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Contact Us

- Via [Facebook](#)
- Via WWW.AC6EE.ORG
- U.S. Mail:
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A Word

Dan Mason, AB6DM, President

Howdy, TARA friends!

I'd like to start off by giving kudos to you all for coming together on several projects that are getting done and starting to bear fruit for our club. We just joined the Tehachapi Chamber of Commerce, have been engaging the public at several events, and are getting our repeaters ready for reliable service for several years to come. All of this stuff is getting us notoriety, and I'm sure we will obtain help that will expand our capacities.

Now on to September - National Preparedness Month

National Preparedness Month has been a federally recognized month dedicated to increasing the preparedness capabilities of the American population since 2004. September was chosen as it is the peak of the Atlantic hurricane season, and because of the significance of the events of 9/11.

The best, and easiest, way to prepare for disasters is to have a plan. Create a plan that is specific to your family, and includes any special needs or requirements you may have, like children, elderly family, pets, medical needs, etc. Ensure you receive emergency alerts and warnings and you know where your nearest safe shelter location is and have evacuation routes planned.

(cont'd next page)

Another great way to be prepared is to create an emergency supply kit. Supply kits should be built to last each person utilizing the kit 3 or more days. Things to consider including in your kit are:

- Water (One gallon per person, per day)
 - Nonperishable food (and a way to open, cook, and eat it)
 - Battery powered or hand crank radio (not counting ham)
 - Flashlights
 - Batteries (including portable chargers and cords for your devices)
 - First Aid Kits
 - Whistles
 - Sanitation supplies
 - Prescriptions you may need
 - Important documents (insurance information, identification documents)
 - Cash and/or checks
- And for us hams:
- Ham radios with charged batteries or applicable way to power
 - Proficiency with radios mentioned above (manual on hand if needed)

EDITORS' Note:

Dave Walter, WA5GUL, and I were talking at lunch the other day, when he suggested a fun newsletter focus might be "Your craziest antenna". That sounded like a novel and fun theme to me. So, for the October edition tell us of the craziest antenna with which you have ever successfully made a contact. Whether it is loading up the rain gutters, bed-springs, a long wire laying on a fence, the fence itself, wire wrapped around the ceiling of a room or things I've not yet imagined, please share a paragraph or two of your craziest/most non-traditional antenna.

Send them to info@ac6ee.org by 9 October.

73 ...Ray W6QPA

“Summer Adventures”

Mike Hardee, AC6PC

So, here we are at the beginning of September, seeing Halloween candy on display at the WallMart and wondering where the heck the summer went, while I’m still weed whacking brush and foxtails. I expect next week to start seeing Christmas trees at Home Depot and Christmas music wafting in the air at Albertsons...

But seriously, what did we do in our radio hobby this summer? Well, I didn’t do any big build projects, or erect some monstrous antenna (I actually took down an offending antenna support mast—but that’s another story), or get yet another micro mini QRP rig that somehow folds into my wallet... No, I just continued my training and practicing CW.

Yep, CW. Still hacking at it, still trying to improve my instant character recognition and to help with that process, I went and found me a code buddy.

Now this code buddy search came out of my latest course in CW, where they required the class members to team up with a code buddy. A code buddy was supposed to provide encouragement and feedback on my character clarity, comprehension and spacing between words. In short provide the positive feedback we need to continue to improve our skills in CW. We were supposed to meet on the air and have a contact and then a QSO at least twice a week.

I picked the classmate that was nearest to my QTH and asked him to team up and meet me at a specific frequency. This was on the second week of the course. While on the phone with each other, we came up on the air and sent each other our call signs and a few short words. The first words out of my “code buddy”’s mouth was: “Can’t you go any faster?”

Talk about instant character recognition. I instantly recognized that this “code buddy” wasn’t going to work for me. I wanted to learn code and be able to hear words in code, not get into a speed contest. I realized that this gent wasn’t going to help me get there and that we were on different paths. I thanked him and signed off.

So what to do? I still needed a code buddy, the music to the musical chairs going on in the CW class had stopped and I was without a code buddy to practice on the air with. Well, nobody said I couldn’t pick a CW code buddy outside the classroom. Luckily, I knew someone in TARA that had CW experience and that had just finished a CW course. Ray (W6QPA). I called him up, explained the situation and asked if he would be my code buddy. He readily and enthusiastically agreed and that started our adventure in CW this summer.

