

**This is a 501c3 club, so your donations are tax deductible.
This club is also an Arizona Non-Profit Corporation.
OVARC Newsletter Editor: Ron Herring W7HD**

**Monthly club meeting location is at Ascension Lutheran Church
1220 W Magee Road Tucson, AZ 85704
(just east of LaCanada on Magee)**

**Meetings are held the third Friday of each month at 7:00 pm except in
December. Elections are held in the January meeting.**



Analog repeaters:
146.620- Keystone Peak
147.320+ Catalina City Golder Ranch Fire District
444.100+ Oro Valley PD Main
447.525- Marana PD Parks & Rec



Dstar repeaters:
445.800 -5 W7AI OVPD Main
445.1375 -5 KG7PJV Tucson Foothills
440.7625 +5 KG7RWN Camino Seco & 22nd St.
444.750 +, (W7NFL B) Tucson Mountain
445.7375 -5 (W7NFL C) Saddlebrooke
445.5375 -, (N5SN A) Oro Valley test

Echolink node W7AI-R 99946

Facebook: https://www.facebook.com/rovalleyarc?ref=tn_tnmn

Website: <http://tucsonhamradio.org>

How to contact us:

- <http://tucsonhamradio.org/contact-us>
- OVARC email contacts:

In memory of my xyl Penny Herring KC7HGX who died July 30, 2018.

54 years of marriage to a wonderful woman

For general information about OVARC
For licensing and VE questions
For help setting up your station or other operating questions
For suggestions on club programs, etc.
For membership questions
For assistance with public service events or to help out at public service events
For Field Day information
For website suggestions or comments
For Sunday Night Net questions
For hamfest information
For newsletter submissions or comments

info@tucsonhamradio.org
licensing@tucsonhamradio.org
elmer@tucsonhamradio.org
suggestions@tucsonhamradio.org
membership@tucsonhamradio.org
public_service@tucsonhamradio.org
field_day@tucsonhamradio.org
webmaster@tucsonhamradio.org
Net_Manager@tucsonhamradio.org
hamfest@tucsonhamradio.org
newsletter@tucsonhamradio.org

Please note that we removed the email addresses listed in the newsletter due to a phishing attempt. So please use the ones from the links above.

We're making **The Views** our new Hams & Eggs Breakfast venue.
The address is: 1555 E. Rancho Vistoso Blvd, Oro Valley, AZ 85755.
We're looking forward to seeing you there on Saturday mornings at 07:00 MST.

73, Steve

Previous PDF editions of the newsletters are at:
<http://tucsonhamradio.org/newsletter>
and at <http://w7hd.ddns.net/newsletter/index.htm>

Arizona Desert Airwaves subscriptions:

The current procedure is to have them send me an email at newsletter@tucsonhamradio.org requesting membership in the Desert Airwaves newsletter. It needs to contain their name, call, and email address.

I then upload that information to ADAW once a month around the 10th.

OFFICERS

Steven Wood, W1SR, President **Scott Boone, K7ADX, Vice-President**
Hanna Eckert, KG7TPD, Treasurer **Carl Foster, KB7AZ, Secretary**

BOARD MEMBERS

George Cooley, NG7A
Fred Besani, W2HZ





Marnee Dearman, KG7SIO

linuxsig@groups.io









Group Description

A Special Interest Group started by the Oro Valley Amateur Radio Club in Arizona.

Group Information

-  19 Members
-  32 Topics, Last Post: Feb 17
-  Started on 8/11/16
-  [Feed](#)

Group Settings

-  All subscribers can post to the group.
-  Posts to this group do not require approval from the moderators.
-  Posts from new users require approval from the moderators.
-  Subscriptions to this group do not require approval from the moderators.
-  Archives are visible to anyone.
-  Wiki is visible to subscribers only.
-  Members can edit their posts.
-  Members can set their subscriptions to no email.

