



The
Wave Bender
August 2020
AWARD WINNING NEWSLETTER



WRARC PREZ



Hello everyone,

It seems to be that the end of these stay at home orders may be near. Soon we will all be able to get together again.

I don't have much if anything to report since 'alotnofunplans' had to be put on hold not being able to have meetings. I hope that everyone has been able to do some operating while being stuck at home. If anyone has any questions, or has something they have done while staying at home, they would like to share with the club, I'd like to make time for you to do so.

Just know that when we are able to hold meetings again we'll be working on putting things back in order as quickly as possible. The plans for learning workshops are still in place, just on hold. Once everything is finished we will post dates and times

of everything.

Hold tight everyone, and we'll see you soon

73 WF8U, Chris
WRARC/Club President

INTERNATIONAL LIGHTHOUSE LIGHTSHIP WEEKEND ON TRACK FOR 2020

Registrations for this year's popular International Lighthouse Lightship Weekend (ILLW) appear to have been largely unaffected by the current COVID-19 pandemic. The event will take place this year over the August 22 -23 weekend.

By mid-July, more than 200 entries had been received, and some 400 are expected to have signed up by the event weekend. New to this year's event is Corsica at Phare d'Alistro, which for ILLW purposes carries the French number of FR0030. Two lighthouses in Ghana will be on the air for the first time, as well as Buck Island Lighthouse in the US Virgin Islands (VI0001). Germany is well in the lead with 54 entries, followed by Australia with 29 entries, and the US with 27 entries.

This event is designed as a fun weekend to encourage exposure to amateur radio and lighthouses to the visiting public, and ILLW stresses contacts should be more than just an exchange of signal reports. All participants are urged to observe local COVID-19 safety guidelines.

—Thanks to Kevin Mulcahey, VK2CE



IN THIS ISSUE

| | |
|--|----|
| WRARC Prez | 01 |
| Lighthouse/Lightship Weekend on Track | 01 |
| From Our VP | 03 |
| NIST Creates New Recipe - Single-Atom Trnsstrs | 05 |
| From the Secretary, Mike KC8UNR | 05 |
| Field Day Testing | 06 |
| Ham Radio Reconnects Friends after 60 Years | 07 |
| Field Day 2020 is One for the Record Books | 07 |
| Space Weather News for July 15, 2020 | 09 |
| MMSN Comes to the Aid of Vessel in Distress | 09 |
| Your Participation Is Needed | 10 |
| A Surprise Visit from Steve | 11 |
| Calendar | 13 |

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- VP:** Maureen Stein, KD8NXS kd8nxs@wrarc.net
- Secretary:** Mike Cibella, KC8UNR kc8unr@wrarc.net
- Treasurer:** Bob Kramer, KE8HHH ke8hhh@wrarc.net
- Past President:** Bob Mitzel, N8RCM n8rcm@wrarc.net

Trustees:

- Steve Fabry, KC8SOY kc8soy@wrarc.net
- Darrin Cannon, N8DMC n8dmc@wrarc.net
- 3-year Trustee open

Appointed Positions:

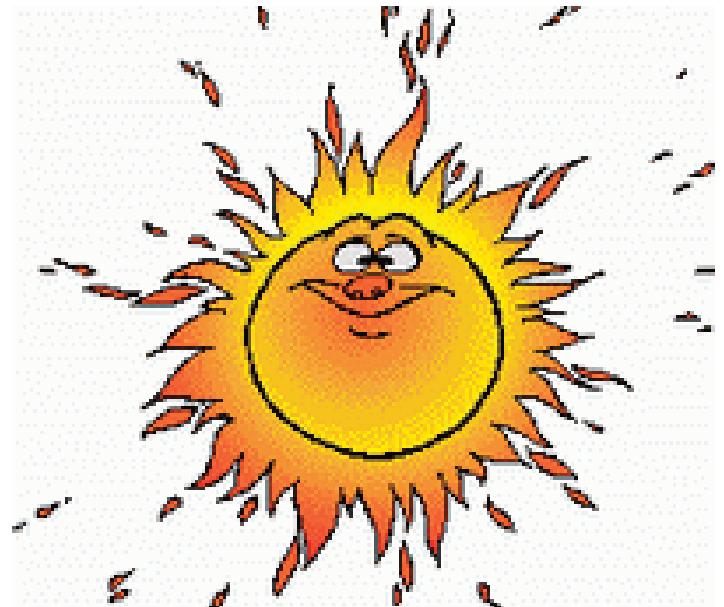
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- Historian: Rose Marko, KD8TII
kd8tii@wrarc.net
- Badges: Darrin Cannon, N8DMC
n8dmc@wrarc.net

