



MTARA NEWS



| APRIL 2021 | [Mountain Top Amateur Radio Association](#) |

President: Vic Marquez, KK6WKI

Secretary: Dave Esquer, K6WDE

Ed/Membership: Tracy Lenocker, WM6T

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

Vice President: Gary Johnson, AA6GJ

Treasurer: Patty Szychowski, KK6LWH

Past President: John Snedden, KT7P

President Vic's Message

Greetings from your President, Vic, KK6WKI.

FREE IS GOOD. Back in February, Tracy WM6T, did a two part zoom presentation on battery and solar power supplies. Part 1 began with some very basic ways to set up a battery system for home, field or mobile use. Some of the components in his presentation included a Bioenno battery and a couple of different battery boxes. We all know the importance of having a back up power supply at home as well as a portable power supply for field operations.

I purchased a 30 amp [Bioenno battery](#) and charger for \$294.76 with our club discount and a battery box from [Powerwerx](#) that was \$128.61. Before that I used three 12



volt, 7 amp sealed lead acid batteries inside a [Harbor Freight ammo box](#) wired in parallel giving me 12 volts, 21 amps. The ammo box was on sale

for \$3.49 and the batteries were free, they were left over from a Sea Cadet training. When I was using the SLA battery box, I also used a Buck Boost to provide 13.8 volts to my radio, something you do not need when using a Bioenno battery.

The week prior to Tracy's presentation, Kevin from Bioenno Power gave a presentation on their products and if you watched it, you would understand why a Bioenno battery is far superior to any lead acid battery for use with amateur radio but if a Bioenno battery cost more than you want to spend at this time or if you want a back up battery to your back up battery, here is another option.



The club has acquired some sealed lead acid Batteries. Ed,

KM6UWI has a neighbor/friend that has a security company that provides security bracelets for newborns in the hospital. Due to the extreme importance of security to newborns, the back up batteries for the system are changed out annually. The batteries that are changed out are still in good

condition and have plenty of life left in them. Ed was giving approximately 40 batteries. The batteries are FREE to club members.

If you wish to make your own economy battery box, there are several options, Harbor Freight has two sizes of ammo boxes that work well, the smaller box will hold three batteries and the larger one will hold four (28amps). If you choose to build a more elaborate box, you can go to the Powerwerx website and select from several DC power products.

Stay radio-active and as always, **if you see something, say something!**

73, Vic

Monthly Club Meetings

Our monthly meetings are on the first Tuesday of each month. **April 6 is our next Zoom meeting.**

The virtual meetings begin at 7:00 p.m. and last until about 8:00 p.m. Our meetings are open to everyone, licensed amateur radio or just interested parties. Our purpose is to provide educational opportunities,

MTARA NEWS

| APRIL 2021 | [Mountain Top Amateur Radio Association](#) |

mentoring, radio communication training and radio communications for community events.

For our virtual meetings, interested parties, NOT members of the club, will need to email tracy@lenocker.com with their name and callsign. The credentials for the meeting will then be emailed to that person.

See and hear you soon!

Treasurer's Report - KK6LWH

Our opening February 1 balance was \$10,001.92, deposits for February were \$610.00. There were no expenses for the month and the total funds on deposit in our account is now \$10,611.92 as of March 2.

73, Patty

Online Zoom tech meetings

Our Zoom meetings are on THURSDAYS at 2:00 p.m. Check out the MTARA Website home page for a listing of what each of the presentations will be about. If you need help setting up Zoom on your laptop or smart phone please contact Tracy, WM6T, who will help you get set up and running.

More Construction Tips with Greg! - AJ6FN



Use drinking straws to keep your cables organized.

(Source: Instructable by mikeasaurus)

Use bread clips to mark cords/cables in the ham shack.