[Linux SIG groups.io Web page](#)

Keep track of the **[solar forecast and condition analysis from Dr. Tamitha Skov](#)**. She has a [Twitter based account](#) and posts the [videos to YouTube](#). Often generally useful info pops out of those that is better than the old red/yellow/green web apps. I have come to appreciate what she provides since Tomas and some of the others have slowed down the active commentary. She also specifically mentions ham radio operations and what conditions to expect. She is also a Technician class licensee WX6SWW.





cross-reference

OVARC Digital Repeater Information

To Access Dstar from DMR

Comparing the Linking Procedures between D-Star and XLX DMR

AUGUST OPERATING EVENT

INTERESTING LINKS

RadioShack "Express Stores"

TENERGY BATTERY PERFORMANCE

CATALINA ISLAND WITH A KX2

Amateur Radio Weekly headlines

CROSSWORD PUZZLE

EDITORS PAGE



OVARC Digital Repeater Information

The club sponsored and associated repeaters are home based on D-Star Reflector XRF310C, so connections to this reflector will result in being heard on all the repeaters. If a D-Star reflector is changed to any other reflector the repeater will automatically return to XRF310C an hour after the last transmission into the repeater. Both D-Star and DMR connections can be controlled by the user.

In addition to D-Star operation, DMR mode is available on several of the repeaters and will soon be available on all. The Brandmeister network is used and allows connection to any of the associated talk groups. The repeaters are connected to the static talk group 3104668 which will allow a transmission to this group to be heard through all of the repeaters. This is the local talk group called "Tucson". In addition to the static group, dynamic groups in the 3100 series are available as well as the TAC channels. All the repeaters allow both Slot 1 and Slot 2 operation, and independent QSOs can be supported on two slots at the same time. The Arizona state wide talk group 3104 is available and Texas state wide on 3148 is also a popular group. All DMR operation is on Color Code 1.

System Fusion has been activated on the test repeater as well as W7NFL on Tucson Mountain. This mode is available to any user wanting to get to the YSF talk rooms.

Digital Repeater

The following repeaters are either managed or being assisted by the repeater support team:

- **Oro Valley Main Police Station** 445.8 -, (W7AI B) D-Star XRF310D
- **North Tucson Foothills** 445.1375 -, (KG7PJV B) D-Star XRF310D, DMR 3104668
- **Camino Seco and 22nd** 440.7625 +, (KG7RWN B) D-Star XRF310D, DMR 3104668
- **Oro Valley test** (near CDO High School) 445.5375 -, (N5SN A) D-Star XRF310 D, DMR 3104668, Fusion US 310
- **Tucson Mountain** 444.750 +, (W7NFL B) D-Star XRF310D, DMR 3104668, Fusion US310
- **Saddlebrooke** 445.7375 -, (W7NFL C) D-Star XRF310 D



New PJV antenna

Courtesy of Gary. Invented by Gary. Designed by Gary. Installed by Gary. Tuning by Jim, ZIT.

....And Sharon approved.

Yay Gary !

Howard Chorost





Here is what I have working to get to D-Star from DMR on the crossover we are using.

To Access Dstar from DMR, follow the instructions in these links:

[Dstar access from DMR](#) [DMR Gateway](#)

Good luck - I hope I made it clear enough to follow.

73 - Jim

Also, you may wish to read [this info](#) about DMR numbers.

Comparing the Linking Procedures between D-Star and XLX DMR

If you are familiar with using D-Star connects, the XLX connects are similar. Explaining how to use a DMR radio and repeater or hotspot to a DMR newcomer may be easier if you keep in mind the following points:

- o You would issue an INFO query to D-Star for determining which reflector is connected. Likewise you would issue a 65000 private call in DMR to see which talk group is connected.
- o You would issue a U command in D-Star to disconnect from the presently connected reflector. Likewise you would issue the 64000 private call in DMR to disconnect from a talk group.
- o You would issue a command such as XRF310DL in D-Star to select a reflector to use. Likewise you issue a private call to 64004 private call in DMR to select that talk group.
- o You would not interrupt a conversation in progress by doing any of the above commands. No one but the listener on the gateway device (hotspot or repeater) would know you had issued the command.
- o You would send a CQCQCQ command in D-Star to talk on the reflector you have selected. Likewise you would send a group call to talk group 6 in DMR to talk on the selected talk group. Brandmeister is a different procedure in that you issue the command to go to a desired talk group at the same time you key-up to talk each time. The difficulty is that if a QSO is in progress on the selected brandmeister talk group, everyone connected to that talk group will see your key-up. It is like sending CQCQCQ in D-Star when a QSO is in progress. In both D-Star and DMR this usually results in blocking a transmission that was in progress. Doubles cause big problems in both D-Star and DMR systems.