Officer's Meeting:

August 11, 7:00 P.M. At Eat 'n Park,
Austintown, Eat 'n Park,
5451 Mahoning Ave
All members welcome

Members Meeting:

august 18, Davidson's
3636 Canfield Rd., Cornersburgh
We Hope



OTHER IMPORTANT WEB SITES

THE ARRL EXAM SEARCH PAGE

<[HTTP://WWW.ARRL.ORG/FIND-AN-AMATEUR-RADIO-LICENSE-EXAM-SESSION](http://www.arrl.org/find-an-amateur-radio-license-exam-session)>

OHIO SINGLE SIDEBAND NET

<[HTTP://WWW.OSSBN.ORG/INDEX.HTML](http://www.ossbn.org/index.html)>

ANTENNA HEIGHT ABOVE AVERAGE TERRAIN (HAAT) CALCULATOR

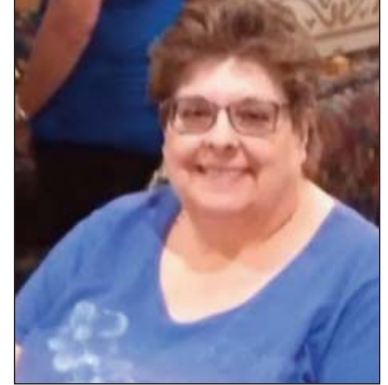
[HTTPS://WWW.FCC.GOV/MEDIA/RADIO/HAAT-CALCULATOR](https://www.fcc.gov/media/radio/haat-calculator)



<http://www.wrarc.net/>

FROM OUR VP

Greetings, All. Here we are entering another month with many uncertainties about the coronavirus pandemic. After a leveling off of the numbers, the number of new cases in Ohio is sharply rising. We are not as bad as Texas, Florida, or Arizona, but our state leaders don't want us to get there. There is a good possibility that mandatory mask wearing in all public settings for our local counties and the state as a whole may come to be if the numbers continue in the direction they are going. As of Monday, July 20, mask wearing will be mandatory in public places in the city of Youngstown. Even if it is not mandated in some areas, it is recommended and is effective. Stricter measures such as rolling back the continuation of bars being allowed to be open and indoor dining at restaurants could happen. Contact tracing on recent new cases has shown that the major sources of spread of the virus are no longer congregate living settings like nursing homes. It is now happening from crowds gathered at bars, restaurants, and other group gatherings whether indoor or outdoor. Outdoor activities are a little safer but still have the potential to spread the virus. There really should not be gatherings of people more than just a few anywhere at all to be able to get this under control. Another major factor in the spread of the virus is in household settings where one person brings it home after getting infected in some public setting whether it be a work setting or some other outing. Participants at any kind of gathering should wear masks while they are there. All this being said, it makes the resumption of general meetings very difficult to put into motion. Most of us are in the vulnerable category to add to the mix. How true it is that the virus sets the timeline for all things, and not us. It is an ever changing and evolving situation. Between now (July 18) and the time you read this, some of this could change again.



Looking ahead to our two fall public service events, the Peace Race, October 11, and the Youngstown Marathon, October 25, there is still uncertainty with these as well. The website for the Peace Race has no updated information on it, and would appear to be still scheduled at this time. The Youngstown Marathon has some updated information on their website and Facebook pages with, essentially, the same information on both. They have cancelled their 2020 Health and Fitness Expo, to return in 2021, and are awaiting word from city and health department officials as to whether or not to cancel the main event with all the crowds that are part of it. Regardless, they would like to have some type of event on the scheduled weekend. That could mean a virtual run where everyone runs on their own and submits their times and other needed info instead of doing it as a group. They conducted a very successful 5K virtual run in April and the proceeds were given to Gleaners Food Bank. If this becomes a virtual event, they would not need us. If it goes on as normal or if there would be some kind of altered in person race, they likely would need us. We just don't know yet and it is still a little early to contact them. We also don't yet know if the Boardman Park Family Fun Day will go on in early September, no date yet. For now, just keep these things on your calendars for just in case. We'll let you know as we find things out.