Ray has been everything I needed in a CW buddy; patient, encouraging, willing to slow down and repeat himself and always gave immediate and constructive feedback after each QSO. Some days we can’t make it on the air due to life happening, but most days we get on the air for at least 15 minutes. Giving each other signal reports, weather conditions and whatever projects and events that happen to us. Sometimes our sending and comprehension is even horrible. I remember times when I didn’t get anything he sent and I suppose neither did he understand a word I sent either—but it was great fun nevertheless. But that is radio. It is like pizza; even when it is bad, it is good. Most days we pretty much get the gist of what each other is trying to say..

So we're still stumbling around in our CW, failing towards improvement. It is fun and we plan to keep it going.

A couple of learning opportunities had presented themselves during this summer adventure:

- 1) immediate feedback is important and extremely helpful
- 2) Daily QSOs really help me improve my skills
- 3) Same time, same frequency makes it easier to make it a habit, keep it going and stay in practice
- 4) Having a second frequency to go to helps when there's too much noise or other folks stepping on you.
- 5) Practice (training) daily with the Word List Trainer helps with your skill set

...so that's what I did on my Hamcation...

Ray Gretlein, W6QPA

Summer? Is it really over? Well, not according to the thermometer, however, Labor Day usually marks the end of the summer vacation season and that has come and gone.

My summer Hamcation activities were largely Ham-stay-cation. Amateur radio didn't travel with me this summer. My activities other than normal home QTH operations were the ARRL Field Day with the Club at High Country Park in Bear Valley Springs and a QSO Party or two from the home QTH.

ARRL Field Day was a real hoot for me. I enjoyed the camaraderie of the club operation, learned of some very clever packable antennas and gear from Dave Brunnel (KM4OGV) and enjoyed my best ever CW 'contest' experience.

North American CW QSO Party, sponsored by the ARRL National Contest Journal (<https://ncjweb.com/naqp/>) closed out the summer for me. It was another opportunity to find CW QSO's, not the rag chew kind, but still fun and skill building opportunities for me. I didn't beat the number of QSO I had on Filed Day, but I bettered my rate!

Oh yes and then there is the steady diet of summer QSOs with my code buddy, Mike (AC6PC). I was going to write a bit of detail about this wonderful experience ... then Mike submitted his Hamcation article and described our operations so well, I'll just piggy-back on his description and add the view from my side of the operation. Working with a regular (as regular as life permits anyway) schedule for CW has to be one of the best ways to improve skills. Mike has provided me with the motivation and purpose to be on-the-air 6 days a week. Our contacts have been made through a number of different propagation conditions as well as QRM. We've learned to coordinate a QSY (move to a different frequency) and still manage to find each other as well as how to work through some poor signal conditions. All the while we've been improving our head-copy proficiency and fluency with extemporaneous conversation. It has been a real pleasure and helped me improve my CW skills. We both have a way to go for our individual goals but the progress I've seen is gratifying.

On the Bench

This is a semi-regular column for members to share the off-the-air aspects of their ham radio activities. Using a sports metaphor, on-the-bench refers to a player not currently active in the game. So, applying that in a ham radio context, what is “On-the-(work)bench” in your shack?

Emergency Preparedness build-out in Honda CR-V

Will Perry, WA6LDQ

I've had a van for several years now that is set up with emergency supplies including an HF radio, a dual-band VHF/UHF radio with APRS, as well as solar panels and two 100 amp AGM batteries. Recently I purchased a Honda CRV and have been pretty busy outfitting it with emergency supplies and radios. It became quite a challenge to accomplish this with much less real estate than was available in the van. The Honda has a full size spare tire below the rear cargo floor with a little extra room for a jumper cable and a few emergency supplies.

I had the idea that it wouldn't be very difficult to build some wooden trays that would sit on the cargo floor with sectioned off compartments to house tools, a first aid kit, other emergency supplies, an HF radio, antennas, etc.



The trays are constructed of 1/8" and 1/2" plywood each measuring about 16"x 40" by 3" high. A 1/8" plywood cover was constructed to lay over both trays and was covered with black trunk carpeting to match the inside of the cargo area. It was necessary to construct a 2-piece mast for my Hustler mobile antennas to fit into the 40"x 2" compartment I had prepared for them. The center loaded coils also fit into the same compartment.



One compartment (the upper left) is sized for my Icom IC-706MKIIG HF through 440 rig when not in use.