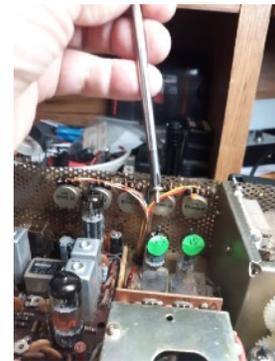


(Source: Pinterest)



Use thin strips cut from a brown paper bag or the strips cut from unprinted portion of textured white

business cards to clean relay contacts. This method will clean and burnish contacts without removing any contact plating. Snip off the dirty tip of the strip and continue burnishing until the paper comes through the contacts clean. (Arnie, KD6CZ)



A tiny drop of grease on the tip of a Phillips screwdriver will hold a screw to the screwdriver in order to reach down into a space too small to

reach into. (Source: Arnie, KD6CZ)

- 73, Greg

From the Editor - K6WDE

It's time for a changing of the guards! I am looking for a replacement newsletter editor. As with all things in life, change is good and a talented editor is lurking in the MTARA membership. I have committed to the board to finish the first year's newsletters. I started with the June 2020 edition and will wrap up with the June 2021 edition. I am a Mac person, using Pages, but any word processing tool will do the trick, even one based on Microsoft products! I hope someone will step up and take the reins starting July 1, 2021. Thank you for the journey, its been fun!

MTARA NEWS

| APRIL 2021 | [Mountain Top Amateur Radio Association](#) |

Member Spotlight, Nancy Karlson - KJ6FQP

Nancy Karlson, K6CUB, approached this Spotlight opportunity with enthusiasm and a chronological outline of her life, practically authoring this article herself! It turned out to be a wonderful chance to share mutually and laugh together. I am so hoping to spend more time with her one of these days soon, out on a trail.



Nancy grew up in La Crescenta, CA in a loving home with her Mom, Dad, and younger brother. She was heavily involved with sports, hiking, church, YMCA, and Young Life. She participated in Blue Shadows Mounted Drill Team from age eight to sixteen, which involved riding horses at show events in sequenced formations, to either specific music or commands. Her favorite sports included softball

and volleyball which ended abruptly when she injured her shoulder. Nancy believes all things happen for a reason.

High school was challenging for Nancy as she found it “undesirable to go to classes”. She was not able to focus on much for more than ten minutes at a time. After attending three different high schools, she did graduate. She jests of preliminary ideas about becoming a either a Los Angeles Dodger or a Missionary, acknowledging neither one of those options were likely.

She attended six different colleges among three states and finished, at Cal Poly San Luis Obispo, with a Baccalaureate degree in Business/Accounting. After graduating, and six-weeks travel through Europe, Nancy went to work for Arthur Andersen, a public accounting firm for the next five years. She obtained her CPA license - after five attempts, she adds! Nancy

did not learn the name for her focal challenges, Attention Deficit Disorder (ADD), until her late thirties. Nobody knew the reason for her struggles when she was in school. It seems she operated to the beat of a different drum in an effort to overcome.

The next step for Nancy was her move into the banking industry where she worked at one institution in Pasadena for 28 years. She served on their Executive Team as the Chief Financial Officer! Her primary cardio exercise, those days, came from Board meetings and in-depth discussions with regulators. During that time, she married, divorced, and was consumed with work to the point that she would find herself in the shower doing calculations on her shower door.

Nancy passionately loves being outdoors. Her main refuge, during those stressful banker years, was taking off a couple of times each year to go warm water diving. Nancy is a certified, advanced scuba diver, having been down as far as the recreational dive limit, 120 feet! Her primary expeditions included “live-aboards” and resort diving in places such as Cozumel, Guanaja and Roatan in Honduras, the Caymans, Belize, Cay Sal Banks, Puerto Rico, St. Croix, the South and Central Bahamas. The objective: steep walls and big fish. The itinerary: dive, eat, sleep, repeat!

Intrigued, I asked about any particularly special moments during those adventures. Nancy’s scariest dive happened on her first ocean attempt, when she ran out of air and had to abort. Another time her jacket wasn’t holding air, necessitating the need to remove her weights so she could surface. The funniest moment was when she entered an ocean dive having suddenly realized that she had forgotten to connect her air hose. The most embarrassing time was when she could not find the live-aboard after the dive and had to surface for a visual. And her most momentous time was when Nancy was encircled by sharks. A valuable lesson that Nancy has learned, from the sum of her experiences, is to stay calm and to never over-react. These are but teasers of stories that will be wonderful to hear in more detail one of these days, when there’s time to relax and chat with this brave adventurous soul.

MTARA NEWS

| APRIL 2021 | [Mountain Top Amateur Radio Association](#) |

The animals Nancy lives with and loves are Rocky, an 11-yr old bichon who likes to talk, camp, and hike. Ruthie is a one-year-old bichon, who likes to chew everything and change the settings on her jacuzzi. And then there's Elske, her 16-year-old cat who likes to cuddle and change the 2nd hand on Nancy's wall clock. Elske is a Danish word, meaning Love. Nancy's lineage is from Denmark and Sweden.

