



GOAT NOTES

Celebrating Amateur Radio!



<https://gotahams.com>

June-July 2023

WG60TA RPT: 449.160 (-) PL 77.0 enc/dec

The Editors' two bits...

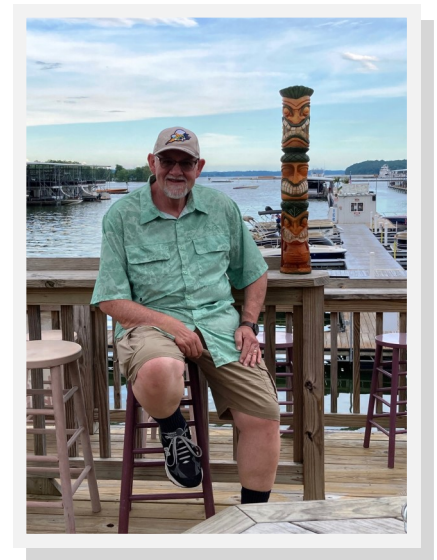
Hello to all y'all!

June gloom? REALLY?!?! Enough already! Don't know about you, but I'm ready for some sunny, warm days.

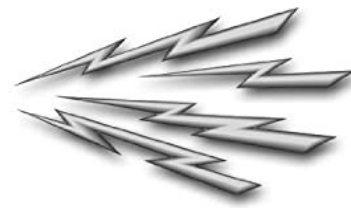
And we got 'em, just in time for Field day! The WX was excellent but the condx could've been better. Lots of detrimental solar activity just a few days before had a major effect on propagation.

Still, a good time was had by all. Friends, lots of guests, food, youth activities, and Ham Radio: What's not to love?!?!

This issue will be an expanded with lots of photos from our events. Many grateful thanks to all who contributed.



73 de N6PCD



RADIO ACTIVITIES

Monthly Club Meeting

GOTAhams Monthly Club Membership Meeting - the second Tuesday of the month, 7PM , Zoom and In-Person. If you would like to join the meeting in person, please join us at Casa Jimenez Mexican Restaurant in Claremont at 921 W Foothill Blvd. Please arrive an hour early (at least) at 6PM so that you can order your dinner and have it out of the way ahead of the meeting. (The restaurant does expect you to order a meal). We'll be in the back room. See the weekly email for Zoom details.

GOTAhams Nightly Net

Held each evening at 7:30 PM Pacific time, *except for the 2nd Tuesday of each month*, on the club repeater: 449.160 (-) PL 77.0. Please see Dave's weekly email for a list of topics.

Radio In The Park & Elmering in the Park

See the weekly email for days and times and locations (but usually on the 3rd Saturday of the month). These are fun events, so come on out and join the fun, and bring a friend!

Monthly Simplex net

Hosted by Erik KN6NRQ on 146.580MHz. A great way to explore the reach of your 2 meter equipment without benefit of repeater, both receiving and transmitting. Convenes on the fourth Wednesday of the month. See the Weekly email for vital details.

V.E. Amateur Radio License testing

LAST SATURDAY EACH MONTH AT 1PM. Location is Brackett Field airport in La Verne. Sponsored by the GOTAhams. Frank Westphal and his experienced team of examiners are resuming in person Amateur Radio License testing at Bracket Field Airport in La Verne. *See Dave's weekly email for testing requirements and other important details.*

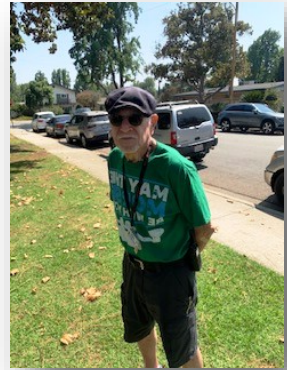
Interested?

If you would like more information about Amateur Radio, GOTAhams Club Activities, or have any interest in joining the GOTAhams Amateur Radio Club please contact the Club Secretary Dave Wilkie (K6EV) at K6EV@ARRL.NET. All are Welcome and no license is required to become a member.





Radio In the Park, May 2023. Many thanks to Milton Garb, N6MG,
for providing these great pictures!