The XLX server procedures are a step ahead of the brandmeister servers in that linking commands are not sent out to the Internet connected talk groups. The brandmeister system is simpler though in comparison since you just select the talk group and start talking. Keep in mind that we have at least 3 different server systems to use in the DMR stable. The Motorola club system, the brandmeister system, and the XLX system. There is another server system in use (mostly in Europe) that we have not addressed. The only advantage to using a DMR system over D-Star is the cost of the radios. Our intent is to get more folks into digital communications while minimizing the

equipment expense. Additionally the brandmeister area talk group system is easier to select the target group with which you wish to communicate than the D-Star reflector system.

73 - Jim W5ZIT

HAMS & EGGS BREAKFAST

According to The Views Website, they will re-open for breakfast at 7AM on Saturday morning so The OVARC Hams & Eggs Breakfast will resume there this Saturday morning, July 28.

KEYSTONE

Thanks to Gary and the entire Repeater Team for getting Keystone back on the air.

AUGUST OVARC MEMBER MEETING

The August OVARC meeting will feature Rob Sherwood from Sherwood Engineering. Rob will SKYPE in and discuss priorities in your ham shack. Watch for details on the home page.

NOVEMBER HAMFEST

November 10th is the date for the OVARC Hamfest. Please save any donations you might have. We always need donations for the sales table but we can also use donations for raffle prizes. Raffle prizes don't have to be ham radio related as previously our prizes included gift cards from DX Engineering as well as various local restaurants.

CHRISTMAS HOLIDAY PARTY

We're working on a date for our Christmas Holiday Party. Stay tuned for details.

ELECTIONS

At the end of 2018, terms expire for 4 OVARC Directors - Marnee - KG7SIO, Fred - W2HZ, George - NG7A and me, Steve - W1SR. Give some thought to any possible nominations you would like to make later in the year.

I hope to see everyone on Saturday morning at The Views!

73, Steve

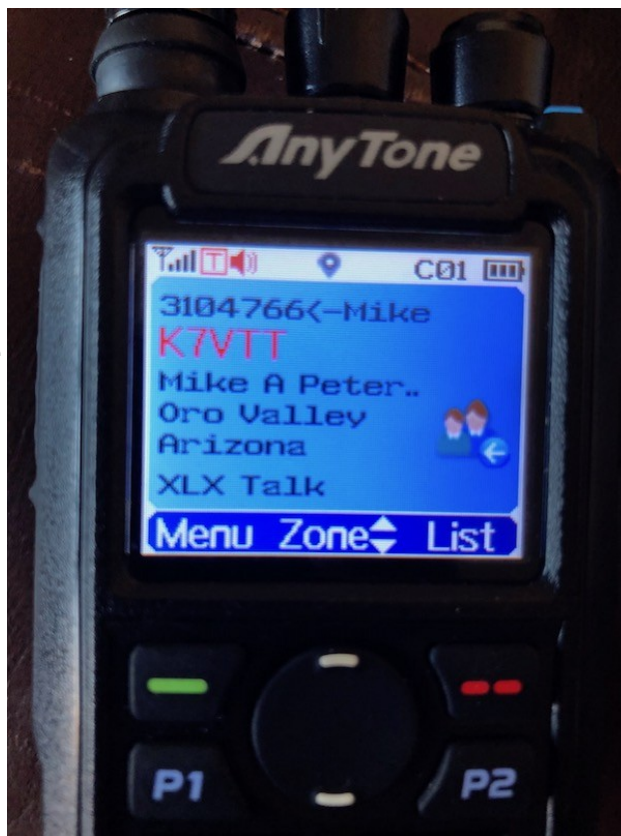


AUGUST OPERATING EVENT

We plan to celebrate the 243rd anniversary of the first Presidio Real de San Augustin del Tucson, precursor of the city of Tucson. Operation will be from Fort Lowell Park, 2998 North Craycroft in Tucson. We have reserved Ramada #3 for the entire day. This location features tall trees for antenna supports and shade. There are rest rooms and city water on site. The ramada has picnic tables. Bring a comfortable chair and your lunch. Sometimes pizza appears at lunchtime, and we appreciate it, but don't count on it.