A 35 amp AGM battery fits nicely to the left of the trays and is wired in parallel with the Honda battery only when the engine is running. A 100 watt two section folding solar panel will occupy the back of the rear seat in the cargo area. The trays can be readily removed to access the spare tire and other items stored there.





Both radios are operated with remote control heads mounted on the center console. I now have the capability to operate 75 meters through 440.

An NMO mobile antenna mount is attached to the hatch lid in the rear. Success was realized when I got a 5x9 report from a guy doing POTA on 20 meters SSB in Crater Lake Park in Oregon while I was parked at Walmart (I may even include a CW Key!).



I'm quite pleased how the project came out with the hidden trays and there's still plenty of room left in the cargo area for groceries or whatever. How about your vehicle? Is it supplied and prepared for emergency operation?



The Operating Room

This is a semi-regular column for club members to share the on-the-air aspects of their ham radio activities.

Solar Storms Impact

David Walters, WA5GUL

[Editors note — We have recently had a short duration HF blackout. While talking about this event Dave provided the following link to an article about a MAJOR Solar Storm in 1940. I've copied the article from <https://spaceweather.com/archive.php?view=1&day=10&month=08&year=2023>. For more info on historic solar storms click this [link](#)]

THE GREAT SOLAR STORM OF MARCH 1940: This story is shocking. On March 24, 1940, a solar storm hit Earth so hard it made copper wires in the United States crackle with 800 volts of electricity. A *New York Times* headline declared that a "sunspot tornado" had arrived, playing havoc with any signal that had to travel through metal wires.



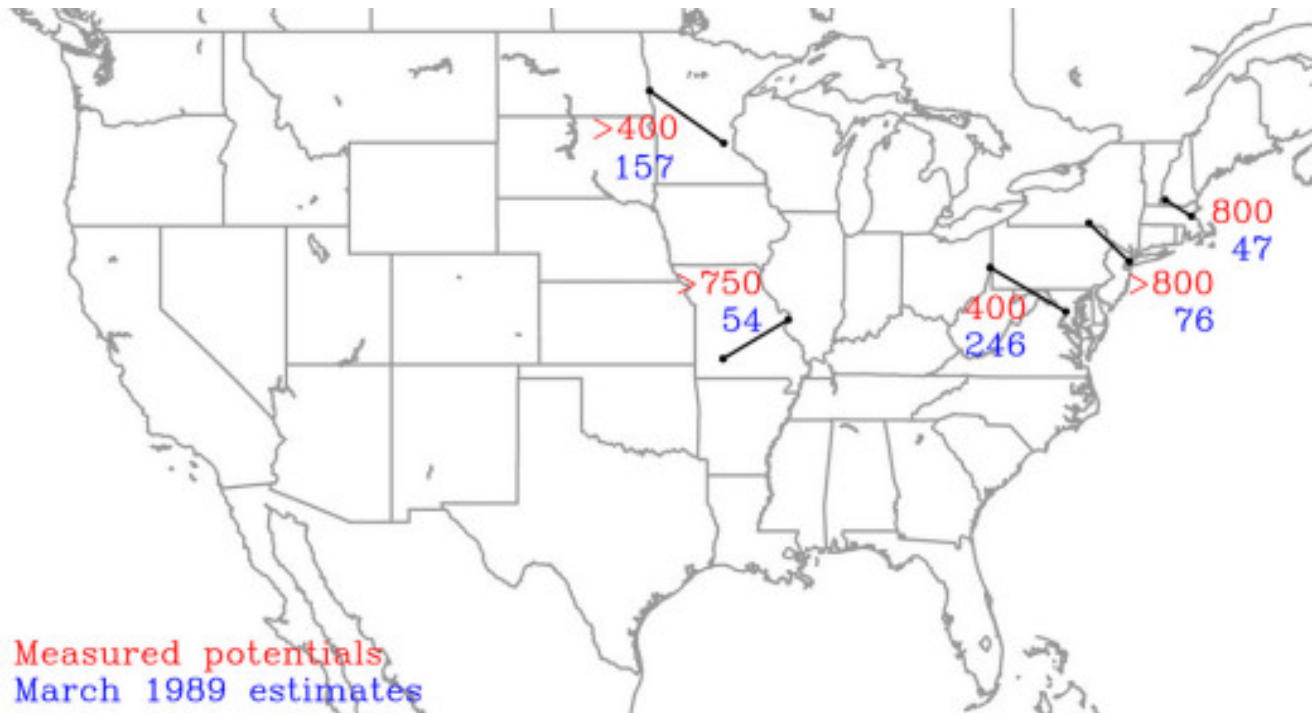
"For a few hours it completely disrupted all long-distance communication," wrote astronomer Seth B. Nicholson in [a recap of the event](#) for the *Astronomical Society of the Pacific*. Radio announcers seemed to be "talking a language no one could understand." The *New York Times* [reported](#) that more than a million telephone and teletype messages had been garbled: "Veteran electrical engineers unhesitatingly pronounced it the worst thing of its kind within their memory."

