

This OVARC email newsletter is sponsored by the Oro Valley Amateur Radio Club <http://www.tucsonhamradio.com>



**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:**

- |                           |                            |                         |
|---------------------------|----------------------------|-------------------------|
| <b>Dave Coccio, N7AKC</b> | <b>Gary Schmitz, KT7AZ</b> | <b>Steve Wood, W1SR</b> |
| <b>Carl Foster, KB7AZ</b> | <b>Bob Stephens, AF9W</b>  |                         |

-----  
How to email your officers:

- [president@tucsonhamradio.org](mailto:president@tucsonhamradio.org)
  - [vicepresident@tucsonhamradio.org](mailto:vicepresident@tucsonhamradio.org)
  - [treasurer@tucsonhamradio.org](mailto:treasurer@tucsonhamradio.org)
  - [secretary@tucsonhamradio.org](mailto: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. [ [Net\\_Manager@tucsonhamradio.com](mailto:Net_Manager@tucsonhamradio.com) ]

---

### Wednesday Night NBEMS Net

Every Wednesday from 7:00 PM to 8:00 PM the Oro Valley Amateur Radio Club (OVARC) repeater network is used for a weekly net on the topic of narrow band emergency message system (NBEMS.) Across the country NBEMS is becoming a standard means for communicating during disasters and is endorsed by the Pima County Office of Emergency Communications (PCOEMCOMM.) NBEMS uses both voice and digital modes to send messages in formats that follow the Incident Command System (ICS) developed by the Federal Emergency Management Agency (FEMA.) and other served agencies.

Do you need to have digital support on your radio to join the net? Absolutely not! Message passing using voice is part of the NBEMS system. People in the field who are providing status information often do not have digital setups and may in fact not even be amateur radio operators! They may be using FRS or GMRS radios or cell phones to pass their messages.

However, when available, we do use fldigi and its associated programs to send messages. Fldigi provides intrinsic support for ICS forms and can send messages with built-in error correction. If you add digital support to your radio we will help you with setup. You can also use just the mic and speaker on the rig for an audio connection to your PC mic and speaker.

#### Resources

[www.w1hkj.com/Fldigi.html](http://www.w1hkj.com/Fldigi.html) - Download fldigi here

<https://groups.yahoo.com/neo/groups/azNBEMS/files> - Information on interfaces and installation, also at <http://w7hd.homelinux.net/nbems>

---

## 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/5tdjg>)

Antenna Height: 40+ Feet  
Power Output: 100 Watts  
Feedline: 7/8" Hard Line

Elevation: at nearly 7,000 feet  
Antenna: Decibel DB-224  
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  
Power Output: 40 Watts  
Feedline: LMR-600

Elevation: 2584 Feet  
Antenna: Tram 1491  
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 WOHF

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

## 445.1375 (-) DSTAR KG7PJV

Located at Howard KC7AC in a drawer at his QTH

DSTAR KG7RWN coming soon on the east side.

[Public Service Opportunites](#)

---

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](mailto:public_service@tucsonhamradio.com)

---

## ARRL ACTIVITIES (excerpted from ARRL Newsletter Jan 2015)

### ARRL Arizona Section

Section Manager: Rev Robert J Spencer, KE8DM  
[ke8dm@arrl.org](mailto: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](mailto:kf7gc@arrl.net) [www.atenaz.net](http://www.atenaz.net) -

Saguaro National Traffic System (NTS) Net ([www.saguaronts.net](http://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](mailto: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](mailto:veregistration@ac7il.org)

Oro Valley/ARRL: First Saturday Contact [licensing@tucsonhamradio.org](mailto:licensing@tucsonhamradio.org)

RST/ Laurel (No Fee): Second Monday Contact Diane, AA3OF, [dzimmerman2002@gmail.com](mailto:dzimmerman2002@gmail.com)

Jacobs Park YMCA/ARRL: Third Saturday Contact Fred, K7OFA, [k7ofa@arrl.net](mailto: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](mailto:kc7vda@gmail.com)

### HAM RADIO EVENTS -

June 27-28 2015 - ARRL Field Day If you need more info contact the Field Day Chairman Tom W8TK [ [tkravec@pobox.com](mailto:tkravec@pobox.com) ]

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 also 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>

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>

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

-----  
What is the best antenna that is inexpensive and performs well?

