



# The President's Message

Hello, MTARA members ~~

June and July have been busy months for MTARA members. Field Day at the Masonic Lodge in Twin Peaks and the July 2 Fireworks over Lake Arrowhead both went very well. We're looking forward to participating in Running Springs' Mountain Top Days Parade on August 4 and the Tour de Big Bear on August 5. More volunteers are still needed for both events. If you'd like to help out, please contact Tracy.

Those who attended our July meeting heard Tracy's presentation on ///what3words, a fascinating location application for smart phones and desktops. It's a system that can identify any location on the Earth's surface with a resolution of about three square meters. Tracy reported on how his use of the application enabled him to guide an emergency helicopter to the exact site of an injured racer, where the pilot was able to lower the rescue team straight to the victim, despite being unable to see the ground through the dense trees. If you didn't hear Tracy's presentation, Google ///what3words. You'll find it interesting.

Our next meeting will be at the Lake Arrowhead Community Presbyterian Church at 7 p.m. on August 1. Hope to see you there.

Seven Three, Everyone ~~ Lorna

PS: My location at the moment is ///silt.abortive.disputes. Thought you'd want to know.

#### **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

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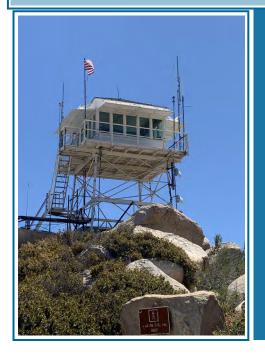
Club meetings are held on the first Tuesday of each month. The meeting begins at 7:00 p.m. and lasts until approximately 9:00 p.m.

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 beginning July Balance was:

\$13.664

Income:

\$475

Expenses:

\$2570

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
Wednes- day	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

- Year-Long Activity "Volunteers On The Air" VOTA vota.arrl.org
- August 1-MTARA Club Meeting
- August 4—Mountain Top Days, Running Springs
- August 5—Tour de Big Bear, Big Bear
- August 5, 6—ARRL 222 MHz and Up Distance Contest
- August 5, 6—North American QSO Party—CW
- August 12,13—ARRL EME Contest—2.3 GHz and Up
- August 19, 20—ARRL 10 GHz and Up Contest—Round One
- August 19, 20—ARRL North American QSO Party—SSB
- August 20—Rookie Round Up—RTTY

# Field Day—June 24, 2023 by WB6LVC

Bright and early, on a beautiful Saturday morning, Gary and I drove up to Twin Peaks to the Masonic Lodge to help set up the club's Field Day activities. It was very warm down in the "Flat Lands," so we were very happy to be up in the cool mountains, enjoying a lovely breeze as centers were set up for each of the topics that were to be shared that day. Outside, in front of the lodge, there was one station, HF, set up by Vic/KK6WKI, the Welcome Tent and a VHF station, around the corner, manned by Craig/KK6APH. Behind the lodge, Gary set up his solar-powered/Bioenno battery to power his radios and his computer on which he was running FT8. Inside, there were numerous educational centers including: Morse Code, Snap Circuits, soldering, installing Anderson Power Poles and much more. As always, there were an abundance of items on the "Free" and "For Sale" table.

This year, Dede/K6DDZ was the CVE for anyone who wished to take a test. There was one very patient and successful candidate. After working around some Wi-Fi issues, Kenny/KM6WVK passed his General!!! The testing team, consisting of Dede, Nancy, and myself, along with support from our club president, Lorna could not have been happier for him.

At the end of the scheduled activities, there were, of course, our famous club raffles. Two types of raffles were held. The first one was for the General Raffle prizes. The second drawing was for the Grand Prize Raffle. (You had to be present for this one.) Below is a list of what was given away.