In the meantime, to help us all still feel connected, please check in on the Friday night nets, if you can, or take a turn at being net control for one of them. It's not hard- honest! If you have been doing something special with Amateur Radio during this time, please write it up and share it with us in the newsletter. We would love to hear about it. So long for now, stay safe and well.

73 Maureen, KD8NXS

SIGHTS AND SOUNDS - the Sun

Good news! While you've been paying attention to other things for the past 10 years, NASA's Solar Dynamics Observatory has been consistently taking pictures of the sun -- one every three-quarters of a second -- across a number of different wavelengths. Images of the extreme ultraviolet wavelength of 17.1 nanometers reveals the sun's corona, and hourly corona pictures have been combined into a time-lapse movie of the last decade of solar activity, condensed into about 60 minutes. Use the video playback controls to flip between the starting and later portions to visualize how activity has diminished between 2010 and now. (Bill, AI5I, and Ward, N0AX)

<https://www.nasa.gov/feature/goddard/2020/watch-a-10-year-time-lapse-of-sun-from-nasa-s-sdo>

Join us for the WRARC Friday night Net 9:00 P.M.
KD8DWV - 145.270, PL -110.9



WRARC Simplex Frequency 146.565

Mahoning County ARES® Nets

1st Monday 8.40 PM ET W8QLY Repeater - 146.745 (PL 110.9)

&

3rd Monday 8.40 PM ET W8QLY Repeater - 146.745 (PL 110.9)

ARES thanks MVARA for the use of their repeater

W8SGT is facilitating The Ohio HF net every Tuesday - 7:00 PM

The net is run from the State of Ohio EOC on the

Ohio ARES Admin frequency 3875 kHz LSB

moves to 7240 Khz after 20-min.

All are welcome to check in.



The Ohio ARES/OES Digital Emergency Net held every Tuesday at 8:00PM.
held on 3585 kHz USB.

Please note all digital communications are Upper Side Band.

<http://www.http://ohden.org/> for net details. Net Manager Gary NJ8BB



CONTACT WRARC ELMERS WITH YOUR QUESTIONS - QUESTIONS@WRARC.NET



Used with permission

Fabry, Steve KC8SOY
Haren, Roy KD8IJF
Williams, Russ NR8W

Yaesu FT8900, FT8800, Mobile
???
Electrician, tele-data, Amateur
Extra

kc8soy@yahoo.com
harens@juno.com
rwiliams@neo.rr.com

Articles from members for the Wave Bender are encouraged. They must be received by the editor by the 20th each month. Please send your articles to: k8jaa@arrl.net, and put WRARC on the subject line of your email. You may also send your articles to the editor: Jane Avnet, 1440 Skyhawk Pl., Wright City, MO 63390

FROM THE SECRETARY, MIKE KC8UNR



Good day to all! I hope everyone is doing well and staying cool. There have been lots of special events on the air to make contacts with. I hope some of you have taken advantage of them. Not much news to report here. We are having board meetings and like everyone, waiting for the government to allow us to go back to normal which I think is going to be a lot longer than we want. Don't forget to clean your equipment every so often to help avoid and find any problems brewing.