Milt, N6MG

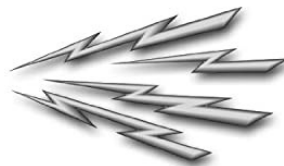




Our monthly day in the park is always a popular event, and we encourage all of you to attend.

The WX cooperated, providing a beautiful sunny day.

Trying to get someone interested in the hobby? Bring 'em on out to one of these wonderful events.



In The News

ARRL and FEMA Sign Agreement: Ham Radio is as Relevant as Ever

The agreement emphasizes the importance of skilled Amateur Radio Operators in times of crisis and the role of ARES leadership within the emergency communications space.

ARES is a network of trained Amateur Radio Service licensees organized across the country to provide communications and other support to served agencies, such as local governments, hospitals, and disaster response charities.

More than 20,000 ARES volunteers actively participate in the ARRL program. In 2022, they provided more than 420,000 labor hours of service saving local officials \$13.4 million in personnel costs.



Each member of ARES has specialized training in emergency communications. Many have also completed training in the National Incident Management System (NIMS) in order to integrate with local officials during an emergency response.

In March 2023, FEMA released the final version of the NIMS Information and Communications Technology (ICT) Functional Guidance, which includes radio amateurs in the response ecosystem and national emergency preparedness.

"The agreement is representative of the continued commitment and cooperation between FEMA and ARRL," said ARRL Director of Emergency Management Josh Johnston, KE5MHV. "Serving our country during emergencies is an important service provided by ARES volunteers and a principal purpose of our Amateur Radio Service. Our well-equipped volunteers bring their training, use of innovative technologies, and community partnerships together to serve before and during disasters."

Source: ARRL bulletin ARLX003



Radio Fun Facts!



Here's a photo from the late '60s of Chet Atkins. His callsign was originally WA4CZD, and later he was given a new one, W4CGP, reflecting his title, CGP (for Certified Guitar Player). One of his favorite activities was to get on the radio on Sunday mornings with his good friend Buster Devault in Luttrell, Tennessee for a QSO. Chet also had a mobile rig in one of his vehicles for awhile.

This famous ham invented a legendary music device that was featured on the album "Switched On Bach". Who is it?

Answer: **Robert Moog**

K2AMH, Bob Moog, invented the famous Moog Synthesizer along with some other innovative electronic music equipment. He died in 2005.



Field Day 2023

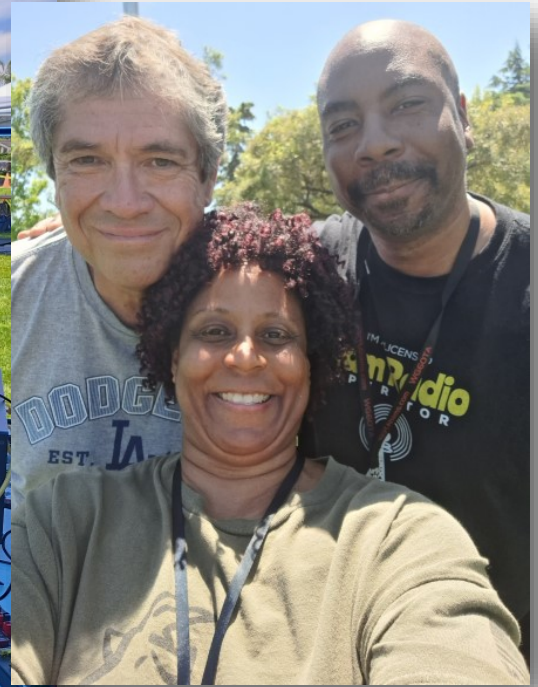
Held at Cedar Creek Park in Eastvale, June 24, 2023. Many thanks to Jere KN6PED, Sheila KM6KNO, and K.C Lin K6KWV for providing some of these great pictures!





Youth activities were a roaring success this year! The kids were able to build with Snap Circuits, assemble and use CW practice oscillator kits, work with an electronic experimenter kit, and solve word puzzles. Several were able to use the GOTA station to make contacts! After visiting the stations and talking to our Elmers they were able to earn their own GOTA Hams passports!