So why have you never heard of this storm? Even in 1940 it was fairly quickly forgotten. World War II was underway in Europe, and the USA was on the verge of joining. People had other things on their minds.

Modern researchers, however, are paying attention. A team led by [Jeffrey Love](#) of the [USGS Geomagnetism Program](#) just published a new study of the event in the research journal *Space Weather*. Their work confirms that it was no ordinary solar storm.

"It was unusually violent," says Love. "There were very rapid changes in Earth's magnetic field, and this induced big voltages in long metal wires."

Love and colleagues learned about the voltages from old engineering reports. In 1940, the United States was criss-crossed by copper wires hundreds to thousands of miles long. They were not for power distribution; electrical systems were still mostly regional. Instead the wires were used for communications such as telephone calls and telegrams. When the "sunspot tornado" hit Earth, electricity began to move through the system. Technicians jotted down some of the voltages they saw--and the numbers were incredible.



Above: Solar storm voltages in March 1940 (red) vs. the Quebec Blackout of March 1989 (blue)

"Records show 400 V in Minnesota, 750 V in Missouri, and more than 800 V in Massachusetts," says Love. "These are 10 times greater than long-wire voltages recorded during the [Great Quebec Blackout](#) in March 1989."

What caused the high voltages? Love's team examined old magnetogram records from the date of the storm and found evidence that two coronal mass ejections CMEs hit Earth only 1.82 hours apart. The double blow rattled Earth's magnetic field in a complicated way most single CMEs do not.

"This could be a harbinger of things to come," says Love. Modern studies show that as many as 5 CMEs leave the sun every day during Solar Maximum. With Solar Cycle 25 underway and intensifying, a double hit could definitely happen again.

A similar storm today might not significantly impact communications; we live in the wireless age of cell phones. Electricity is another matter. Modern power systems depend on long wires to shuttle electricity across the country. A repeat of 1940 could interfere with their operations. Love notes that the 1940 voltages exceed [NERC](#) power-grid industry benchmarks for 100-year storms. As a result, some modern power grids might not be ready to handle the shock of another 1940 event.

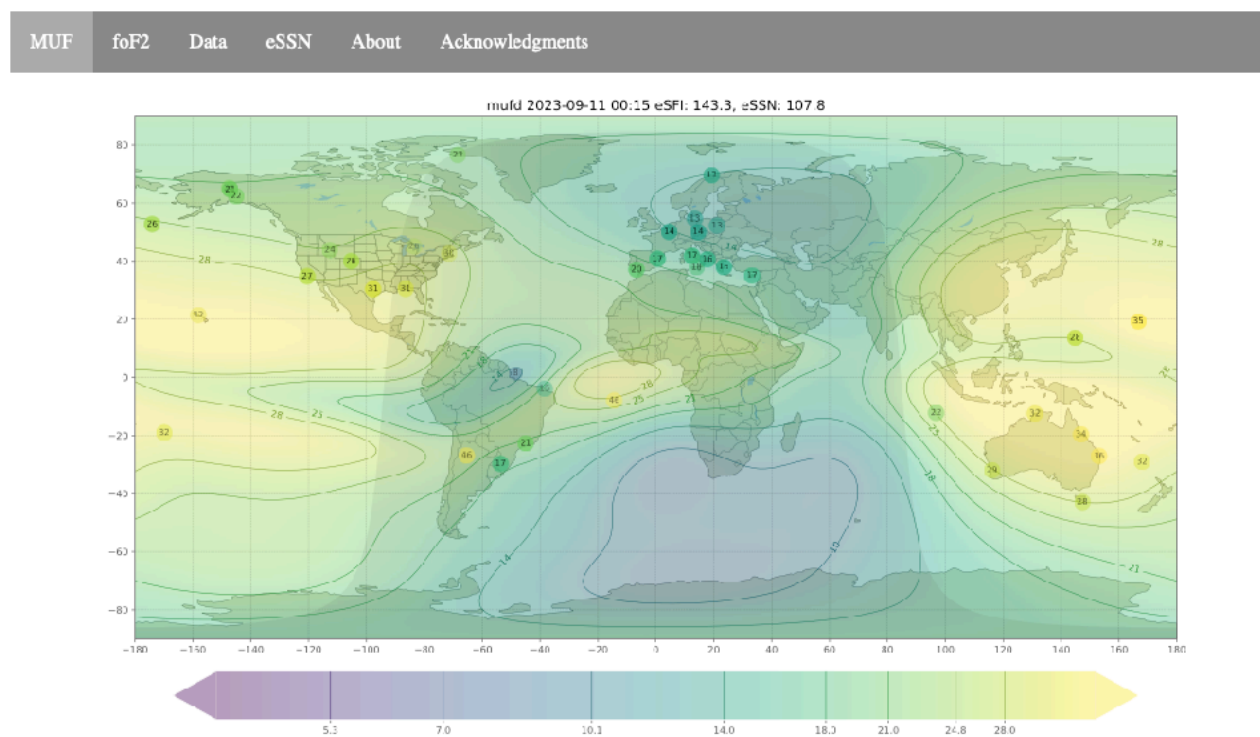
Read Love's original research here: [here](#).