In 2000 Nancy bought her cabin in Big Bear, as another get-away option. In her job at the bank, she had been working seventy-hour exhausting work weeks. This eventually led her to early retirement and permanently moving up to Big Bear Lake in 2017. She was ready, devoting the first eighteen months of her retirement to watching movies, playing guitar, holding choir practice with her pets, and avoiding ANYTHING that resembled a commitment.

After that, Nancy's volunteer journey began. She has found organizations that provide a place for people to unite with common interests and opportunities to build life-long relationships. The volunteers that she works with care about what they do. She joined CERT in 2019, (where she first met Dede, K6DDZ). Two other areas where Nancy volunteers with a passion, are both under the Southern California Mountains Foundation in Big Bear. For their [Discovery Center Program](#), Nancy serves on the Advisory Council, primarily helping in the Outpost store, Snowshoe tours, nature crafts and *Music in the Mountains*. For their [Trails Program](#), she serves on the Advisory Council, helping as a trail host.

Her physical activities include skiing and snowshoeing during winter, paddle-boarding during summer and hiking year-round. Hiking has been her constant sanctuary during the pandemic isolation. Nancy commented, *"aside from the beauty and tranquility, learning how to navigate the trails and arrive safely at a desired designation, has not necessarily been straightforward."* That is how Nancy's interest in HAM radio began. She wanted to enhance personal safety and eventually assist in CERT's emergency communications. Dede and the Mountain Top Amateur Radio Association (MTARA) opened this door.

Due to the pandemic, there has been time to study! Nancy achieved her Technician license in October 2020, followed by her General, and... wow! Now the EXTRA exam in March 2021! She shares, *"Thanks to the HAMs I've met, my vision of this world keeps growing. Although I just recently passed the Extra exam, I am overloaded with the volume of information input and probably wouldn't recognize a phase angle if I was sitting on it. It will likely take many years for the pieces to fit together."* Nancy very much appreciates the MTARA organization and looks forward to learning more while building relationships and helping where needed.



Asked about her most difficult challenge in life, Nancy shared that it was watching her mom struggle with two debilitating chronic

diseases, as well as losing her eyesight. They were very close, and Nancy was deeply affected. Her Mom, had strong faith, never complained, and had always been interested in Nancy's activities, especially in her diving adventures. She hasn't yet gone out to dive since losing her Mom in 2010 but says she might again someday. I questioned my new friend about what gets her through such difficult challenges in life. Her answer, "My faith in God, where I have found a profound sense of calm, strength and direction."

Here are a few concluding thoughts straight from Nancy's heart: *"My life has been truly blessed. And it is my hope to give back. When I was a teen, I inquired about whether there was anything good that I could do? A therapist told me that I could help make my world into a better place to live. As time went on, this started to make sense, in that we can make all our moments matter."*

There you have her, our very own EXTRA special Nancy Karlson. Congratulations to K6CUB!

73, Assunta Maria Vickers, KJ6FQP

MTARA NEWS

| APRIL 2021 | [Mountain Top Amateur Radio Association](#) |

MTARA and Rim of the World ARES Supporting Mountains Community Hospital

Rim of the World ARES (ROWARES) is a subset of our MTARA membership which provides emergency communications for events and to our agencies with whom we have a Memorandum of Understanding (MOU). Mountains Community Hospital (MCH) is one of the agencies with which we have an MOU.

MCH provided ROWARES with training and photo ID's in October of 2019. MTARA provided MCH with an HF radio, HF Antenna and VHF/UHF radio and antenna. In November of 2019 we did a hospital communications drill at MCH in conjunction with the statewide hospital drill.



In March of 2020 when the COVID-19 pandemic hit, MTARA loaned an additional 4 HT's from the club radio cache.

On March 1, 2021, we received a call from Renee, KJ6VJI, asking for our help with

communications at the COVID-19 drive-thru vaccination clinics. Renee is an RN and is the hospital's Disaster Planning Coordinator. Although this effort was to be a backup to the hospital's communications it allowed many of our members a chance to not only provide help to our own community but to also get some additional communications training which has been lacking since the pandemic shut down our normal support activities. There were definitely lessons learned at the clinics.