Setup begins at 0830, Saturday, August 18. If you are curious about my technique for placing an antenna in a 100 ft tall tree, you will see it in action early. We will use our usual end-fed halfwave wire and perhaps a 20m dipole. Bring your own antenna if you want to try it.

We have also reserved callsign K7T. Radio will be Elecraft K3, software N1MM Logger. There are other operating events on the air that day, including North American QSO Party, SSB edition which starts at 1100 and has some quirky rules (<http://ncjweb.com/NAQP-Rules.pdf>) and International Lighthouse Lightship Weekend (www.ill.net) so there should be lots of activity. We always operate CW, SSB, PSK, and FT8 on 20 and 40 meters. We will be on the air by 0900 and operate into the afternoon until we get tired of it.



Next on the calendar:

September at Chiricahua National Monument, Masai Point ramada

October in Tombstone, Shootout at the OK Corral

November at Oracle State Park for its 40th birthday

December 8 at U of A Pearl Harbor Memorial with the U of A club



73 de W8TK
Tom Kravec
(520) 572-0554



INTERESTING LINKS

[Verizon will no longer activate 3G phones](#)

[Howto set up a reverse proxy on Ubuntu 18.04](#)

[Your Windows PC Might Finally Learn to Stop Rebooting While You're Using It](#)

[Authoritative DNS vs Recursive DNS - a laymans guide](#)

Here's link to where you can download a custom version of the latest World-Wide Contact Database for use with the AnyTone AT-D868UV DMR radio.

https://www.dropbox.com/s/gckophfo67s3xl0/D868_contacts_8-8-18.csv?dl=0

This version is dated 8-8-2018, and contains 104,847 contacts. It is set to display the station's Call Sign in a larger size font than the rest of the info on the radio's display, as shown below:

For instructions on how to change the settings in your AnyTone 868 to display the call sign in RED text. Click on the following link and follow the simple instructions:

<http://www.amateurradio.digital/AT-D868UV.php>

You will need to use the supplied USB cable and (version 2.25 or newer) CPS software with a Windows PC to make this change and upload the Contact Data to your AnyTone radio.

Enjoy!

73,

Mike P. - K7VTT

CuriousMarc restores vintage computers, he is restoring a mechanical Teletype machine that was most likely used in military application and has capability for RTTY as well. This is a video series on his [youtube](#) channel:

Russ, KG7DYX



RadioShack "Express Stores" to Open in HobbyTown USA Locations

According to a July 13 [article](#) in the *New York Post*, [RadioShack](#) is planning to open "express stores" within [HobbyTown USA](#) locations. The nearly century-old, twice-bankrupt retailer has signed a deal with HobbyTown USA to put a mini RadioShack outlet in some 50 HobbyTown USA stores across the country that would sell items that might appeal to radio amateurs and experimenters. Those locations will be identified with RadioShack signage. HobbyTown markets remote-controlled cars and boats as well as drones and other hobby-related merchandise.

RadioShack shuttered all of its company-owned retail outlets. Its last unsuccessful effort to bail itself out of debt involved a deal with cellular provider Sprint. HobbyTown USA has 140 retail outlets, and, according to the *Post* article, RadioShack eventually could carve out a presence -- on the order of 500 square feet -- in all of them. Stores in HobbyTown USA's headquarters town of Lincoln, Nebraska, as well as in Parker, Colorado, and Mooresville, North Carolina, will be among the first to host RadioShack express concessions.

"HobbyTown is purchasing the RadioShack merchandise and offering it to its hobbyist customers who need the tools, wires, and other accessories that RadioShack makes," the *Post* article said.

The article quoted Steve Moroneso, chief executive of General Wireless Operations Inc. -- an affiliate of hedge fund Standard General, which acquired RadioShack in 2015 -- as saying that RadioShack's strategy now is not to own brick-and-mortar stores. RadioShack came out of bankruptcy in January with 400 dealers, an online retail presence, and a distribution center. General Wireless acquired the 1,743 retail outlets that survived RadioShack's 2015 bankruptcy.

Moroneso also told the *Post* that there is "plenty of interest from dealers who want to open a full-line Radio Shack." Read [more](#).