Propagation Forecasting Tools

Ray Gretlein, W6QPA

As described in Mike's (AC6PC) article, we've been working CW requiring "local" HF communications. Most of my previous efforts have been HF DX, so this has been a fun exercise. I use a 30 ft flagpole as my antenna, coupled with an SGC-230 automatic antenna coupler. This vertical, according to models, provides a primarily low angle of radiation, making it difficult to make contacts closer than 1000 miles on 20 meters and above. Our initial approach was to use 80 meters. That, unfortunately, proved to be saturated with noise at my location.

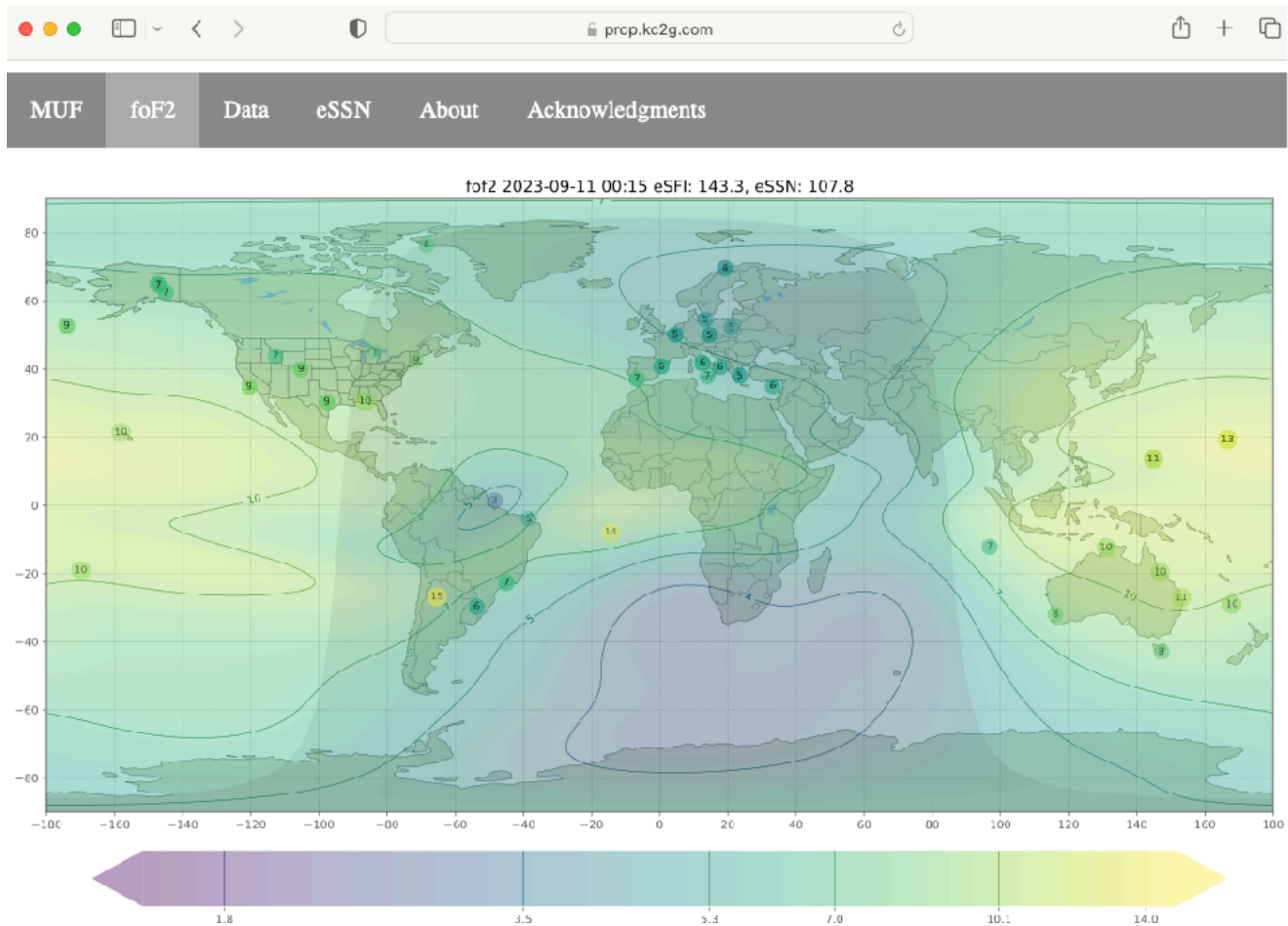
I went looking for information on HF propagation and among many sources of information I came across this web site <https://prop.kc2g.com/>