Teams were put together for the days that the hospital had received vaccines for the drive-in clinics. These were held on March 5, 16 and 17. The volunteers included Jodi, WA6JL; Chet, AE6CO; Theresa,



KJ6OXQ; Kathy, KI6YLF; Stan, KI6YLG; Lorna, KJ6GFS; Assunta, KJ6FQP; Nancy, K6CUB; Greg, AJ6FN; Gene, KJ6LMP and WM6T. We had other volunteers but the vaccines ran out and they did not have to participate and those members included Debbie, WB6LVC; Gary, AA6GJ; Bruce, KJ6IJM and Chrystal, KK6API.

The hospital staff was extremely grateful and most importantly we demonstrated that in an emergency or disaster we can assist the hospital with communications. We do expect that we will be asked again as more opportunities for COVID-19 drive-thru clinics occur in the following months.

Here are some comments from those working at the COVID Clinics.

"I wasn't feeling very well, having aches and pains from my second Covid19 shot. I was paired with someone I had never met before, who turned out to be very easy to relate to; It was a good experience meeting other members! We had some technical difficulties, so the take-aways are first, number the pages to help with relay communications. Second, two is one, and one is NONE played out. Luckily there were two radios, and we only needed one." ~Chet, AE6CO

"It was a good experience and practice for me. However, I think it was overstaffed, since MCH staff were relaying the same information to the same location between the two posts. Oh, NEVER use a porta potty at the park." ~Theresa, KJ6OXQ

"I was happy to be part of this opportunity, as part of

MTARA NEWS

| APRIL 2021 | [Mountain Top Amateur Radio Association](#) |

MTARA/ARES, to actually demonstrate our communications capabilities to the hospital community, to show them how we can aid them.” ~Kathy, KI6YLF

“This was a useful exercise in passing information accurately, for future events. It is extremely important for new people to gain experience. Some people may be initially terrified to participate, fearing they might not know enough and could mess something up. You really can’t mess it up, and practice is a way to get comfortable, and bolster confidence so next time they won’t feel so intimidated.” ~Stan, KI6YLG

“The volunteer experience in radio communications at Mountain Community Hospital was full of fun. MTARA members could re-unite for the first time in months. The process appeared straightforward, if we could only remember what post we were at and our call sign. The day was good and filled with laughter and fun moments among friends.” ~Nancy, K6CUB

“Good experience, I learned if I’m going to volunteer in winter up on the mountain, I probably should get some chains! Tracy came to my rescue, providing this Riverside ‘flatlander’ a personal escort from the Valero station, with a safe arrival despite some dicey road conditions on the way up. It was good learning the basic info-relay routine, and GREAT getting to meet some of our MTARA team-mates in person.” ~Assunta, KJ6FQP

“Really fun working in person after so many months on Zoom. I was impressed at how smoothly everything went. On Wednesday MCH staff asked us at post-1, instead of radio relay, to help hand out slips of paper for the patients to fill out, to help staff from shuffling so much paper. We got the job done.” ~Lorna, KJ6GFS

“It was FUN! It was my first time doing anything like this, and I started off nervous. Turned out to be easier than I thought, in fact a piece of cake. Everyone was so flexible, it was not at all stressful. This is a MUST DO training activity if you haven’t before.” ~Greg, AJ6FN

“I had the pleasure of volunteering on St. Patrick’s Day. I’ve worked 22 years with Kaiser... yet at MCH I saw such camaraderie, fun and cohesiveness among the

employees. They were having a great time working together during their duty. I’ve had the experience of getting the shot at a different site with long waits, long lines. This was organized, went so smooth, expeditiously and graciously moving patients in and out. There was music and Rim High School brought up some coffee and hot chocolate, danish and donuts. It was a wonderful experience!” ~Gene, KJ6LMP

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.	Weekly Check-in	Tech discussions
Wednesday	HF	7:30 p.m.	7.223 Mhz	Band(s) status
Friday	MTARA-5	5:00 p.m.	XYL Happy Hour!	It’s Friday!
Daily	CBARC	7:00 a.m.	Technet	Elmer sessions

Membership Info

Membership in the Mountain Top Amateur Radio Association© is open to any person interested in learning more about Amateur Radio. Members do not have to be a licensed Amateur Radio Operator to be a member but licensure is recommended. Members must be active in club

MTARA NEWS

| APRIL 2021 | [Mountain Top Amateur Radio Association](#) |

activities which includes trainings, events, club meetings and Field Day. Membership is on an annual basis and is from January 1 to December 31 of each year. There are no prorated memberships. The annual membership is \$20 for a single member or \$30 for an entire family.

