



MTARA NEWS



President Lorna's KJ6GFS Message

Hello, MTARA members ~~

September has been, due to the Radford fire, a challenging month for our members who live in the Big Bear area. The good news is that the fire has been totally contained and is expected to be fully extinguished by the end of the month. We're relieved that none of our members suffered more than the **major** inconvenience of evacuation, and were able to return safely to their undamaged homes.

Route 66 On The Air was fun. With Tracy (WM6T) helping me, I was able to make 71 contacts all over the country (well, maybe not Alaska or Hawaii) over the course of 95 minutes. Lots of hams wanted to connect with Whiskey Six Charlie. Good practice in dealing with pile-ups !

It was a disappointment to learn earlier this month that MTARA members won't be needed to assist with the Big Bear Gran Fondo race on October 8. I've enjoyed working it in the past and hope we get an opportunity to help in the future.

Among several activities coming up next month is the Great American Shake-Out on October 20. Since the last MTARA newsletter, there have been several major earthquakes around the Pacific Rim. While these may not impact Southern California, they are important reminders of the need to be prepared for a major quake. Following the Shake-Out on Thursday, October 20, a CERT ECS exercise will be held on Saturday, October 22, with several MTARA members who are also in CERT participating. Anything learned from the ECS exercise that is pertinent to MTARA will be passed along to all MTARA members.

I'm hoping to see many of you at our next in-person meeting at the Lake Arrowhead Community Presbyterian Church at 7 p.m. on Tuesday, October 4.

Seven Three, Everyone ~~ Lorna

Officers

- **President:**
Lorna Polley, KJ6GFS
- **Vice-President:**
Chet Olson, AE6CO
- **Treasurer:**
Nancy Karlson, K6CUB
- **Secretary/Newsletter**
Debbie Johnson, WB6LVC
- **Ed/Membership:**
Tracy Lenocker, WM6T
- **Past Presidents:**
John Snedden, KT7P
Vic Marquez, KK6WKI

The Rim of the World ARES group is an ARRL affiliated organization and part of the Mountain Top Amateur Radio Association

Monthly Club Meetings

Club meetings are held on the first Tuesday of each month. The meeting begins at 7:00 p.m. and lasts until approximately 9:00 p.m.

Our meetings are open to everyone; so bring a friend, and keep the hobby growing. There is always a presentation that will pique your interest and add to your knowledge.

All upcoming meetings, beginning with July 5, 2022, will be held at the Lake Arrowhead Community Presbyterian Church, 351 South State Highway 173, Lake Arrowhead, CA 92352

Membership

Membership in MTARA is open to any individual interested in learning more about Amateur Radio. An FCC issued license is not required, but is encouraged. Membership is on an annual basis, running for the calendar year. There are no prorated membership fees. Club fees are \$20.00 for a single membership and \$30.00 for a family membership. The necessary forms can be found on the club's home page @ MTARA.club. Current members only need to send in their dues to MTARA, PO Box 2441, Lake Arrowhead, Ca. New members will need to download and send in their forms and payment to the same address.



TREASURER'S REPORT

Our ending August Balance was

\$10,125

Income:

\$1,610 (\$1,500 from TdBB Contribution)

Expenses:

\$0

73, Nancy K6CUB

Local Weekly Nets

	Repeater	Time	Activity	Purpose
Monday	MTARA—2	7:00 p.m.	Weekly Check-In	MTARA News
Monday	144.330 MHz	8:00 p.m.	“Gordo Net”	Simplex Readiness
Tuesday	MTARA—5	7:00 p.m.	“Debbie Net”	Educational Topics
Wednesday	HF	7:30 p.m. First Wednesday	7.223 MHz	Band(s) Status
Friday	MTARA—5	5:00 p.m.	YL Happy Hour	It’s Friday
Daily	CBARC	7:00 a.m.	Tech. Net	Elmer Sessions

Upcoming Calendar Of Events

- October 1-2—ARRL Simulated Emergency Test
- October 14-16—Pacificon Amateur Radio Convention, San Ramon, CA
- October 14-16—Scouts Jamboree On the Air
- October 17-21—School Club Roundup
- October 20—Great American Shake Out @ 10:20 a.m.
- October 29-30—CQWW DX SSB Contest