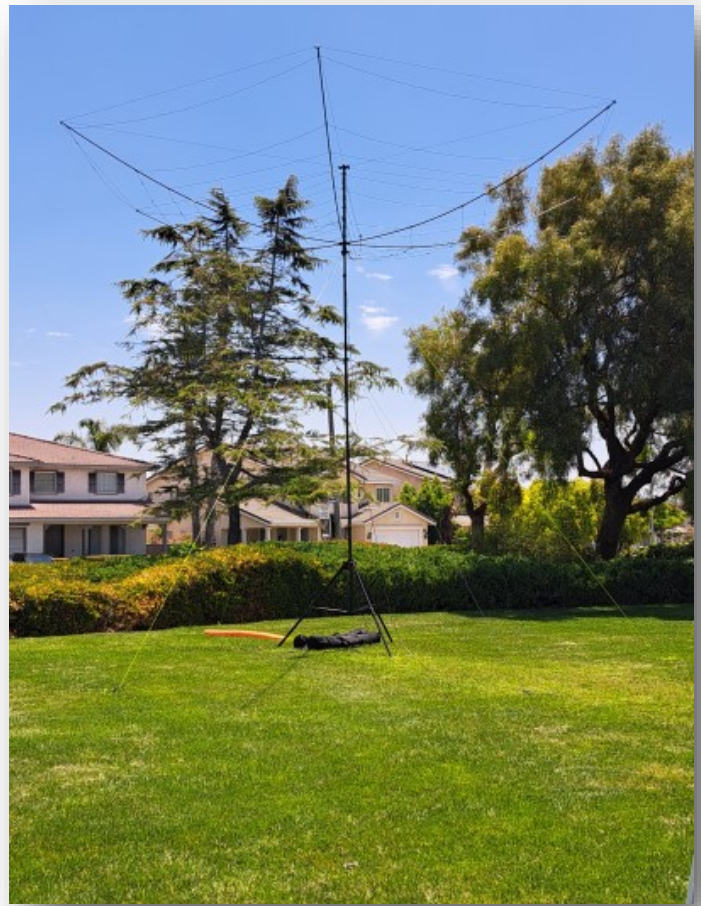






The vintage station set up by Dan K6YIC was a big hit with everyone. Really cool to see how far radio equipment has developed in the last few decades!







The guys did a wonderful job erecting several antennas for all stations. Not easy in the warming morning, but they got it done.







OPERATING. That's where it's at!! Tough condx due to solar activity, but it settled down some by nightfall. Good times!



We were treated to several flybys by a Lockheed Super Constellation airliner. I understand that there are only two Connies that are airworthy in the world. This was quite a treat to see!