[Reprinted with permission from July 19, 2018 ARRL Letter]





TENERGY BATTERY PERFORMANCE

Hi Mike,

Of the three Tenergy packs we tested, two performed very well, but one had a flaw in the over-charge protection section of it's BMS (Battery management System) which caused it to terminate the charge prematurely. Tenergy is a well-respected battery builder and uses quality cells, but after talking to many hams with KX2s, we have discovered this was a flaw that occurred in a certain small percentage of the Tenergy 34124 packs. As you suggested, Elecraft has not used Tenergy as a vendor for over a year as far as we know, having switched to another quality vendor, Expocell. We have not received any complaints about the Expocell packs yet, indeed the Expocell LIP-3S1Px18650S-26 sold by Elecraft was one of the best batteries we tested, coming in at 98% of it's rated mAh.

I hear you about the Tenergy charger...

Cheers & 73,

Howie - WA4PSC

www.proaudioeng.com



CATALINA ISLAND WITH A KX2

On Jul 28, 2018, at 12:21 PM, Wayne Burdick <n6kr@elecraft.com> wrote:

Last week my family and I went to Avalon, Catalina Island, off the coast of southern California. What an awesome place! It feels like a coastal tourist paradise in another country, except that it's just 26 miles from Long Beach. Definitely a bucket-list item.

To recover from two days of gawking at beach scenery and tapping generous libations, I set off on a 6 mile solo hike to take in the view from 1500 feet. And to sneak in a little stealth radio op.

From downtown Avalon I walked to the Wrigley Memorial, then zig-zagged up the Garden to Sky trail for 1.2 miles, where I was rewarded with a vista to the north that includes another of the Channel Islands. At this point I picked up the jeep road for another half mile, heading east, ascending even further to a gazebo overlooking the Hermit Gulch campground far below. (The trail down from here is very steep; if I ever do it again, I'll go the opposite direction.)

This gazebo was the perfect spot to break the KX2 out of its tiny ES40 bag and deploy the whip, which took all of 30 seconds.

Aside from the obvious (gorgeous WX, killer view, and the joy of running 10 watts hand-held to an AX1 whip on 15/17/20), I was blessed with both acoustic and RF noise floors so low that I was reminded of a minor tinnitus condition. No wind, no other humans, the occasional cry of a hawk, and the radio equivalent of a peaceful, easy feeling. I could hear stations that were merely thinking about transmitting.

It would be tempting to weave a tall tale about DX worked from this idyllic overlook. Truth is I just listened for awhile, marveling at how sparkling clean everything sounded without the usual three coats of RF grunge we often suffer at home. The noise drops with any trip away from civilization, of course, but this was exceptional.

It's yet another reason to get out of the shack. And why we keep designing rigs like the KX2.

73,
Wayne
N6KR



Amateur Radio Weekly headlines

Ham radio technology used in Thailand cave rescue

UK radio amateur John Hey G3TDZ (SK) designed the special low frequency radio equipment, the Heyphone, used in the recent cave rescue in Thailand.

[Southgate](#)

SDR: Direction finding techniques

Public KiwiSDRs distributed around the world can be used to pinpoint the physical locations of any 0 – 30 MHz transmitter using the TDoA technique.

[RTL-SDR](#)

A short guide on baluns

Unless precautions are taken to minimize it, all coax fed antennas will have significant current flowing on the outside of the coax shield while transmitting.

[Surrey Amateur Radio Club](#)

3D printed 10KV tuning capacitor

I will show you how to build a super-cheap tuning capacitor that will tolerate up to 10,000 Volts of RF and allow you to use up to about 100 Watts of RF into my 14MHz (20m) antenna.

[The SWLing Post](#)

Directive Systems 2 Meter Rover Yagi

With an 8 foot boom, it's just the right size to fit on the roof of my SUV for transport and works great on the fiberglass push-up mast.

[K5ND](#)

Significant changes in store for FT8 and MSK144

Enhanced versions of the MSK144 and FT8 protocols will extend the message payload to 77 bits.

[ARRL](#)

Why wire diameter is important

The larger the cross-sectional area of the conductor, the more electrons are available to carry



the current.