Current members do not need to fill out the renewal application form for 2021. You can just mail your check to MTARA, PO Box 2441, Lake Arrowhead, CA 92352-2441. We already know who you are. Those who joined in November or December of this year are already paid for 2021. The membership form can be downloaded by [clicking here](#).

Hams helping Hams - KK6WKI

I am aware that some of our members are not comfortable with DIY wiring, they don't know what parts they need or have the proper tools. Luckily our club has Elmers that are very comfortable with DIY wiring, they have the skill set and tools.



This is not limited to just building a battery box but it's also intended to assist members with other ham radio wiring projects, i.e. putting [Anderson Powerpoles](#) on your radio equipment, etc. There is nothing that would make Chet happier than drilling a hole in the roof of your new car for an antenna installation.

I have listed a few of our Elmers that will be happy to

assist you with DIY wiring. They will advise you on what parts are needed and where to buy them. This is also a good hands on learning experience.

The following members are willing to assist you:

- ▶ Myself, Vic, KK6WKI I'm located on the east end of Running Springs
- ▶ Dave, K6WDE is located on the west end of Running Springs
- ▶ Tracy, WM6T is located in Lake Arrowhead
- ▶ Chet, AE6CO is located in Crestline
- ▶ Gary, AA6GJ is located in Rancho Cucamonga
- ▶ Greg, AJ6FN is located in Highland

Remember, we are still following all COVID-19 safety guidelines.

The NEW YL Corner! - WB6LVC

Hi there, ladies (and gentlemen)! Welcome to the YL Corner. This little column will attempt to fill in your knowledge of the adventures and accomplishments of the YLs in Ham Radio throughout the years, past and present. To start out, you might ask "What is a YL?" Generally speaking, it is the term for any female radio operator. It is short for "Young Lady" regardless of the operator's age. Remember that men in the hobby have been called "OMs" or "Old Men" for as far back as you can research. No one wanted to be called "OLs" or "Old Ladies", so the term YL developed.

One of the oldest organizations for YLs was founded back in 1939. It is still in existence today. That would be the Young Ladies Radio League, Inc. It came into existence to encourage and assist YLs throughout the world. YLRL was founded by Ethel Smith, W7FWB/K4LMB along with about 12 other ladies who were licensed hams. One wonders if these ladies ever thought that their organization would still be operating

MTARA NEWS

| APRIL 2021 | [Mountain Top Amateur Radio Association](#) |

82 years after its formation!

Ham operators use many terms in their communications with each other. There are "Q" codes and numerical codes that shorten statements and questions, especially when using CW. You may have heard or seen closure of correspondences using 73 or 88. But there is one that is considered "sacred" for YLs and this is 33. To close my first column, I have attached the poem from which it came. Hope you enjoy it!

The Birth of 33

Clara had her ticket
She also had a rig
Because she was just startin
It wasn't very big

She slowly tuned the crystal,
And watched the meter drop.
Then tapped the key a couple times
To be sure it wouldn't stop.

Now everything was ready,
She called a short CQ
And received an answer
On thirty-six sixty -two.

They chewed the fat "bout stuff and things.
"bout dresses, work and dates. They finally called it
QRT

The girl sent eighty-eights.

Clara though it might be funny
Whether it be Miss or Mrs.
To end a perfect QSO
By sending "Love and Kisses"

It sounds too sentimental;
Just a little too much "goo"
To be sending "Love and Kisses"
to a girl the same as you.

For an entire week she pondered;
Wouldn't even touch the rig.
She pushed her slide rule by the hour,

Employing "logs" and "trig"

She added and subtracted.
What could the answer be?
To reach a happy medium
Twixt eighty-eight and seventy-three.

Clara finally looked up from her work
All smiles and not forlorn.
Twas July in Nineteen Forty
That thirty-three was born.

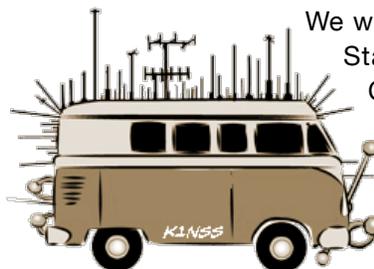
There's no real definition
But it's meaning is known well.
It's how a YL says good evening
To another friend YL.