There is no one best answer to this question. I'll give you some quick tips here. Inexpensive implies a wire antenna built by the individual. It also depends on the frequencies involved (2M and 440 MHz antennas are simple to build using nothing more sophisticated than an SO-239 connector and some stiff wire cut to a  $\frac{1}{4}$  wavelength at the desired frequency (5905 / Fmhz) for length in inches.

For the HF bands, simple wire antennas tend to be least expensive and usually perform well when you can get them out in the clear. Don't let restrictions stop you – an antenna in the attic is better than none at all. Even a simple inverted vee supported in the middle by a nail in the peak of the roof with a pulley to pull the antenna up into place will get you out there. This way, you can also take it down easily when not in use, especially if you live in an HOA area. If mounted in the rear of the house, it won't be visible from the street, as required by many HOA rules. Make sure the ends are NOT in reach of anyone.

One word of caution – keep the ends of the antenna away from nearby objects. The ends can get white-hot if there is any kind of conductor nearby. I've actually seen this myself with a 40-meter dipole tacked to the ceiling of a hallway. I forgot to droop the ends at least 1 foot down, and ended up with a burn spot on the wall where the end touched. Keep in mind that RF burns are the worst kind – they take a long time to heal. Don't let anyone touch the antenna wire! Best to keep it out of reach.

So if your microphone “bites” when you transmit, you have RF floating around in your shack and you MUST get rid of it. Often, simply grounding the radio to an earth ground (not the electrical outlet) will do the job nicely. If you are using an antenna tuner, also ground it to the same earth ground. When you have RF feedback into your microphone, it often results in a “fuzzy” sound to your transmitted audio, so if someone mentions this, start looking for that ground!

---

From Tom W8TK:

Handyman's creed: "If the women don't find you handsome, they should at least find you handy!"



---

Courtesy of Bil Munsil K1ATV HAM TV Mesa AZ  
Hams should be seen as well as heard.  
More than 30 years on and off HAM TV in Arizona.



#### WHAT IS ATV?

Presented by Amateur Television Network ([www.atn-tv.org](http://www.atn-tv.org))

#### SECTIONS

- |                |                 |
|----------------|-----------------|
| 1. What is ATV | 4. Transmitters |
| 2. Operation   | 5. Antennas     |
| 3. Receivers   | 6. Repeaters    |

**Section 1: What is ATV?**

Amateur Television (ATV) is divided into two primary types:

**Slow Scan** - a system used on the HF bands occupying the audio bandwidth of an amateur station to transmit a few still pictures per minute to another station usually over long distances and

**Fast Scan** - a system of sending broadcast quality full motion pictures over shorter distances on the UHF and microwave bands.

In this presentation we will examine the Fast Scan version of ATV. Back in the late 1940's hams in many parts of the country helped develop commercial television. The old Amateur 5 meter band was used for this mission. They were very helpful evaluating reception of different system types and many engineers were also hams using their vast technical knowledge for television development. The hams - being hams - decided to build their own stations. In the early days it was home brew or converted war surplus UHF equipment.

By the 1960s home brew and converted UHF two-way radios were used. By the 1970s technology changes were afoot with modulator and downconverter kits and completed boards followed a few years later by a complete ATV station in a box were available from PC Electronics and other manufacturers. By the mid 1970s Metrovision in Washington DC was the group that had built and licensed the first ATV repeater in America. By 1979 WA6SVT had built the first wide coverage repeater in California on top of Mt Wilson. Over the years a group called Amateur TV Network (ATN) was formed to support the repeater and many more repeaters soon followed. ATN now has six state chapters across the country.