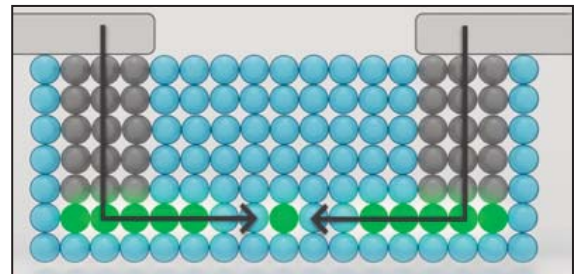
73 Mike, KC8UNR

JULY BOARD MEETING - BOARDMAN PARK



NIST SCIENTISTS CREATE NEW RECIPE FOR SINGLE-ATOM TRANSISTORS

(Submitted by Gregory Drezdzon, WD9FTZ)
Linking multiple copies of these devices may lay the foundation for quantum computing once unimaginable, transistors consisting only of several-atom clusters or even single atoms promise to become the building blocks of a new generation of computers with unparalleled memory and processing power. But to realize the full potential of these tiny transistors —miniature electrical on-off switches —researchers must find a way to make many copies of these notoriously difficult-to-fabricate components.



Now, researchers at the National Institute of Standards and Technology (NIST) and their colleagues at the University of Maryland have developed a step-by-step recipe to produce the atomic-scale devices. Using these instructions, the NIST-led team has become only the second in the world to construct a single-atom transistor and the first to fabricate a series of single electron transistors with atom-scale control over the devices' geometry.

To read the full story, visit:
<https://www.nist.gov/news-events/news/2020/05/nist-scientists-create-new-recipe-single-atom-transistors>

FIELD DAY TESTING

During our 2020 Field Day at Elser Metro Airport, we had "one" test taker for his Technician Class license. Of course he passed.

Here is a little bio about Mike:



Mike Klem, KE8OWJ, lives in Canfield with his wife of 32 years, Kim. They have a daughter Kara that just got married on February 29th. Mike is currently the Sales & Marketing Manager of the M. Conley company in Canton, Ohio where he has been actively involved with COVID-19 since late January since M. Conley is a regional distributor of infection control products and PPE. When Mike is not working, he keeps busy with beekeeping (teaches adult evening classes at the MCCTC), antique cars (national judge and certified appraiser) as well as an NRA Instructor (Basic Pistol and Chief Range Safety officer)



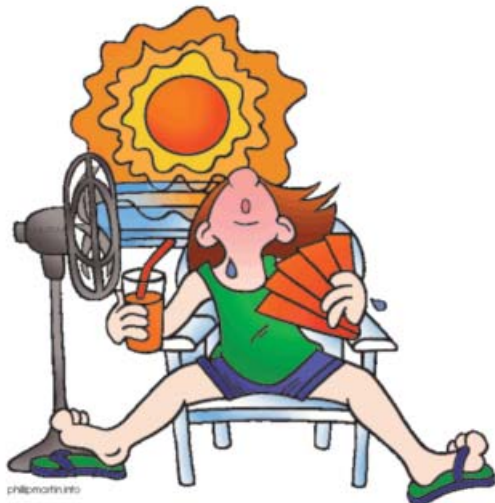
Getting into Amateur Radio has been a bucket list goal of his. Mike's friend John Morris, K8WAM, is his Elmer. Mike is currently studying for his General. Eventually Mike would like to become a VE and get involved in teaching/helping new Amateur Radio students. He is very interested in getting more young people involved. Mike is also interested in helping with the club's social media efforts with his 12 years' experience with other different clubs. He is very excited to join our club and wants to be an active member.

I would like to thank those who came out to assist with the VE session. They were, Roy Haren – KD8IJF, Wes Boyd – W8IZC and David Salmen – WB8IBA

Hoping everyone is "trying" to enjoy the summer. I'm looking forward to one day having our normalcy back at Davidson's Restaurant once again.

73 Darrin – N8DMC
(330)720-4454
Darrincan@gmail.com

There is nothing amateur about Amateur Radio



**Semi-Monthly
Ham Community
Breakfast
Second and Fourth
Tuesdays
9:00 A.M.
Eat 'n Park Restaurant
in Austintown
Join Us!**

FIELD DAY 2020 IS SHAPING UP TO BE ONE FOR THE RECORD BOOKS

ARRL Contest Program Manager Paul Bourque, N1SFE, reported this week that ARRL has received more than 8,700 online Field Day entries, and paper-only entries have started arriving too.

"As many participants chose to operate from home this year, and given the 2020 rules waivers, we have seen a tremendous increase in entries over last year's event," Bourque said. "Most of the entries received have been through the online web app, and Headquarters staffers have begun processing the paper entries this week." The 2020 waivers allowed individual club members to attribute their scores to their clubs.