Author Unknown

MTARA Activation of WWFF KFF-4490 and POTA K-4436 - K6WDE

Please put **Tuesday, April 27** on your calendar! The September 2020 COVID-19 postponed activation of the San Bernardino National Forest will hopefully take place downslope of the Heap's Peak Transfer Station. We hope to have Assunta, Jo and Matt, Maria, John and Gail as ham radio operators and will be giving out the activations of the SBNF on HF and VHF/UHF bands. Listen for the team between 10:00 a.m. and 2:00 p.m. We need chasers!

For further information and more details, check out the following links. The **World Wide Flora and Fauna program** can be found [here](#) and the specific **U.S. program here**. The **Parks On the Air** program information can be found [here too](#).



We will be following all Federal, State and County mandated COVID-19 protocols for all folks involved on site.

MTARA NEWS

| APRIL 2021 | [Mountain Top Amateur Radio Association](#) |

Upcoming Calendar of Events

Activities that MTARA will be participating in or supporting during the upcoming months:

- ▶ MTARA monthly meeting - April 6 at 7:00 p.m.
- ▶ MTARA monthly meeting - May 4 at 7:00 p.m.

Upcoming VHF/UHF and HF Ham Radio contests or special events

A few fun events that club members can participate in and/or sharpen their communication skills with!

- ▶ [Slow Speed Con\(Test\)](#) for CW operators, **EVERY SUNDAY** (5:00 - 6:00 p.m., PDT) and **EVERY FRIDAY** (1:00 - 2:00 p.m., PDT), a great learning tool for us new operators!
- ▶ [Weekly Phone Fray](#) by NW2K. A great way to get your feet wet for 30 minutes. It is weekly on Tuesday nights from 6:30 p.m. to 7:00 p.m. PST on SSB. The rapid-fire exchange is OP name and location ('Dave CA', e.g.). Folks start on 15 meters and then migrate to 20, 40, 80 and even 160 meters, its fun to watch the bands change as seasonal propagation does!
- ▶ [Louisiana, Mississippi](#) QSO Parties and [Florida State Parks-on-the Air](#), April 3-4
- ▶ [Nebraska, New Mexico](#) and [Georgia](#) QSO Parties, April 10-11
- ▶ [Texas State Parks-on-the-Air](#) and [Michigan](#) QSO Party, April 17-18
- ▶ [ARRL SSB Rookie RoundUp](#), April 18
- ▶ [Florida](#) QSO Party, April 24-25

MTARA jackets

 We have our optional MTARA jackets, you too can look smart and cool! Two colors are available which are forest green or black. The forest green matches our polo shirts. Sizes available range from small to 6X. Here is a list of the sizes and **prices that include the lettering and sales tax.**

The Port Authority jackets without the \$6.00 name, call sign and MTARA logo are approximately \$6.47 less.

If interested, you need place your order with Mary at Classic Images in Crestline. Her number is 909-338-2281. She is there Tuesday through Friday and the address is 23723 Rocky Dell Drive, Crestline, CA 92325.

Size	S	M	L	XL	2X	3X	4X	5X	6X
Price	\$45.23	\$45.23	\$45.23	\$45.23	\$46.31	\$48.47	\$49.54	\$51.70	\$52.78

MTARA NEWS

| APRIL 2021 | [Mountain Top Amateur Radio Association](#) |

Welcome to “Ponder the Pool” by AA6GJ

Ponder the Pool is my column for the MTARA Newsletter. Every month I pick a point to ponder (a question) from one of the three FCC question pools and try to explain it more and review the concepts because,

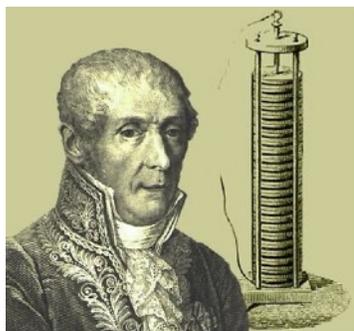
“If you don’t use it, you lose it!”

This time, we will ponder a question from the Technician Class pool: Question No. T5A05 (Pg. 139 in Gordo’s Technician Book)

[T5A05 – What is the electrical term for the electromotive force \(EMF\) that causes electron flow?](#)

Well, this time I’m going to do this a little differently. I am going to give a little biography of the scientist whose name is attributed to electromotive force along with a short history of the term EMF.