\*\*\*\*Grand Prizes (one ticket per attending club member, must be present to win)

Kenwood TM-V71 Base/Mobile Transceiver---Lorna/KJ6GFS
Bioenno Folding 28 Watt Solar Panel---Chrystal/KK6API ... And Craig/KK6APH won the <u>The ARRL</u> Handbook 2023 100th Editiion
Powerwerx PWRbox Portable with a Bioenno 12 AHr Battery---Patty/KK6LWH
Bioenno 3.0 AHr---Bill/KK6TVB
Bioenno 12.0 AHr Blue---Debbie/WB6LVC

\*\*\*\*General Prizes (one free ticket per person after attending the two mandatory stations and up to 3 more stations on the Adventure Pass – at least 5 stations total.)

Bioenno 12.0 AHr Black
Baofeng UV-5x3 (Triband) x Four Radios Available
Battery Buddy x Two Available
Full Size G5RV Antenna
G5RV Junior (Kit)
ARRL Items

Field Day Shirt – Large Field Day Shirt – X-Large Field Day Hat Field Day Hat

All in all, a great day was had by all. Thanks so much to all of the volunteers who helped with set-up and tear down, leading seminars, helping others with "hands on" activities and, most importantly, to Jaye and all who helped her with all of the meals and snacks. Such Comradery! That's what it's all about.

Here are a few snaps of the day, including the winners...and the losers. (All in fun.) Hope to see you next year at another great MTARA Event!







## PONDER THE POOL by AA6GJ

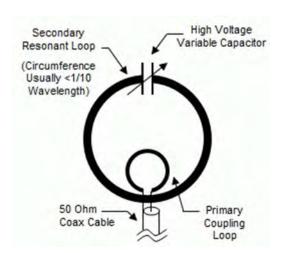
Ponder the Pool is a way for us as Amateur Radio Enthusiasts to dive into selected questions more deeply from each of the current FCC pool of questions used to create the randomly generated Examinations for the Technician, General, and Amateur Extra License. Ponder the Pool is helpful to individuals 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.

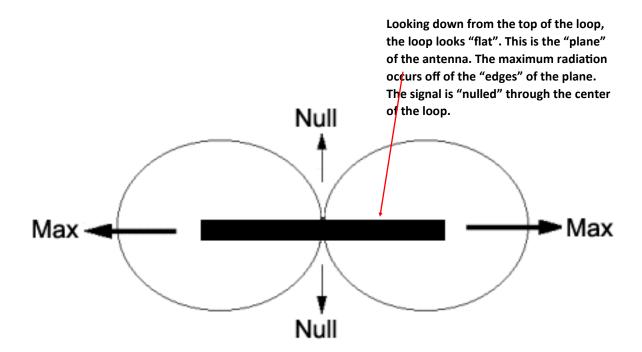
We will ponder this question from the NEW General Class License Pool:

G9D10 – In which direction or directions does an electrically small loop (less than 1/10 wavelength in circumference) have nulls in its radiation pattern?

A small magnetic loop antenna is an easy and cheap antenna to build. It can be used for transmitting and receiving signals in the HF band<sup>1</sup>. The basic configuration of an inductive-fed small magnetic loop consists of the main loop, coupling loop, and a capacitor - fixed or variable. This antenna requires no grounding or counterpoise since it is a resonant circuit. Performance is not limited by low height. The main loop can be configured as an octagon, circle, or square<sup>12</sup>.



Near field radiation patterns of a magnetic loop antenna are mainly in the plane (the flat side) of the loop. Not through the center. Facing the center of the loop at a noise source can help to <u>null</u> out interference caused by noisy electronics. Far field radiation patterns of a MagLoop magnetic loop antenna are mainly in the plane of the loop<sup>3</sup>.



There are a lot of misconceptions about small loop antennas. Small loop antennas are often referred to as magnetic antennas. This is because they mostly respond to the magnetic component of an electromagnetic wave and transmit a large magnetic component in the extreme near field (<1/10 wavelength distance). I

In the far field (>1 wavelength distance) the RF from a small loop is the same as that from any other antenna being composed of both electric and magnetic fields. In fact, at distances between about 1/10 and 1 wavelength it responds more to the electric field than the magnetic! It is often believed that magnetic antennas will not respond to local noise because local noise is mostly composed of electric fields.