Participants who submitted entries online are encouraged to check the Field Day entries received (<http://field-day.arrl.org/fdentriescvd.php>) page to verify that their entries are marked as complete, and that the club name entered is correct. Entries with a status of "pending" are incomplete entries that are missing one or more items, and these

need to be completed for an official entry.

Share your stories and photos using the ARRL soapbox page or via social media, such as on the ARRL Field Day Facebook group.

HAM RADIO RECONNECTS BOYHOOD FRIENDS AFTER 60 YEARS

Two radio amateurs who were in school together in Austria decades ago have reconnected via VoIP ham radio. One of the two had moved to the US, and they lost touch. On June 15, Arnold Huebsch, OE1IAH, heard a call via Echolink from Albin Ennsthaler, KK9HAM, near Spokane.



Arnold Huebsch, OE1IAH

"At first, I did not want to respond as I was working on a program. But as I know that usually nobody responds here to calls in English, I answered," recounted Huebsch, who is also KN6EYB and fluent in English.

As it turned out, they chatted for some 20 minutes. Because each was familiar with the geography on both sides of the contact, they had a lot to talk about. Huebsch learned that Ennsthaler was born in Austria and had relocated to the US years earlier. "He pronounced the local city names in perfect German but asked to run the QSO in English, as he felt more comfortable to do so," Huebsch said.

A few minutes after the contact ended, Huebsch turned his attention to serving as the net control station of a daily net on a local repeater in Vienna. "I mentioned the contact with KK9HAM and noted that his name was Albin, a name not common in Austria. That caught the ear of one of the locals, Gerhard Weissenboeck, OE1WED, who recalled someone named Albin from school in Styria about 60 years ago, but had lost touch with him. Weissenboeck wondered if it could be the same person.

"I initiated contact via email between them, as I knew Albin had come from that area of Austria," Huebsch said. "They found out that they had shared a desk in school." KK9HAM and OE1WED arranged a sked via Echolink for a few days later.

"It was an intense, very emotional, funny QSO in a wild mixture of English and German," Huebsch said. "Without our hobby, these two former school friends would never have had a chance to meet again."

Ennsthaler later emailed Huebsch. "I am still speechless about this get-together with Gerhard and Fahrdienstleiter [traffic controller] Arnold and other members of the group," he said. "What a memorable day."

MARITIME MOBILE SERVICE NETWORK COMES TO THE AID OF VESSEL IN DISTRESS

07/06/2020 - The Maritime Mobile Service Net (MMSN) on 14.300 MHz came to the assistance of a sailing vessel on June 25. MMSN control operator Steven Carpenter, K9UA, took a call on 20 meters from Ian Cummings, KB4SG, the skipper of the Mystic Lady, then some 40 miles east of Florida. Cummings reported that his engine had failed as he was attempting to return to his home port of Stuart, Florida. He not only had insufficient wind, but a strong current was carrying the vessel out to sea.

Cummings had been unable to reach any station via his VHF marine radio, since he was too far from the coast. Assisting in the call was Robert Wynhoff, K5HUT, also an MMSN net control operator. Cummings said his vessel, with one passenger on board, was drifting northwest toward the South Carolina coast.



“A major concern was that the vessel was heading directly towards a lee shore,” the MMSN reported. “Lee shores are shallow, dangerous areas which are a hazard to watercraft. Vessels could be pushed into the shallow area by the wind, possibly running aground and breaking up.”

Carpenter contacted Cummings’ family, who had already called the Sea Tow marine towing service. Sea Tow advised Carpenter to tell the captain to head closer to shore by sailing west, if possible. Carpenter told Cummings that if he was unable to get nearer to shore, he would notify the US Coast Guard, which was already monitoring the situation.

As the MMSN reported, “The Mystic Lady was able to make some headway, but it was very slow. Members of the MMSN made additional calls via landline to the captain’s family as to the ongoing status of those on board. The family was concerned but relieved that communication was established and that all were well.”

Several hours later, the captain advised that the wind had picked up, allowing him to head close enough to shore for Sea Tow to reach the vessel and take it back to port.

