of course, that wasn't under Field Day conditions, with several thousand others trying to make that one contact during the one or two available passes :-)

KA7VPR reported that we will be planning a members only trip to Keystone in late April or early May and some other events that KC0LL will be participating in.

AK2L reported on the 100% pass success of a new OVARC class and licensing session. There will be another Tech class starting April 14. We also now have two additional classroom locations in Marana.

March Presentation: WWV for Amateur Radio
Presented by Tom Kravec, W8TK
W8TK’s presentation detailed all of the information available on WWV broadcasts, illustrated with audio clips taken from his receiver in his Tucson ham shack.

About Tom Kravec, W8TK
Tom is an experienced ham who has a passion for helping new hams become comfortable with their new hobby. He is a regular speaker at OVARC meetings presenting the Handyman Corner.

Tom is also the OVARC Field Day Chairman and Chief Elmer.

Additional Programs:
Handyman Corner, Presented by Tom, W8TK – "Make a Cable Winder"
Doctor DX, Presented by George, NG7A – The Decibel
On March 8, members of the Oro Valley ARC were part of a team of amateur radio operators who provided communication support for the Old Pueblo 50 trail run. This event takes place in the Santa Rita Mtns between Vail, AZ and Sonoita, AZ. Runners cover a 50-mile course on forest roads and single-track trail. One of the key aspects of the communication support is to record when the runners pass through each of the 9 aid stations and when runners drop from the race. The team does this to make sure all runners are accounted for and none are left in the forest. This year 116 runners started the race.

In past years, each aid station recorded the runner times at the aid stations on a paper log. The ham radio operators at each station would then contact Net Control on an FM repeater and read the runner numbers and times to the operators at Net Control. Net Control maintained a master list of runners and their status through the aid stations. Needless to say this was a time and bandwidth consuming process that was prone to error. Multiple repeaters were used to get the bandwidth necessary and this resulted in interference between stations at Net Control.

Last year the team experimented with using the HF Winlink email system to send runner reports to Net Control. Runner numbers and times were sent as text emails. The aid stations involved in the experiment used HF radios, computers, and soundcards or Pactor modems to send their reports. Net Control received these reports by contacting the Winlink Common Message Server using telnet over the satellite internet system mounted in the Cochise County Mobile Communications Unit that served as Net Control. The technology proved useful but the process needed some changes.

Winlink for those who are not familiar with it is a radio-based system for sending email. Figure 1 is a picture of the overall Winlink system. The system consists of 5 Central Message Servers (CMS) on four continents accessed via the Internet where mail is stored for delivery. Access to the CMS is via Remote Message Servers (RMS). The RMS is accessed from a client computer running a program called RMS Express. RMS Express can contact the RMS using telnet over the Internet and radio-based modes such as HF Pactor, HF Winmor, and VHF/UHF Packet. HF Winmor is a software-based Pactor look-alike that is implemented with a computer soundcard instead of a Pactor hardware modem. Anyone who uses fldigi, DM780, or similar software with soundcard to do digital modes such as PSK31 or RTTY, has the equipment necessary to pass email messages via HF Winmor. For packet, RMS Express supports many hardware modems that support KISS mode and some of the newer software packet modems that provide KISS mode via a computer soundcard. To learn more about Winlink and RMS Express go to http://www.winlink.org/
To get back to the Old Pueblo 50, this year the team had an HF digital station at every aid station. Virtually all runner reports were communicated via Winlink. (One aid station had to provide voice reports after their HF station failed). This allowed Net Control to operate on a single voice repeater improving the efficiency of voice communications and reducing interference at Net Control. Data was sent as .csv files attached to emails. This made it much easier for Net Control to create the consolidated list. Aid stations could send the data when it was most convenient for them and when frequencies were clear. The aid stations could pick the best RMS station for their particular propagation situation and also to reduce traffic on a single frequency. The Net Control station could retrieve data on their schedule. The overall effort to support the race this year was reduced by the use of digital technology. Winlink along with other modes like NBEMS are improving the ability of ham operators to provide critical communication for public service and emergency communications.

If you are a ham operator that likes using digital modes, now is the time to learn about Winlink and NBEMS. I have included some links to more information about the Winlink system. For
NBEMS expertise and practice, join in the Wednesday Night Digital Net held on the OVARC repeater system at 7:00 pm.

Arizona State Veterans Home visit by W0HF members 27-March-2015

Tom, W8TK; Lora, K8LJK; and I arrived at the Arizona State Veteran Home about 8:45am and were joined shortly thereafter by Ken, K9EAZ, and Scott, K7ADX. We had a 20M dipole and Kenwood TS-590 on the air by about 9:30am.

We had about 3 visitors but the important visitor was Frank, WA7CW. Frank has been a licensed amateur for a long time. He has missed the hobby since some health issues made it difficult for him to operate. He was the reason we were asked to come and set up the station.

He got to listen to the 20M SSB and most importantly talk to hams about ham radio. I think he had a great time and that was why we were there. I promised to help him to get his license renewed before it expires in August and to see if I could get him a TenTec catalog. Probably the two most important promises I have made in a long time.

He carries his license with him all the time. He is really proud of it. We had the OVARC banner up and pictures were taken by Scott and Lora. Duane Kraus of the American Legion took some video to get some photos to use for the American Legion newsletter.

We’ll get some of the photos published soon. We were wrapped up by about 11:00am but it was worth the effort. A real public service and a good time.

73 de AF9W Bob Stephens

================================ END NEWSLETTER ==================================
Enjoy,

Ron Herring W7HD