Today it is easier than ever to get on the air with ATV for less than \$700 for all new equipment and less than \$100 for the builder. The oldest and most widely used mode of ATV is AM and a related modulation - Vestigial Sideband (VSB). A cable ready TV set can directly pick up ATV on the 420 MHz band. A downconverter is needed for the higher bands. Your camcorder can be used for your ATV camera. All that is needed is a transmitter and antenna and you are on the air!

FM ATV is one of the fastest growing modes of ATV. FM ATV uses 4 MHz deviation (the terrestrial commercial TV standard used for studio to transmitter links and ENG) in the 0.9, 1.2, 2.4 GHz and higher bands. A few ATVers use the satellite (TVRO) standard of 11 MHz on the 3.3 GHz and higher microwave bands. FM ATV using converted part 15 TV room to room links - such as the WAVECOM units - is available from ATV vendors. FM ATV is the preferred mode in Europe on 1.2 and 2.4 GHz bands.

Digital ATV is just starting out by converting analog video to MPEG-2 bit stream with QPSK, 8-VSB, and DVB modes of digital modulation. Most of the research to date is done in Germany by the DATV group using standard definition DTV on 434 MHz using 2 MHz of occupied bandwidth and HDTV on 1.2 GHz using 6 or 7 MHz of bandwidth. In this country ATN has started experiments using

the methods above and using internet pipelines to link distant ATV repeaters (see <http://www.atn-tv.org>) and look under ATN on the internet for more details). The HSMM group is experimenting with multimedia formats including ATV using 802.11b and WiFi part 15 equipment occupying 22 MHz in the 2.4 GHz band.

### **Section 2: Operation**

ATV is unique in that it enables a ham to show and tell another ham in real time his shack, latest project, field day, home video of the family's vacation, and other events. ATV for public service allows pictures in real time to be sent to emergency operation centers to report storms and damage assessment.

Most ATVers use a 2 meter calling and coordination frequency to set up ATV contacts. 144.34 MHz is popular in the Midwest and some areas of the East Coast. 146.43 MHz is popular in the west. Most ATV repeaters have a 2 meter receiver on site to mix in the calling channel audio with the TV audio. On the 420 MHz band polarization is usually vertical with areas that use 434 MHz and horizontal in areas that use 439.25 MHz and areas with inband 421.25 MHz out and 439.25 MHz in repeaters. Most cross-band repeaters use vertical polarization on both bands.

Lighting is important for good ATV pictures. More detail is available in "Advancing the ATV Art Workshop" produced by ATN. A camcorder, CCTV camera and most analog output computer cameras work well for ATV. Antennas should be above the tree line for good DX on simplex and operation to far off ATV repeaters. Low loss feedline should be used. A low noise preamp is a good idea if you use a cable ready TV or an older downconverter. At least 10 watts is needed for good ATV distance and 100 watts or more for long haul DX work.

ATVQ magazine (<http://www.atvquarterly.com>) is a good resource for information on what is happening in your area on ATV, projects you can build, ATV group information and advertising for the latest ATV gadgets for sale by reputable ATV vendors and manufacturers.

### **Section 3: Receivers**

The simplest ATV receiver for AM or VSB is the standard TV set using a 6 MHz wide channel. A cable ready TV can receive the 420 MHz band ATV signals - just add an antenna (and preamp for even better performance) and you are ready to receive ATV! For a non-cable ready TV add a downconverter and for the higher bands a downconverter is needed for all TV sets.

FM ATV needs a TV with A/V inputs or a video monitor, both requiring a full FM TV receiver. Low cost Part 15 domestic units work well on 2.4 GHz and imported Part 15 type units work well for 1.2 GHz or 2.4 GHz bands. A satellite receiver can work on 0.9 and 1.2 GHz bands for FM TV but are set up for wideband FMTV and need a preamp and filter for better operation. They work well for Wideband ATV with a downconverter on the 3.3 GHz band and above.