The Pacific Seafarers’ Net, which monitors 14.300 MHz from the West Coast after the MMSN secures at 0200 UTC, kept in touch with the Mystic Lady into the night while it was under tow.

The tired, grateful captain later messaged the net, “A million thanks to everyone last night who helped rescue us on 14.300. Everyone chipped in as we drifted north in the Gulf Stream 60 miles headed to a lee shore. The MMSN net control and several others stayed with us for hours, phoned people, and were immensely helpful. The situation on board was dangerous. We are now safely under tow home. You folks are amazing!”

In operation since 1968, the MMSN monitors 14.300 MHz 70 hours a week to assist vessels and others in need of assistance. — Thanks to MMSN Net Manager Jeff Savasta, KB4JKL

I’m always asking for input by members. The following questions may give you something to think about.

What was your first station?

Tell us about our first contact.

Have you built something?

Who was your First Elmer?

How old were you when you got interested?

and/or

How did Ham Radio shape your life?

-ye ed

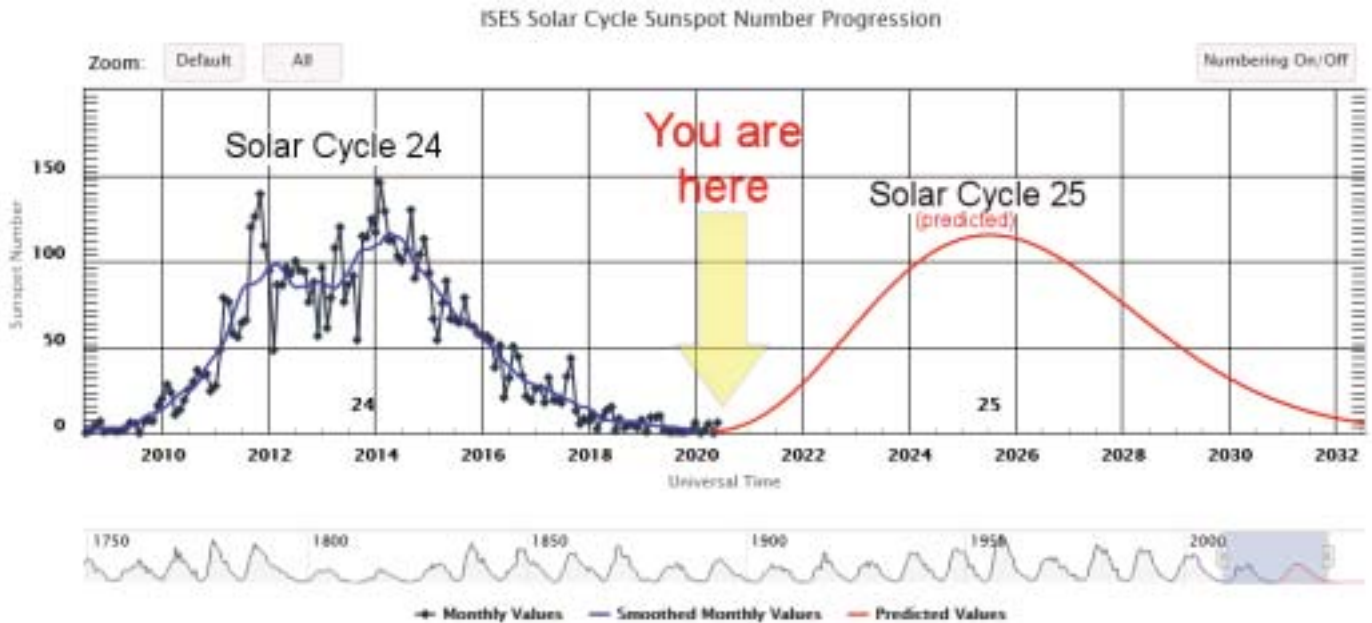


SPACE WEATHER NEWS FOR JULY 15, 2020

<https://spaceweather.com>

<https://www.spaceweatheralerts.com>

SOLAR CYCLE UPDATE: NOAA has released a new interactive tool to explore the solar cycle. It lets you scroll back through time, comparing sunspot counts now to peaks and valleys of the past. One thing is clear. Solar Minimum is here, and it's one of the deepest in a century.