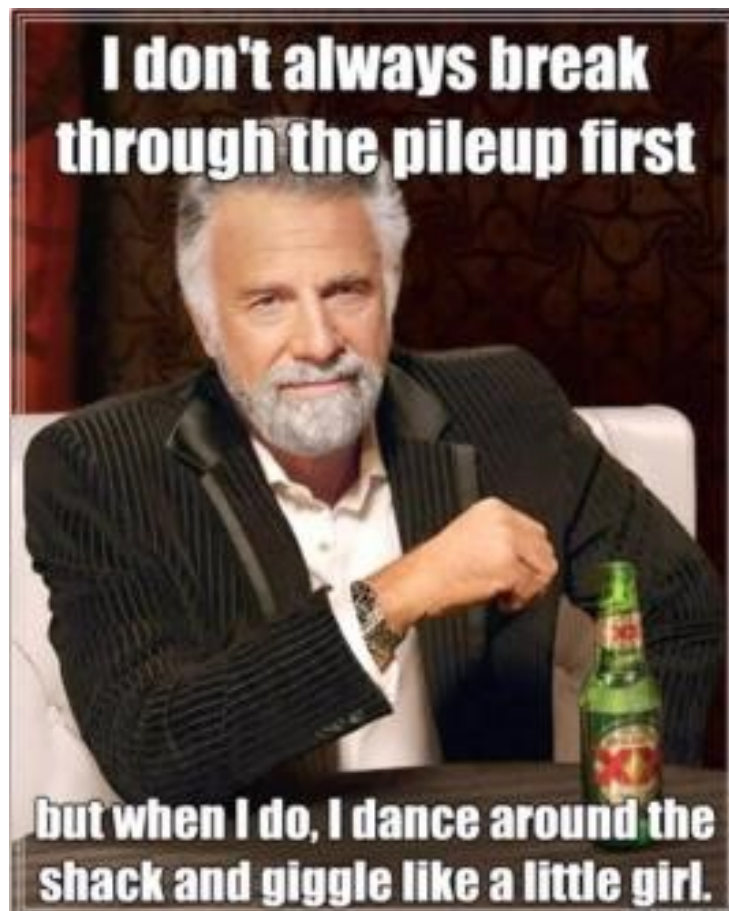
VITAL SHACK FACTS



THE SHAQ...

This is YOUR page! Send me a few pictures of your shack and/or mobile installation along with a description of same and I'll be most happy to feature YOUR setup here.

Here's your chance to shine! Many thanks from your newsletter editor, Ken N6PCD.



Tech Stuff

What are Dummy Loads & how are they used?

By Ken N6PCD & Dave K6EV

A Dummy Load (or “RF termination”) is a non-reactive resistance used to terminate an RF line (instead of an antenna for example) with a matched impedance that generates nearly zero reflected power. It is just a high-power non-reactive resistor with cooling. Using a dummy load instead of an actual antenna, the transmitter can be tested and configured without radiating RF. The RF power from the transmitter is dissipated as heat from the dummy load. (Whereas an antenna radiates that energy as electromagnetic waves). A dummy load is extremely helpful if you have a problem and want to discern whether it is in the transmitter vs. the antenna system / feedline. If your transmitter works fine into the dummy load then your problem is likely in the antenna + feedline. You may not use it often but you will be very glad you have it when needed. It is also very useful when repairing or aligning transmitters. A dummy load is also a great example of an ‘antenna’ with a nearly perfect standing wave ratio (SWR) that is pretty much useless for actual transmission or reception, illustrating that SWR isn’t everything.

Dummy Loads are usually chosen such that they present an impedance matching the output impedance of the transmitter (almost always 50 ohms for ham equipment). Transmitting with no load (or a mismatched load) on the transmitter causes very high SWR and reflected energy that may damage the transmitter or at least interfere with its proper operation. The dummy load avoids that as well as eliminating unwanted (or even illegal) transmissions on the ham bands or other frequencies – especially while a transmitter may be defective, tuned out-of-band or improperly adjusted. It may also reduce interference with other elements of the test setup. Here are some tips for choosing a dummy load:

Tip 1: The dummy load should be the same impedance as the transmitter (usually 50 ohms for ham equipment) and be connected to the transmitter with a short coaxial cable. Choose a load with the type of connector you prefer (UHF, type N, BNC, etc.).

Tip 2: Choose a load that can handle the amount of power you will deliver for the time you will deliver it. Most loads will overheat if driven with their maximum rated power for a long period so pay attention to the time vs. power derating curve that is supplied in the manual or printed on the load. In many cases the rated power might only be allowed for 30 seconds or so before a cooling off period is required. Higher power units cost more and are larger but also dissipate lower power levels for much longer periods or indefinitely. The good news is that simple tests of the transmitter usually only take a few seconds. Basic dry units well suited to simple verification tests of 100W transceivers are about \$70.

Tip 3: Choose a construction that makes sense. Many modern units are lightweight dry types using convection cooling. Some add aluminum heatsinks or fans for more power. ‘Wet’ types contain a power resistor in a pool of mineral oil within a vented paint-bucket enclosure. These offer an inexpensive high-power solution but can leak or vent oil, are heavy and may take a long time to cool down once hot.

Tip 4: Choose a load that covers the frequency range of interest. A theoretically ideal dummy load results in an SWR of 1:1. But realistic loads are imperfect - and the SWR will usually deteriorate as frequency goes up. Most transmitters are fine with SWR’s up to 1.5:1 but check the documentation and consider the purpose of your test. It is better to be close to 1:1. Many commonly available units will cover all the HF bands and up to 500MHz or higher with adequate SWR performance.

Tip 5: You can build your own but by the time you choose appropriate components heat sinking and packaging you might not save that much, especially for higher power levels or wide frequency ranges.