[VE7SAR](#)

[3D printed Arrow II portable satellite antenna clips](#)

WI9LL has designed clips for use with the Arrow II Portable hand held satellite antenna.

[WI9LL](#)

[Operating tips for VHF SOTA](#)

I've been using VHF and higher frequencies for SOTA exclusively and have activated over 100 summits in Colorado and other states.

[K0NR](#)

[FCC proposes \\$18,000 fine for Ham in interference case](#)

"Given his history as a repeat offender, these apparent violations warrant a significant penalty."

[ARRL](#)

[A visit to the home of FreeDV and codec2](#)

I knew I was in the right place when the squid pole supporting a corner dipole came in to view.

[Marxy](#)

[WWFD in AM HD](#)

America's only AM HD station.

[The SWLing Post](#)

[Is your repeater ID boring? Try something like this.](#)

If your repeater ID is getting a little stale, perhaps this will give you some ideas on how to freshen it up a bit.

[KB6NU](#)

[Receiving astronaut Amateur Radio conversations with an RTL-SDR](#)

If you live in an area that can 'see' the ISS at the same time as the school then you can easily pick up the downlink.

[RTL-SDR.com](#)

[Send APRS data/telemetry via Xastir command line](#)

You can do it all via RF if your Xastir setup is already paired to the radio and configured to transmit.

[S55MA](#)



Video

[Make your own LED battery level indicator](#)

In this video I will show you how we can use the classic LM3914 IC to create an LED Battery Level Indicator.

[YouTube](#)

[ISS packet radio system back late this year](#)

The currently silent packet radio system on the International Space Station could be back on the air by year's end.

[ARRL](#)

[Tutorial: Plot and decode weather balloon data](#)

A radiosonde is a small weather sensor package that is typically attached to a weather balloon. As it rises into the atmosphere it measures parameters such as temperature, humidity, pressure, GPS location etc, and transmits this data back down to a receiver base station using a radio signal.

[RTL-SDR.com](#)

[Edwin Armstrong's Battle for FM Radio](#)

It is a story of innovation, but also a story of personal vanity, corporate greed, stubbornness, marital problems, and even suicide. The only thing missing is a long-lost identical twin sibling to turn it into a full telenovela.

[Hack A Day](#)

[Locating Sources Of Noise](#)

As our lives become filled with technology, the likelihood of electronic interference increases. Every lamp dimmer, garage-door opener or other new technical "toy" contributes to the electrical noise around us.

[Surrey Amateur Radio Club](#)

[Digital nets on 11m](#)

Digital modes (ROS, FT8, SSTV, PSK31) are emerging on 11 meters.

[Delta Alfa](#)

[Milliwatt DX on 868 MHz](#)

Packets transmitted by the gateway of Ryan Walmsley, member of The Things Network East Coast, Great Yarmouth, was received 235 km away in Utrecht, Netherlands.

[Southgate](#)



[Q&A: Summer of Tariffs](#)

Will a 25 percent tariff be material on a single switch purchase costing a few dollars? Of course not. But this helps illustrate that once you start entering into the hundreds and thousands of dollars, these tariffs begin having an impact.

[SparkFun](#)

[Ruth Willet is 2018 Hiram Percy Maxim Memorial Award recipient](#)

The Hiram Percy Maxim Memorial Award is given annually by the board to a radio amateur under the age of 21 whose accomplishments and contributions to both Amateur Radio and the local community are of an exemplary nature.

[ARRL](#)

Video

[QRP vs 20 Watts – What is the Practical Difference?](#)

Running one hour in a contest at 5 watts, and the next hour at 20 watts.

[Outdoors On The Air](#)

[Flight of the Bumblebees 2018](#)

This is a popular QRP CW amateur radio event. The Bumblebees are portable stations.

[N4KGL](#)

[Compact Homebrew End Fed QRP Antenna](#)

I built this antenna specifically for low wattage QRP use to be compact and inexpensive. It utilizes a 9:1 unun wrapped on a T106-2 toroid and minimal hardware to be lightweight.

[WI9LL](#)

[JumboSpot DMR Hotspot](#)

One of the latest crazes in the world of DMR radio is the Chinese iteration of the DMR hotspot. The principal attraction? Low cost. The Jumbospot costs about \$45.