**Section 4: Transmitters**

It used to be said that AM TV on the 420 MHz band was the easiest way to get on ATV and that is still probably true but the Part 15 FM TV units are also simple to use on 2.4 GHz. Most ATVers use off the shelf transmitters or a transmitter with a built in downconverter. Transmitters use crystal control or PLL to set frequency and AM modulate the carrier directly with video. Audio is modulated on a 4.5 MHz subcarrier and mixed in at the video modulator. The transmitter is double sideband occupying 9 MHz. The easiest way to build a VSB ATV transmitter is to either add an external RF 6 MHz wide bandpass filter to your existing AM transmitter or use a CATV Modulator.

CATV modulators are rack mountable and are much more sophisticated. They modulate a 45.75 MHz IF with video then filtered through a VSB 5 MHz wide IF filter. The audio is modulated on a 41.25 MHz carrier at 25 KHz deviation. Usually the aural carrier is phase locked to the visual carrier maintaining a precise 4.5 MHz difference. The aural and visual carriers are mixed to the final output frequency and amplified. Most CATV modulators can produce an output to 550 MHz making them suitable for the 420 MHz band. The modulator output is in the 10 to 20 m/w level requiring amplification with a class AB RF power module.

The easiest FM ATV transmitter is a Part 15 TV unit on 2.4 GHz. The frequency chip can be changed to put all four channels into the ham band on coordinated ATV frequencies. Amplifiers are available from ATV vendors. Imported Part 15 type TV units for 1.2 GHz band are available from ATV vendors.

**Section 5: Antennas**

The antenna system and its placement is one of the most important items in designing any ham station. In ATV we need more signal as compared with voice modes due to our larger bandwidth. Base stations should use a directional 13 dbd or better gain antenna to get as much signal as possible and to reduce co-channel QRM and multipath. The polarization is dependent on what is used in your area. Stacking yagis or using larger microwave dish antennas will give better DX on ATV.

The best location for your antenna is above the roof line and trees. Stay away from RG-58, RG-8 and other HF-VHF feedlines. They have too much loss at UHF and even more on microwave. The same goes for the PL-259 connector. Use type N or other quality connectors. LMR-400, 9913 and heliax are preferred feedlines for ATV. Try to keep losses under 3 dB. Waveguide is used for the 5 and 10 GHz bands. DX can reach 50 to 100 miles with good antenna systems and several hundred miles with tropo ducting. KH6HME's ATV transmission from Hawaii was received by ATV stations 2500 miles away in California in full color with tropo ducting.

**Section 6: Repeaters**

ATV repeaters are fast becoming popular for ATV activity. Today many hams are finding themselves in antenna restricted

communities reducing simplex ATV to about 10 miles but an ATV repeater on a high tower or mountain top allows longer distant ATV contacts. Many ATV groups and individuals have built ATV repeaters. ATN has a linked network of interstate repeaters allowing ATV contacts over hundreds of miles.

The two types of repeaters are:

Inband where both the input and output are in the same band (popular in the Midwest since existing ATV simplex stations do not require additional equipment to use the repeater) and

Cross band repeaters have the input and output in different bands allowing the sending station to see his own picture, make adjustments to his station and hear distant stations talk back to him over the repeater via the ATV 2 meter calling channel audio mixed at the repeater. A separate antenna and downconverter or transmitter is needed compared to simplex operation.

The Microwave Experimental Television Society (METS) uses a wideband FM input on 10.4 GHz using Gunplexers to transmit and slightly modified domestic C band satellite receivers to receive their 3.4 GHz wideband FM TV repeater output.

ATV repeaters are located in a high centrally located area and use omnidirectional antennas. The repeater's transmitter is keyed up upon detection of horizontal sync on the repeater receiver. ID is usually done visually by momentary interruption of the received ATV signal by an ID screen or done via video overlay. Some repeaters have two inputs: one is the old 420 MHz channel and the 2nd is a 2.4 GHz FM TV channel.

MPEG-2 Motion Picture Engineering Group's broadcast digital video standard

DVB European HDTV and DTV standard

QPSK Quadrature Phase Shift Keying

8-VSB 8 Level digital Vestigial Sideband, the US HDTV and DTV standard

List of ATV repeaters in Arizona can be found at:

<http://www.azrepeaters.net/index.php?n=RepeaterMaps.ATV>

There is also a new one being built here in Mesa.