This is **ONLY** true if the offending source is in the extreme near field (reactive field) of the loop antenna **AND** if the source is truly of electric field origin. An example of this might be a high impedance power transmission line that had an arcing insulator and was right next to the antenna. In this case, a small loop may not respond to the interference as much as say a dipole would. The same cannot be said if the offending transmission line was miles away. This is because you cannot have a time varying electric field without generating a time varying magnetic field and vice versa. This is basically what generates an electromagnetic wave anyway. It is worth noting though that due to the two sharp nulls in the small loop's radiation pattern it is very easy to null out local interference while still obtaining large azimuth coverage area. Also, unless the loop contains a well-balanced capacitive (electric field) shield, it may still respond to very close electric fields due to capacitive coupling. Small loop antennas usually have higher signal-to-noise ratios than larger antennas<sup>6</sup>.

That is why the official answer is:

## G9D10 - Broadside to the loop

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

- (1) Small Magnetic Loops K5IJB Webclass.org. http://webclass.org/k5ijb/antennas/Small-magnetic-loops-K5IJB.htm.
- (2) Small Magnetic Loop Antennas Webclass.org. http://webclass.org/k5ijb/antennas/Small-magnetic-loops.htm.
- (3) Tips for using a Magnetic Loop antenna MagLoop. https://alphaantenna.com/community/hints-and-kinks/hf-magnetic-alpha-loop-magloop-antenna/tips-for-using-a-magnetic-loop-magloop-antenna/.
- (4) Patterns and Polarizations of Modestly Sized Loop Antennas ARRL. https://www.arrl.org/files/file/QEX\_Next\_Issue/Sept-Oct%202019/Emerson.pdf.
- (5) Small Magnetic Loop Antenna Theory Webclass.org. <a href="http://webclass.org/k5ijb/antennas/Small-magnetic-loop-theory.htm">http://webclass.org/k5ijb/antennas/Small-magnetic-loop-theory.htm</a>.
- (6) Small Transmitting Loop Antennas Steve Yates, AA6TB AA5TB Small Loop Antennas



Here are a couple of photos of me using my AlexLoop on Field Day. I know it's hard to see which is another reason to use a loop antenna. They are stealth!

# Amateur Radio Exams Now Online or In-Person! No Paper! All Electronic! Very Cool! with K6DDZ & AA6GI

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.

For MTARA in-person or remote testing, please go to **K6DDZ.com - Amateur Radio Testing Made Simple.** 

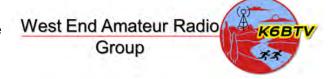
#### **ONLY ONE CLICK** to:

Order Gordon West's study materials
HamStudy.org Practice Tests (all levels)
Schedule a Test (in-person or remote)
Get Your FCC Registration Number (FRN)
Pay for Your Test
...and even click to Gary's (AA6GJ) video training for more in-depth knowledge

Let's keep it simple! Any questions, email Dede Hermon at <a href="DedeK6DDZ@gmail.com">DedeK6DDZ@gmail.com</a>

#### And if you are DTH (Down the Hill)

You can test all classes of license with the



That's my team AA6GJ and the Group

If you are interested drop me an email at <a href="mailto:AA6GJ@arrl.net">AA6GJ@arrl.net</a> 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 510L Dark Green, 510K Dark Green, Long Sleeve Dark Green.-Check with Brandy
- Jackets—Forest Green or Black J317. Sizes Small to 6X
- Brandy will also embroider hats. You must supply the hat.
- Contact:

Hurt Ink
2651 Coleen Lane
San Bernardino, CA 92407
(909) 815-6852
hurtink815@gmail.com
www.hurtink.com