Conte Alessandro Giuseppe Antonio Anastasio Volta was born February 18, 1745 in Como, Lombardy, Italy – he died March 5, 1827. Count Volta was a physicist.



He invented the electric battery also known as the “Voltaic Pile”. His battery provided the first source of continuous current. He was the Chair of Physics at the University of Pavia.

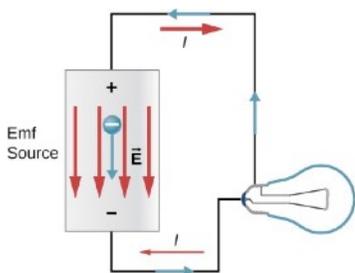
In 1791, Alessandro’s buddy, Luigi Galvani (Yes, of Galvanometer fame) and Volta, announced that the contacting of two different metals with the leg muscles of a skinned frog resulted in the generation of an electric current that caused the leg to twitch. Galvani thought that this was a new form of electricity found in living tissue which he called “animal electricity”. Volta thought differently. He thought that the frog merely acted as a conductor in which a current flowed between the two metals. He called this “metallic electricity.” He began experimenting in 1792 with metals alone. He would place disks of different metals on his tongue. He could detect a weak flow of electricity between the two disks. This caused a big

stir between the animal- electricity adherents and the metallic-electricity advocates. But, in 1800, he was successful when he announced his invention of the first electric battery.

The voltaic pile or voltaic column (pictured with him in this picture) consisted of alternating disks of zinc and silver (or copper and pewter) separated by paper or cloth soaked either in salt water or sodium hydroxide (also known as lye and caustic soda). Gordon West does this same thing when he demonstrates powering a digital clock with a potato and two metal probes. The potato provides a similar dielectric as above. Try it! It really works!

EMF

Volta coined the term Electromotive Force (EMF) when he invented the battery. Actually, electromotive force is not a force at all. It is a difference in potential. Consider the circuit below.



It is a 12-volt lamp attached to a 12-volt battery. The battery is a two terminal device that keeps one terminal at a higher electric potential than the second terminal. The higher potential is called the positive terminal, and the lower potential terminal is called the negative terminal. This is the source of the EMF. When the EMF source is not connected to the lamp, there is no net flow of charge within the EMF source. Once the battery is connected to the lamp, charges flow from one terminal, through the lamp (lighting the lamp), and back to the other terminal of the battery. If we consider positive (conventional) current flow, positive

MTARA NEWS

| APRIL 2021 | [Mountain Top Amateur Radio Association](#) |

charges leave the positive terminal, travel through the lamp, and enter the negative terminal.

Here's another way of thinking of potential. You are standing on the dam that creates Lake Arrowhead. Looking back toward the lake, you see the water. There is a lot of beautiful positive potential energy there, but right now it is just there looking beautiful. If you look the other way toward the valley, you see a descending landscape. If we open the flood gates, the water will begin to flow down the hill. Our high-altitude lake water (+) is now flowing (current) to fill up the low altitude valley (-). On the way, that current could be doing some work, like driving a hydroelectric generator or pushing rocks out of the way, you get the idea. Depending on how wide we open the flood gates would determine how much current will flow. By the way, please don't do that because it would definitely ruin the day for the residents of San Bernardino. 😊 So, you see it's really not a force as much as it is higher charge trying fill up the void of the negative charge. There's so much negativity. We need more positive potential! (grin)

Meanwhile, back to Volta. In 1801, he demonstrated his battery's generation of electric current before Napoleon in Paris. Napoleon was so impressed, he made Volta a count and a senator of the kingdom of Lombardy. The Austrian emperor, Francis I, made him director of the philosophical faculty at the University of Padua in 1815. The Volt, the unit of EMF, was named in his honor in 1881. Wow! That's 54 years after he died! Talk about a tough crowd! So, I say, way to go Anastasio! What would we as Hams have done if it weren't for Count Volta? He had such potential, too! (Pun intended.)

The official answer to this question is: **Voltage**.

There you have it, Ponder the Pool for another month. I hope it was helpful. Stay tuned, and we'll do another one next month. 73 – Gary

If you have any questions or comments, drop me an email at AA6GJ@arrl.net .