This site describes its data sources as:

"The near-real-time ionospheric data that powers the site is collected by ionosondes (ionospheric radars) around the world, and compiled by the [NOAA National Centers for Environmental Information](#) and the [Lowell Global Ionospheric Radio Observatory \(GIRO\)](#). The ionospheric physical model for the "IRI" plots is the [International Reference Ionosphere 2020](#), produced by a joint task group of the [Committee on Space Research \(COSPAR\)](#) and [International Union of Radio Science \(URSI\)](#)."

The data is presented in two maps, the one above is of the MUF. The Maximum Usable Frequency over a 3,000 KM path (think coast to coast from our location). The MUF is frequency below which it is refracted off the ionosphere and returns to earth. Above the MUF it goes through the ionosphere and onto space.



The other map is called FoF2 or Critical Frequency map. This map depicts the frequency below which a near vertically incident signal (NVIS) will be reflected back to earth. This is the frequencies that will be useful for local HF communications, meaning in our case from the East side of Bakersfield to Tehachapi.

Using these near-real time maps we've been able to select bands that will likely support our local QSO. I like to use the highest band still below the FoF2 frequency over our location. As shown above, at the time I'm writing this, anything below 9MHz will likely work for a local QSO.

Using this tool, it is much easier to choose a band that will likely cover the range over which I want a contact. So for DX as shown in the first map (MUF) bands below 27 MHz are open for a 3000 KM path. Conversely, the FoF2 critical frequency for a NVIS or short path is below 9 MHz.

I hope you find this tool useful. It was a fun discovery that brought meaning to those licensing test questions.

Operating at the Bakersfield College Student Involvement Festival

Micah Martin, KN6VUT

The Bakersfield College Student Involvement Festival Thursday, August 31, 2023, from 9 a.m. to 1 p.m., Ray, W6QPA, and I manned a booth at Bakersfield College.

This was part of Bakersfield College's week of back to school events.



While Ray and I agreed we wouldn't be terribly busy, we thought it was a good opportunity to introduce college students to Ham Radio

We brought our usual items for demonstration, I brought my SSTV demonstration equipment. Ray brought a home built radio, tablet computer and a Mag-loop antenna to demonstrate FT8. Ray, was able to show students how far our signals reached without the internet or

satellites by showing his FT8 signals being received across the US, Alaska, and even made a contact with a Hawaii station while students were watching.

I also set up my mobile 25 watt and hung a J-Pole from a tree.

Contrary to our expectation, we were so busy I never did demonstrate SSTV. We had students talking on my mobile using the WIN system as well as the W6SLZ 2-meter repeater. A few times, we even had a line waiting!



A few Hams from Bakersfield dropped by to see what we were doing. They ended up talking to students as well.