Click to explore almost 300 years of sunspot counts:

<<https://www.swpc.noaa.gov/products/solar-cycle-progression>>

<https://www.nasa.gov/content/goddard/what-did-hubble-see-on-your-birthday>



| | |
|-------------------|--------|
| Mark Stein, | KD8YMK |
| Robert Mitzel, | N8RCM |
| Mike Klem, | KE8OWJ |
| Rosemary Cibella, | KD8OKK |
| Scott VanDerWal, | KB3KQY |
| David Moore, | KE8ALR |



Amateur Radio Operator "Amateur means we're simply professional volunteers" ARRL reflector

YOUR PARTICIPATION IS NEEDED

Hi everyone, Andrej, KB8QGR, here and I am calling CQ...CQ...CQ...all hams across the nation for eyeball QSO's and help.

Ok so here is the deal. I have been selected to participate in a reality show. I am now realizing that what I have gotten myself into is a LOT more difficult (Maybe impossible) than it first seemed. It is a race from Los Angeles California to New York. We will be paired up with a partner. There will be six teams of two people each. We have been given 3 months to complete this task. (THREE MONTHS !?!?!?!?)

Wait a second... We are allowed to bring with us to the start of our race our phones, a power bank to charge our phones, a flashlight, our clothes and toiletries. THATS IT!!! No cash, no credit cards, nothing that would give us an advantage over our rivals.

OH. AND IT TAKES PLACE ON A RIDING LAWNMOWER!!! LOL...OMG!!!!!!



OK now for the serious part of my plea. My team will be allowed to barter lawn cutting and whatever other services to whomever we meet along the way (as long as it is not illegal) to get food, fuel, shelter etc. to get across this great nation of ours. The rules stipulate that we can receive one bit of help from one person. For example Alan gives our team food. Chuck can give us fuel but if we need some oil for the tractor we are out of luck until we can get assistance from Todd. The rules also say that if someone wants to give us something out of the goodness of their hearts we can and will definitely accept that kind of charity. Another biggie is the towing rule.

We will have a small trailer that we pull behind our own lawnmower. If you happen to live a few miles east of where we meet AND you have a hitch on your vehicle you could tow us up to 20 miles!!! That is what is going to save us from the elements. We cannot receive any cash from anyone, just goods and services.

Now for the big beg. I'm begging any and all hams in the Los Angeles area to plz, plz, plz, come out to the opening of our race and donate or lend to me an HT that I can recharge from either a 12 or 5 volt source. If I can use the 2-metercalling frequency WE can win this race together!!! Here is a list of things that I believe my team will need in addition to the HT to get a leg up on our competition. This list is not set in stone, if you think of something else that I might require along the way then please feel free to bring it along to the start of the race and we can take a look at it.

1. 5-gallon gas cans. I think 2 or 3 would be great. Now according to the rules, I don't know if they will allow them to be filled with fuel but if not then some good hams to fill our tanks to start.

2. A tarp. To cover our trailer. That will be our shelter from the weather while one member of the team drives the other can rest under the tarp. The trailer I'm told is 4ft.x6ft. I hope it has sides. If not, I hope there is a ham east of LA that might be able to help us put some sides on the trailer so we can have a roof over our heads. The tarp should be around 8ft. x 10ft. in size.

3. A good sized cooler and plastic tote with a lid so we can keep our clothes and hopefully that HT dry and out of the weather. Worst case scenario a bunch of those huge garbage bags could work also.

4. Some rope to keep the cooler and tote strapped to our trailer. It will also help to lash the tarp to the trailer so it doesn't blow away.

5. Wire... What good MacGyver type guy doesn't need wire? I'm thinking some 16,18or20 GA or speaker wire for whatever reason. One reason I can think of is to wire up some canned soups or other canned foods close to the motor so we can heat up dinner or tea or whatever. Also, to wire up a way to charge the HT with the mower. Oh, and wire cutters maybe a multi tool of some sort.