W6C— ROUTE 66 ON THE AIR by WM6T

This was a very good year for participation during Route 66 On The Air. MTARA members, Vic, KK6WKI, Jim, KM6YBZ, Ed, KM6UWI, Gary, AA6GJ, Paul, KN6PH, Greg, AJ6FN, Lorna, KJ6GFS, Ginger, KN6TJT and Tracy, WM6T were on the air. They were on multiple bands and modes. The modes included SSB, FT8 and CW. There were several CBARC member on the air as well. they included Mike, W6WAR, Ken, WU6I, Carolyn, KG6YUM and Dirk, N6UNH. There may have been a few others who did not post their names.

And there were members who just made contacts and were not runners. Making contacts is also a lot of fun.

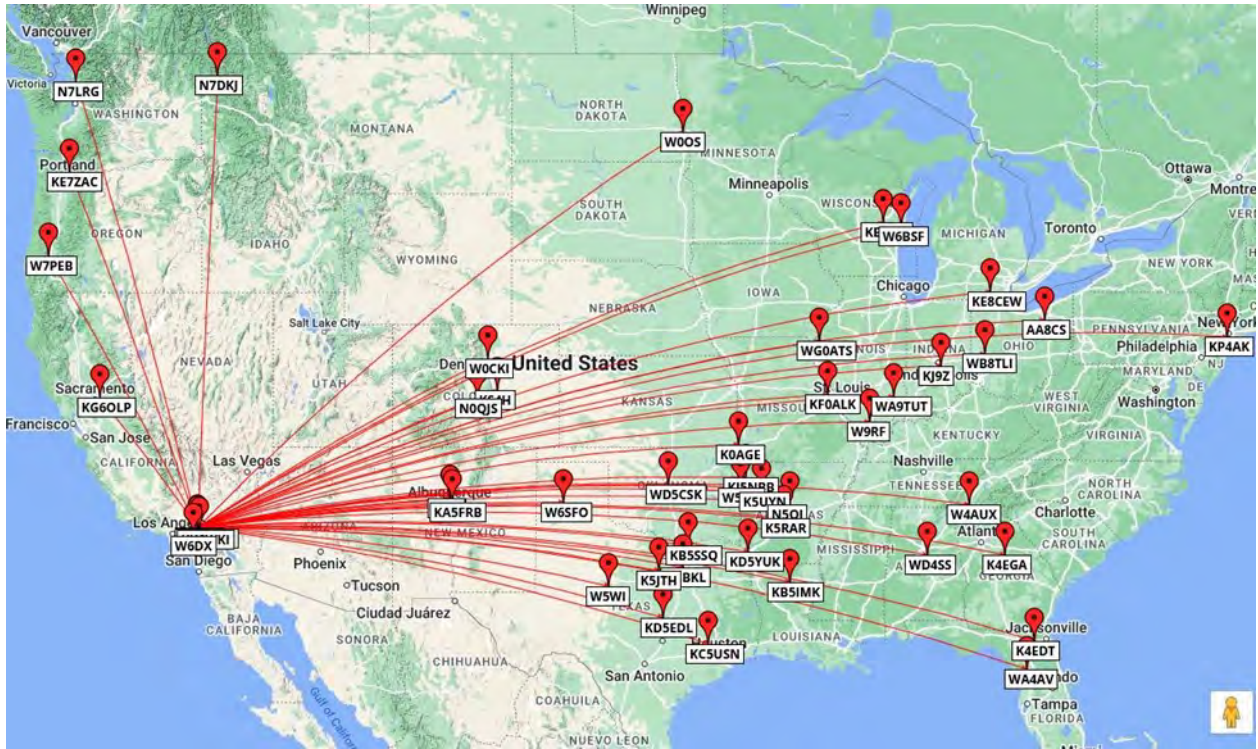
I had the opportunity to do a bit of contest training this year. Both Lorna, KJ6GFS, and Ginger, KN6TJT came over to the house on different days to get on the air. We started with an overview of the radio equipment. I explained that I would do their logging for them as they would be busy with pileups. The log was on the screen directly in front of them so they could see the calls and respond. Both had on Heil headsets and used a foot switch so they had their hands free. I monitored with headphones. We practiced off the air first with them just reading the script and I pretended to respond. That gave them an idea of what it would be like a few minutes later when they got on the air.