[John Hagensieker](#)

[Light Up 2 Meters Night, an FM Simplex Event](#)

August 26, 2018 7-9pm local time.

[K5ACL](#)

[Radio hams at DEF CON 26](#)

DEF CON 26 is taking place August 9-15 in Las Vegas and radio amateurs will be there giving



presentations on HAARP, amateur satellite communications, and SDR's.

[Southgate](#)

[DIY vs. commercially made solar panel](#)

The price of commercially made solar panels on eBay is around \$1 per watt and have been for a few years, but the price of individual solar cells are likewise at a low price per watt, around \$0.48.

[Hack A Day](#)

[Receiving GOES weather satellite with a 2.4 GHz WiFi grid antenna](#)

GOES 15/16/17 are geosynchronous weather satellites that beam back high resolution weather images and data.

[RTL-SDR.com](#)

[Moving Pictures: First dabbles in Amateur TV](#)

I've spent the last couple of weeks experimenting with some Amateur Television ATV and Digital ATV.

[AmateurRadio.com](#)

[Wisconsin residents embrace Amateur Radio](#)

An estimated 2 million people are on the airways worldwide, according to the American Radio Relay League. About 830,000 amateur radio stations are located across North, Central, and South America alone.

[U.S. News](#)

[A primer on grounding for Hams](#)

Nothing like a fierce electrical storm to get Hams talking about susceptibility to lightning strikes. Well, we experienced just such a storm in early August, which provides the perfect opportunity to review the topic.

[VE7SAR](#)



CROSSWORD PUZZLE

by Chris Codella, W2PA

5/22/2009

Pins

Across

- 1. Tube connection*
- 5. Close-knit group
- 10. Tube conn.*
- 14. Verdi opera
- 15. Ten-Tec rig
- 16. Ten-Tec rig
- 17. After-bath powder
- 18. Kazakhstan prefix
- 19. Bushel quarter
- 20. With 53 across, describes the * words
- 22. Analyze syntactically
- 23. Window alternative
- 24. ARRL org. pertaining to SS, others
- 25. Beast of burden
- 28. Turner of TV channels
- 29. Platform on a ship's mast (a place for a /MM antenna?)
- 33. Odwalla fruit and ___

1	2	3	4		5	6	7	8	9		10	11	12	13
14					15						16			
17					18						19			
20				21					22					
			23					24						
25	26	27		28			29				30	31	32	
33			34				35				36			
37						38			39					
40					41				42					
43				44			45				46			
			47				48				49			
50	51	52				53					54	55	56	
57						58					59			
60						61					62			
63						64					65			

- 35. Not brilliant
- 36. Best kind of tower
- 37. New England net
- 38. Transistor conn.*
- 39. Singer Ronstadt
- 40. UA assembly
- 41. Cutter
- 42. Digital mode
- 43. Delta follower
- 45. YLRL non-member
- 46. "___ we having fun yet?"
- 47. Caller for calls
- 48. T8 land
- 50. RG8 ground
- 53. See 20 across
- 57. CW
- 58. Thorny
- 59. 7800 maker

- 60. H.S. tests
- 61. Cycle user
- 62. Put one's foot down?
- 63. Transistor conn.*
- 64. TI land first name
- 65. D.C. group

Down

- 1. Tube or Transistor connection*
- 2. EP coin
- 3. Like some chatter
- 4. S2 capital, old-style
- 5. Swift horse
- 6. Noted traitor
- 7. Device with only a 25 down and 10 across
- 8. Recent UA prefix, especially, e.g. M-V Is.
- 9. W1 dir. from W7

- 10. Just fine
- 11. Part of ARRL (abbr.)
- 12. Ckts. for 42 across use
- 13. Go backpacking
- 21. Ten-Tec amplifier
- 22. Golfer's goal
- 24. Computer port type
- 25. Tube connection*
- 26. Gray line time
- 27. Flower towers
- 29. Tube conn.*
- 30. JA poem
- 31. OOTC member, to an OTC member, probably
- 32. Tube connection*
- 34. Smartest
- 35. Jones' partner
- 38. Plains states NTS org
- 39. KH6 porch

- 41. The only CW most people know
- 42. KH5 land
- 44. CRT successor
- 45. OJ0 reef
- 48. What output power does, in resonance
- 49. Ohms, volts, and others
- 50. Transistor connection*
- 51. Drift
- 52. Prefix with VOX
- 53. Kenwood, once
- 54. Antenna farm unit
- 55. "Crazy" bird
- 56. Tiny parts
- 58. Big G SW org.