My failure as our Public Information Officer was actually not being positive enough about the interest we had from Bakersfield College. We quickly ran out of the flyers I had put together for the event, then the extra fliers I had in my bag. By the end, we were down to my supply of business cards, and having students use their phones to capture the QR Codes I had made for the club and hung from a sign.

We were surprised that few had heard of "Ham" radio, or even CB radio, just walkie talkies for kids. There were maybe three that had heard of Ham radio when I mentioned the series "Stranger Things, Walking Dead" or the movie "Frequency" The students were amazed by the distance and ease of use to talk long distance (Using the WIN system and the local repeaters)

The fact it worked without Internet or cellular service was amazing to them.

I believe that Ray said it best, "Ham radio is so old it's new again"



We were visited by a reporter from the Bakersfield College Renegade Rip, Jorge Gutierrez, who wrote a story about our efforts to grow the club and get younger members. His story was picked up by the ARRL newsletter, which of course lets even more people know we're active.

I believe, High School and College is where we should push for members as aggressively as possible.

Below are photos of the booth.



ARRL Contest Calendar

This page provides a summary of events sponsored by the ARRL, the national association for amateur radio. The most current information is on the website at:

<http://www.arrl.org/contest-calendar>.

Another source for contest and on-the-air activity is WA7BNM Contest Calendar at <https://www.contestcalendar.com/weeklycont.php>

October 2023

- 1-2 [Collegiate QSO Party](#)
- 16-20 [School Club Roundup](#)
- 28-29 [EME - 50 to 1296 MHz](#)

November 2023

- 4-6 [Nov Sweepstakes-CW](#)
- 18-20 [Nov Sweepstakes-Phone](#)
- 25-26 [EME - 50 to 1296 MHz](#)

December 2023

- 1-3 [160 Meter](#)
- 9-10 [10 Meter](#)
- 17 [Rookie Roundup-CW](#)

TARA Calendar

This page is a summary of events sponsored by or involving our club.

All dates are subject to change. Please check the club Facebook and [website](#) for updates.

October 2023

- 4, 11, 18, 25 – 1900 hrs PDT “Just Because” Net (W6SLZ VHF rpt, 146.70 - / 123.0)
- 5 – 1900 hrs PDT, TARA Board Meeting, Via Zoom (invite via email)
- 14 — 0830 hrs PDT, TARA Club Breakfast at Denny’s 847 Magellan St, Tehachapi, CA
Reserve a spot with [Valerie Mason](#) by 11 October
- 12 – 1900 hrs PDT, TARA Club Meeting, Tehachapi Police Department Conference Room, 220 W C St, Tehachapi.
- 14 — 1100 hrs PDT — VE License Exam Session Salvation Army Community Room 538 E Tehachapi Blvd, Tehachapi, CA
- 19 — 1019 - 1049 PDT —The [Great California Shake-out](#)
- 28 — 0800 hrs PDT, TARA Club Breakfast at BVS Mulligan Room. Reserve a spot with [Valerie Mason](#) by 25 October

November 2023

- 1, 8, 15, 22, 29 – 1900 hrs PDT (PST after 5 November) “Just Because” Net (W6SLZ VHF rpt, 146.70 - / 123.0)
- 2 – 1900 hrs PDT, TARA Board Meeting, Via Zoom (invite via email)
- 9 – 1900 hrs PST, TARA Club Meeting, Tehachapi Police Department Conference Room, 220 W C St, Tehachapi.
- 11 — 0830 hrs PST, TARA Club Breakfast at Denny’s 847 Magellan St, Tehachapi, CA Reserve a spot with [Valerie Mason](#) by 8 November
- 25 — 0800 hrs PST, TARA Club Breakfast at BVS Mulligan Room. Reserve a spot with [Valerie Mason](#) by 22 November.

December 2023

- 6, 13, 20, 27 – 1900 hrs PST “Just Because” Net (W6SLZ VHF rpt, 146.70 - / 123.0)
- 7 – 1900 hrs PST, TARA Board Meeting, Via Zoom (invite via email)
- 9 — 0830 hrs PST, TARA Club Breakfast at Denny’s 847 Magellan St, Tehachapi, CA Reserve a spot with [Valerie Mason](#) by 6 December.
- 14 – 1900 hrs PST, TARA Club Meeting & Christmas Party, Location TBD.
- 30 — 0800 hrs PST, TARA Club Breakfast at BVS Mulligan Room. Reserve a spot with [Valerie Mason](#) by 27 December.