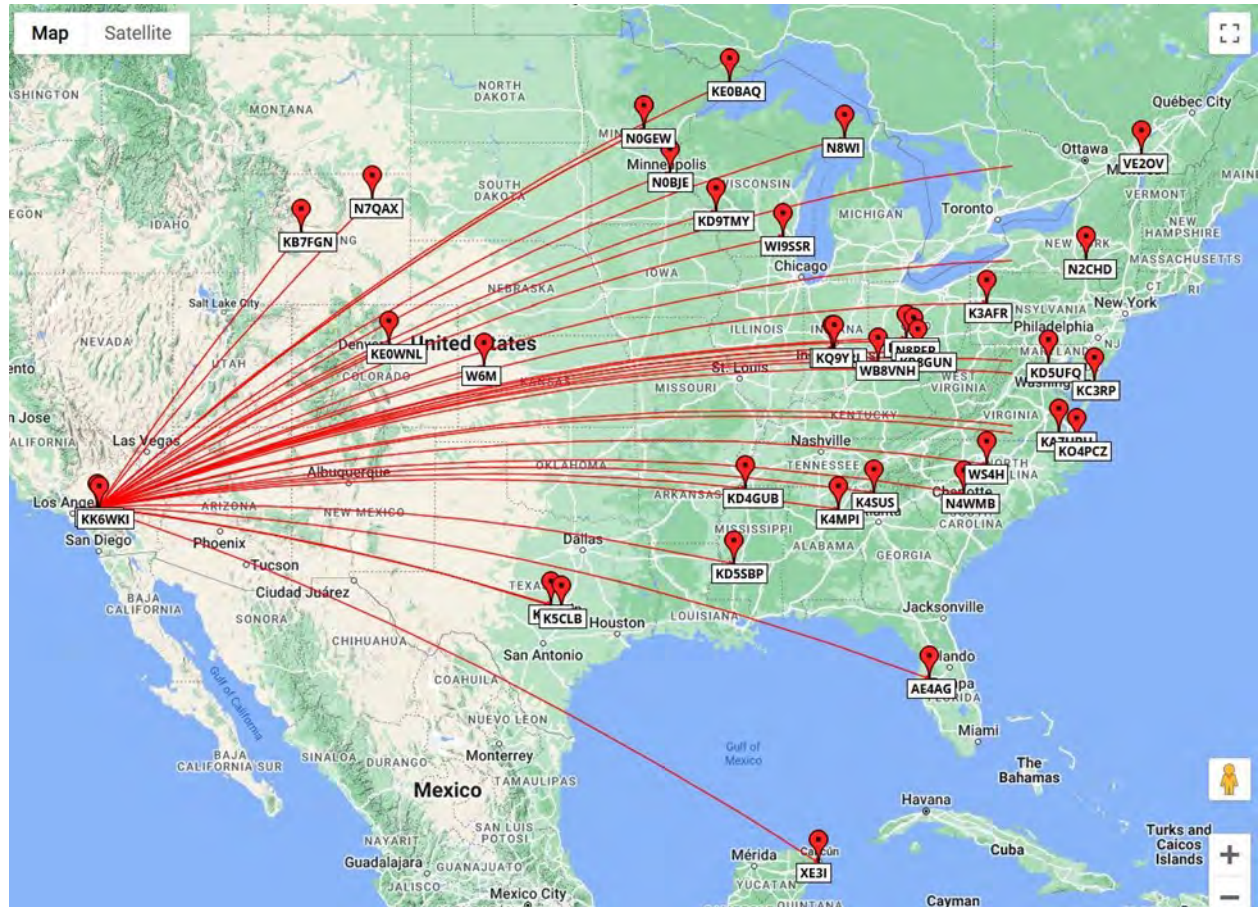
To help them along, Vic, KK6WKI, Denise, N6DEE and Gail, KM6GBN responded to the W6C CQ call. This gave Lorna and Ginger a contact with a known person to get over any mike fright as they stepped in to the pileup pool. Both Lorna and Ginger did very well. It was evident as time went by that they got the hang of responding to the callers with the script in front of them. The hour passed by fast, well maybe not fast enough with all those pileups.