JUN 2018 CROSSWORD PUZZLE ANSWERS - Phunetics

W	I	T	H	E		W	A	R	E		J	E	A	N
A	D	H	O	C		A	T	O	R		K	N	I	T
N	E	I	G	H		G	R	O	G		L	T	R	S
T	A	N	G	O	U	N	I	F	O	R	M			
S	S	S	S		S	E	P			E	N	A	C	T
				M	A	R		H	A	J		W	A	R
P	A	S	H	A			D	E	S	O	L	A	T	E
O	N	E	A	L	P	H	A	W	H	I	S	K	E	Y
L	O	N	G	P	A	T	H			C	B	E	R	S
A	D	D		E	N	S		R	M	E				
R	E	V	E	L			L	E	O		S	D	R	S
				R	O	M	E	O	F	O	X	T	R	O
E	I	C	O		I	A	R	U		R	O	U	G	E
S	C	A	N		K	R	I	S		A	L	B	U	M
P	Y	R	E		E	L	S	E		Y	E	S	E	S



GOVERNOR DOUGLAS A. DUCEY

STATE OF ARIZONA ★ COMMENDATION

WHEREAS, during the week of May 28th through June 3rd, the Central Arizona DX Association (CADXA) will be commemorating the 20th anniversary of the passing of Arizona Senator Barry Goldwater by hosting an on air special event using his callsign, K7UGA; and

WHEREAS, on June 1st and 2nd, The American Radio Relay League (ARRL), the National Amateur Radio organization in the United States, will hold its 2018 Arizona State Convention in Prescott, Arizona. Amateur Radio Operators from all over the southwestern U.S. will gather to congregate, share knowledge, assess the state's emergency response capabilities, and exchange equipment among themselves; and

WHEREAS, in the month of June, the Amateur Radio Council of Arizona (ARCA) will announce awards for Ham of the Year and Young Ham of the Year to individuals that have made notable contributions to Amateur Radio over the previous year. ARCA will also announce Scholarship awards to deserving Amateur Radio operators throughout the state of Arizona, to help them further their education; and

WHEREAS, during the 4th weekend in June, the nationwide ARRL Field Day emergency exercise is held, where many thousands of Amateur Radio operators throughout North America set up temporary transmitting stations in public places to demonstrate ham radio's science, skills, and emergency service capabilities to our communities and to our nation. ARRL Field Day combines public service, emergency preparedness, community outreach, and technical skills, all in a single coordinated event.

NOW, THEREFORE, I, Douglas A. Ducey, Governor of the State of Arizona, do hereby recognize June 2018 as Amateur Radio Month, benefitting the 47 ARRL affiliated clubs and over 22,000 FCC licensed Amateur Radio operators in the state of Arizona.



IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Arizona

Douglas A. Ducey
GOVERNOR

DONE at the Capitol in Phoenix on this fourteenth day of May in the year Two Thousand and Eighteen and of the Independence of the United States of America the Two Hundred and Forty-Second.

ATTEST:
Michelle Reagan
SECRETARY OF STATE

EDITORS PAGE

Deadlines for 2018 submissions (Monday preceding club meeting):

Jan 15th Feb 12th Mar 12th Apr 16th May 14th Jun 11th

Jul 16th Aug 13th Sep 17th Oct 15th Nov 12th Dec 17th

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Feel free to email me at newsletter@tucsonhamradio.org

Please note that all articles submitted may be edited for spelling and grammar mistakes. My document program does automatic spell checking (LibreOffice Writer). DOC, RTF, PDF, ODT, TXT are all acceptable. If pictures are included, having them in separate files as JPG or PNG formats is best. I can place captions under the pictures if needed.

May your noise be low, signals high, and your waterfall never dry up :-)



Ron Herring W7HD

Newsletter Editor

**Serving Pima County and Southeast Arizona,
now distributed worldwide**

Saguaro National Park West

Tucson, AZ

17-Mar-2018

Photo by Ron Herring W7HD