---

## ***H.R. 1301***

The Amateur Radio Parity Act of 2015 - H.R.1301 - has been introduced in the US House of Representatives. The measure

## **ARRL Legislation**

**HR 1301: Let's Get it Done.**

**Show Your Support for HR-1301**  
The Amateur Radio Parity Act of 2015



would direct the FCC to extend its rules relating to reasonable accommodation of Amateur Service communications to private land use restrictions. US Rep Adam Kinzinger (R-IL) introduced the bill on March 4<sup>th</sup> with 12 original co-sponsors from both sides of the aisle - seven Republicans and five Democrats. HR 1301 would require the FCC to amend its Part 97 Amateur Service rules to apply the three-part test of the PRB-1 federal pre-emption policy to include homeowners' association regulations and deed restrictions, often referred to as "covenants, conditions, and restrictions" (CC&Rs). At present, PRB-1 only applies to state and local zoning laws and ordinances. The FCC has been reluctant to extend the same legal protections to include such private land-use agreements without direction from Congress.

H.R. 1301 has been referred to the House Energy and Commerce Committee. Rep Greg Walden, W7EQI (R-OR), chairs that panel's Communications and Technology Subcommittee, which will consider the measure.

Most importantly, it will ensure that every ham in the US, regardless of the community they live in, will have the opportunity to practice their avocation from their own homes without breaking any rules or fear of reprisal.

If enacted, it would direct the FCC to extend the the reasonable accommodation protections to those amateurs who are living in deed-restricted communities. Known as "CC&Rs" (covenants, conditions and restrictions) these are the prohibitions and limitations placed on properties by builders or home-owner associations (HOAs) which prevent licensed Amateurs from erecting even modest antennas.

The Amateur Radio Parity Act would not give Amateurs "carte blanche" to do whatever they wished. It would require HOAs and other private land use regulations to extend reasonable accommodation to Amateurs wishing to erect antennas.

ARRL members are urged to contact their US House members and ask them to sign on to the bill as a co-sponsor. We recommend sending the letter to your member of Congress to:

***ARRL - Attn HR 1301 grassroots campaign - 225 Main St. - Newington CT 06111***

***From the ARRL***

***See <http://www.arrl.org/hr-1301> for more information***

---

## ***Printing Your Amateur License***

A friend of mine actually wrote to the FCC and got a pretty good description of how you have to navigate around to get to the area where you can get a .PDF copy of your current license to download and print.

Here goes..... **Please remember, this comes from the FCC.....**

PLEASE NOTE: Per Public Notice DA 15-72, The FCC no longer mails license authorizations. If you provide an email address on your application, an official copy of your license will be automatically emailed to you after the application has granted.

Licensees can also opt to download electronic authorizations by logging into License Manager: Log in to <https://wireless2.fcc.gov/UlsEntry/licManager/login.jsp> with your FCC Registration Number (FRN) and Password (Ed. Note..... This is essential. You have to have these two items BEFORE you begin)

If you do not know the password:

- Click on the Contact Tech Support link
- Click the Reset Password button and follow the prompts for resetting the password
- After receiving confirmation of a successful password reset, click the link for Universal Licensing System (DO NOT click the CORES Public Interface link).

Click the button labeled ULS License Manager; you will be taken to the log in screen

Click the "Download Electronic Authorizations" link on the navigation bar on the left side of the License Manager home page.

1. To search for the authorization(s) you want to download:

- a. Enter the call sign OR
- b. Enter a date range (based on Effective Date of the license)
2. In the My Authorization box, select the call signs you wish to download
3. Add the call signs to the Authorizations to Download box.
4. Once the licenses have been selected, click the Download button in the lower right-hand corner of the screen.
5. The download will be automatically converted to a PDF file, and you can choose to Open (to print) or Save (to save to a desired folder).