Lorna made 71 contacts in 95 minutes and Ginger made 36 contacts in 36 minutes. The maps of Lorna's contacts and Ginger's contacts are shown below respectively.

We now have two more MTARA members who can run a contest. Congratulations to both Lorna and Ginger and of course to everyone else who participated.



Lorna's Contact Map



Ginger's Contact Map

Ponder the Pool by AA6GJ

Ponder the Pool is a way for us as Amateur Radio Enthusiasts to dive into selected questions more deeply from each of the current FCC pool of questions used to create the randomly generated Examinations for the Technician, General, and Amateur Extra License. Ponder the Pool is helpful to individuals who are studying for an exam or simply to review concepts that we have already learned. Because, as we know, if

We don't use it, we lose it

The question we will ponder today comes from the current Technician Class pool.

Question: **T8D13 – What is FT8?**

I found a great article on Wikipedia on which I simply could not improve. The following is that article with all credit and references thereto appertaining:

***FT8 or Franke & Taylor 8** is a frequency shift keying digital mode which was released on June 29, 2017, by the creators Joe Taylor, K1JT and Steve Franke, K9AN along with the software package WSJT.^[1] FT8 is a popular form of digital weak signal communication used primarily by amateur radio operators to communicate on amateur radio bands with a majority of traffic occurring on the HF amateur bands.^[2] The mode offers operators the ability to communicate in unfavorable environments such as during low sun spot numbers, high RF noise, or during low power operations.^[3] With advances in signal processing technology FT8 is able to decode signals down to -20 dB, which is significantly lower than CW or SSB transmissions.^[4] The mode works by sending signals in 15-second-blocks with 12.64 seconds of transmission time and 2.36 seconds of decode time, this gives the mode five words per minutes effective transmission.^[1] FT8 features: – Very narrow bandwidth (50 Hz) • 8 tones, spaced 6.25 Hz apart.*

The mode requires each computer to be synced up in time with each other with most users making use of either NTP or GPS to ensure transmissions fall in the proper window, usually less than one second. This allows FT8 transmission to support up to 13 characters, the mode uses forward error correction to ensure proper transmission and decoding. As the mode is quite limited in the number of words that it can send, it only sends enough information to ensure a contact with each station. There are multiple uses for FT8 including contesting,^{[5][6]} testing antennas,^[7] and for scientific research.^[8]

As mentioned in the above article, FT8 is a perfect mode for contesting. In the latest “Route 66 On-The-Air” contest, I operated for several hours on multiple days utilizing FT8. The exchange between stations is always the same whether contesting or not. It is: Universal Coordinated Time (UTC), Signal Strength of the received station in dB, the time differential (DT) between the receiving station and the transmitting station in milliseconds (mS), Frequency, and Message.

A typical Exchange is below. I was calling CQ as W6C (DM14 is my Maidenhead Grid Square position on the map.) The frequency of 2400 Hz. is audio frequency shifted tone. You can actually hear the 8-tone “warbling” that creates the digital message. KI6AFB then responded. His location was DM79. His signal strength was -17, pretty

weak. The time differential was about 600 mS and he was transmitting on a slightly different frequency. In the third exchange, I gave him his signal strength (-17). On the fourth exchange, he “Rogered” my transmission and gave me my signal strength (R+03). On the fifth exchange, I “Roger Rogered” all of it and sent “Best Wishes” (RR73). On the sixth and final exchange, he wished me 73. That was the end of the QSO. Each transmission was about 15 seconds for a total time of 90 seconds for the whole QSO.

UTC	dB	DT	Freq.	Message
030815	Tx		2400	- CQ W6C DM14
030830	-17	0.6	2399	- W6C KI6AFB DM79
030845	Tx		2400	- KI6AFB W6C -17
030900	-22	0.6	2398	- W6C KI6AFB R+03
030915	Tx		2400	- KI6AFB W6C RR73
030930	-24	0.6	2399	- W6C KI6AFB 73

Typical QSO—About 90 seconds in length



In the photo above at the top you can see all of the signals that were present. In the lower left is the WSJT-X FT8 Display and at the lower right you can see my log.