Reference Information

Local Repeater Information				
BVS APRS Digipeater	144.390	No tone	WA6LDQ-3	APRS
BVS Repeater Backup Freq.	146.700 145.580	123.0 Hz Tone Simplex	W6SLZ	Open Machine
BVS Repeater	440.625	100.0 Hz Tone	W6SLZ	Open Machine (WIN System node)
Tehachapi Repeater (Cummings Mtn.)	442.925(+)	141.3 Hz tone	KI6HHU	On the KERN System
Tehachapi Repeater (Double Mtn.)	446.320(-)	151.4 Hz tone	KI6HHU	On the KERN System
Tehachapi Repeater	444.225	100.0 Hz TONE	KG6KKV	Overlooks Bakersfield

Local Repeater Information				
DMR Repeater	442.675	Offset: +5.000 ColorCode: 1	K6RET	Brandmeister, Bakersfield, CA The location is in the Tehachapi Mountains near Cummings Mountain
DMR Repeater	447.120	Offset: -5.00 ColorCode: 1	KR6DK	Brandmeister, McKittrick, CA The location is in the Tehachapi Mountains near Double Mountain This repeater is permanently linked to the KR6DK analog repeater system.
Tehachapi Simplex	145.58	No Tone		Local Simplex
Tehachapi Simplex	146.54	No Tone		Local Simplex

In addition to the repeaters listed above the following repeaters, part of the Kern System, can be reached from locations throughout the Tehachapi area and much of the San Joaquin Valley. They are linked together and more information may be found at <http://www.KernSystem.org>

<u>KERN System Linked Repeaters</u>				
Frazier Mountain (8,000')	447.860	141.3 Hz Tone	KK6AC	Jerry Garis
Cummings Mountain (7,800')	442.95	141.3 Hz Tone	KI6HHU	Lee Bouchard
Double Mountain (8,000')	446.320	151.4 Hz Tone	KI6HHU	Lee Bouchard

<u>ARRG Linked Repeaters</u>				
Cummings Mountain (7,800')	444.425	100 Hz Tone		

ATTENTION:

For those interested in monitoring dispatch for the Bear Valley Springs Police Department

- KCSO Eastern Dispatch — 460.225
- KCSO East TAC — 460.125

All dispatch for BVSPD will be handled by the Kern County Sheriff’s Department

Club & Other Websites	
TARA website	http://www.ac6ee.org
TARA Facebook	https://www.facebook.com/TARatehachapiamateurradio/
Antelope Valley Amateur Radio Club (AVARC)	http://www.k6ox.club/index.html
Kern County-Central Valley Amateur Radio Club (KCCVARC)	http://www.w6lie.org
ARRL	http://www.arrl.org
West Kern County Amateur Radio Emergency Services (WKCARES)	http://westernkerncountyares.org/index.html

Officers & Committee Chairs			
Officer/Committee Chair	Name	Call	Email
President	Dan Mason	AB6DM	ab6dm@arrl.net
1st Vice President	Dan Mason (Interim)	AB6DM	ab6dm@arrl.net
2nd Vice President	Ray Gretlein	W6QPA	w6qpa@ac6ee.org
Secretary/Treasurer	John Dyer	KM6DXY	km6dxy@ac6ee.org
Technical Director	Dick Brown	W6SLZ	db24130@sbcglobal.net
Web Page & FaceBook Committee Chair	John Dyer	KM6DXY	km6dxy@ac6ee.org
Hospitality Committee Chair	Valerie Masson	KK6WLQ	val3mason@yahoo.com
Public Affairs Committee Chair	Micah Martin	KN6VUT	kn6vut@ac6ee.org

Meeting and Club Membership Information

The Tehachapi Amateur Radio Association meets every second Thursday of the month at 7:00 PM (except for July - no meeting). Our meetings are on Zoom and in-person, our meeting site is now the Tehachapi Police Department Conference Room, 220 W C St, Tehachapi.

Member Annual Dues: \$25.00/year

Additional Family Member: \$12.50/per person

Membership Application

Download a copy of our Membership Application [here](#). Please share this with any friends, family or neighbors that are either hams or may be interested in amateur radio. Applications are accepted at all club meetings or you may mail your application along with the applicable dues to the club Post Office Box:

Tehachapi Amateur Radio Association (TARA)
P.O. Box 134
Keene, CA 93531