### Downloading Authorizations Using MAC Operating Systems:

The FCC recommends using the Chrome or Firefox browsers for MAC when downloading authorizations using the MAC OS.

Should you have any further questions or need additional information, please submit a request for help at <http://esupport.fcc.gov/index.htm>, or call the FCC Licensing Support Center at 1-877-480-3201, selecting option 2 after the main menu recording.

Sincerely,  
FCC Licensing Support Center

## "When All Else Fails - Amateur Radio Works"

Are you ready for Field Day 2015?

Probably the most fun you can legally have in Amateur Radio!

Operating, socializing, whatever your choice, it is for you to enjoy...

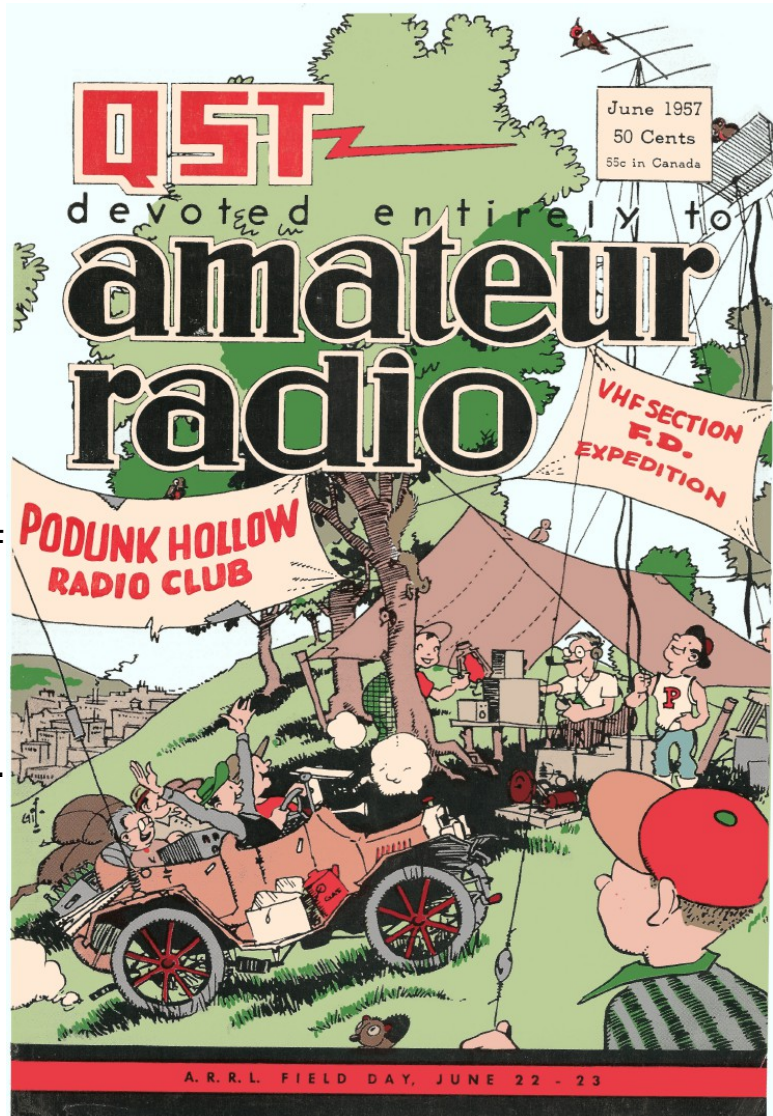
We will be at the EOC in the shopping center just west of Walmart across the open field off Tangerine Road again this year. Tom, W8TK has things well in hand, as usual. Rigs ready, antennas all lined up, if not already mounted, computers programmed for the net logging, Saturday evening dinner planned (don't forget to let Bob KA7VPR know if you plan to have dinner).

I hope to see you there! I'm going to try making a satellite contact again this year (along with several hundred other guys around the U.S.). That's the real competition - getting through the pile ups.

Ron W7HD

For more info contact

tkravec@pobox.com



===== END NEWSLETTER =====

Enjoy,

Ron Herring W7HD