Needless to say, there is a lot more to this than I have presented here. Maybe someday we can go over all of it at a club meeting for all who might be interested.

So, until that time:

The official answer to this question is:

T8D13 – A digital mode capable of low signal-to-noise operation

That's *Ponder the Pool* for another month. I hope it was helpful. Stay tuned, next month we will come up with another question to ponder. 73 – Gary
If you have any questions or comments, drop me an email at AA6GJ@arrl.net



Gary, AA6GJ operating FT8 mode as W6C for Route 66 On-The-Air 2022

References:

1. [Jump up to:²](http://site.ieee.org/msn/files/2019/04/FT8-KA9SWE.pdf) Burmester, Dale March 12, 2019. Amateur Radio Digital Communications Mode FT8. <http://site.ieee.org/msn/files/2019/04/FT8-KA9SWE.pdf>
2. Luscre, Anthony (2019-10-11). "FT8—What Is It and How Can I Get Started?". *OnAllBands*. Retrieved 2022-08-17.
3. "FT8 – Signal Identification Wiki". www.sigidwiki.com. Retrieved 2022-08-17.
4. "FT8 Mode is Latest Bright Shiny Object in Amateur Radio Digital World". www.arrl.org. Retrieved 2022-08-17.
5. "FT8/FT4 from a contester's perspective – VA7ST.ca". Retrieved 2022-08-17.
6. "ARRL Surveying Field Day Participants". www.arrl.org. Retrieved 2022-08-17.
7. "FT8". www.rtl-sdr.com. Retrieved 2022-08-17.
8. Erickson, P.; Liles, W.; Miller, E.; Miller, E. (2020). "Amateur digital mode based remote sensing: FT8 use as a radar signal of opportunity for ionospheric characterization". hamsci.org.

Amateur Radio Exams Now Online or In-Person!

No Paper! All Electronic! Very Cool!

with K6DDZ & AA6GJ

Now that MTARA is back in-person for meetings, amateur radio testing will be offered before each meeting. Testing will cover all three elements (Technician, General and Amateur Extra). Remote (online) testing is also available by appointment.

Registration should be completed online so we can plan for our session. Walk-ins may be accepted if time permits. Space is limited.

To Register:

***Go to HamStudy.org to “Find a Session.”**

***Choose the MTARA Monthly Meeting by Choosing Your Location or Zip Code.**

***Register: Please make certain that your address matches the information in the FCC website. A photo ID will be required for testing.**

***Payment of \$14.00 CASH will be collected during the test session.**

Testing will be on tablets which will be provided. There will be no paper tests. Anyone may also test on their own tablet, laptop or phone. Calculators are permitted. Results will be immediate.

If you have any questions about testing or problems setting up your FCC Registration Number, please contact DedeK6DDZ@gmail.com.

And if you are DTH (Down the Hill)

You can test all classes of license with the

West End Amateur Radio
Group



That's my team AA6GJ and the Group

If you are interested drop me an email at AA6GJ@arrl.net to set a time, either online or in-person or to just get information. We can help you with your FRN, too.

73,

Gary

<https://GaryRJohnson.org>

Mountain Top Amateur Radio Association

The Amateur's Code by Paul M. Segal, W9EEA (1928)

The Radio Amateur is:

CONSIDERATE never knowingly operating in such a way as to lessen the pleasure of others.

LOYAL offering loyalty, encouragement and support to other amateurs, local clubs and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

PROGRESSIVE with knowledge abreast of science, a well built and efficient station, and operation beyond reproach.

FRIENDLY with slow and patient operation when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

BALANCED Radio is an avocation, never interfering with duties owed to family, job, school or commu-

MTARA Shirts, Jackets, and More

We have many items available with our club logo.

The information for ordering is as follows:

- Name Tags—Harlan Technologies, Name Tags by Gene (715) 340-1299, www.hampubs.com
- Mouse Pads—Check with Jodi, WA6JL
- Polo Shirts—Port Authority K420P Dark Green, L420 Dark Green, K100LS Dark Green.
- Jackets—Forest Green or Black. Sizes Small to 6X
- Contact:

Hurt Ink

2651 Coleen Lane

San Bernardino, CA 92407

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hurtink815@gmail.com

www.hurtink.com