6. A thousand other little things that might help us along the way like canned soups, one or two of those slow-moving vehicle orange triangles for the back of the trailer or tractor or both. A compass for obvious reasons. Toilet paper just in case. Marvel mystery oil. Some pillows and or air mattress to put in the trailer *Continued page 11*

PARTICIPATION NEEDED- CONTINUED FROM PAGE 10

to sleep on. Wipes so we can keep clean on the road if we don't have access to water. Several Gallon jugs of water.

Almost forgot the race start date and time is 4pm local time in Los Angeles. I do not have an address yet but as soon as I do, I will send it out to my section manager in Michigan and he can hopefully forward it out ASAP to everyone else. Let's show the world that there is a great hobby called amateur radio and after being around for over 100 years it is alive and kicking and relevant. Let's show the world that there IS a need for ham radio. Let's all show the world that during these trying times that there are still good and decent people out there today. Thanks in advance to all who will (hopefully) come out to support myself and my team at the start of his race and all along the way to New York.

Andrej KB8QGR-My email is thanks in advance, Andrej

A SURPRISE VISIT FROM STEVE

Even STEVE wants to see Comet NEOWISE. On July 14th, the geomagnetic phenomenon appeared over Canada, streaking the sky with mauve ribbons of light. Harlan Thomas of Calgary, Alberta, reports: "I was out shooting the comet when I noticed a mauve-looking cloud. Wow!" I thought. "STEVE has come to visit NEO-WISE. How cool is that?"



"I was shooting the comet outside Calgary when STEVE started to form," she says. "It was a huge purple pillar--a total delight!"

Many observers across western Canada witnessed the display. During a normal summer, STEVE might have been overlooked, but with Comet NEOWISE drawing photographers outdoors, his visit was well documented. "Summertime STEVE" might be more common than previously thought.

STEVE is a recent discovery. It looks like an aurora, but it is not. The purple glow is caused by hot (3000°C) ribbons of gas flowing through Earth's magnetosphere at speeds exceeding 6 km/s (13,000 mph). It appears during some geomagnetic storms, often alongside a type of green aurora known as the "picket fence," also shown in Thomas's photo.

Statistics suggest that STEVE appears most often in spring and fall. What summoned STEVE in mid-summer? It may have been a CME that grazed Earth's magnetic field on July 13th. As our planet passed through the CME's magnetized wake on July 14th, hot currents and plasma waves rippled through Earth's magnetosphere. STEVE was the result.

Christy Turner saw it too:



TAKE TIME TO LAUGH FOR IT'S THE MUSIC OF THE SOUL AUTHOR: -- FROM AN OLD ENGLISH PRAYER

DID YOU KNOW THESE THINGS HAD NAMES?

1. The space between your eyebrows is called a glabella.
2. The way it smells after the rain is called petrichor.
3. The plastic or metallic coating at the end of your shoelaces is called an aglet.
4. The rumbling of stomach is actually called a wamble.
5. The cry of a new born baby is called a vagitus.
6. The prongs on a fork are called tines.
7. The sheen or light that you see when you close your eyes and press your hands on them is called phosphenes.
8. The tiny plastic table placed in the middle of a pizza box is called a box tent.
9. The day after tomorrow is called overmorrow.
10. Your tiny toe or finger is called minimus.
11. The wired cage that holds the cork in a bottle of champagne is called an agraffe.
12. The 'na na na' and 'la la la', which don't really have any meaning in the lyrics of any song, are called vocables.
13. When you combine an exclamation mark with a question mark (like this ?!), it is referred to as an interrobang.
14. The space between your nostrils is called columella nasi.
15. The armhole in clothes, where the sleeves are sewn, is called armscye.
16. The condition of finding it difficult to get out of the bed in the morning is called dysania.
17. Illegible hand-writing is called griffonage.
18. The dot over an "i" or a "j" is called tittle.
19. That utterly sick feeling you get after eating or drinking too much is called crapulence.
20. The metallic device used to measure your feet at the shoe store is called Bannock device.

HOW MANY OF THE ABOVE DID YOU ALREADY KNOW?

August 2020

PREPAREDNESS LEADS TO READINESS - MATT W8DEC



| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|--|--|-----------|--|--|-------------------------------------|
| | | | | | WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers | 1 National Girlfriends Day |
| 2 National Ice Cream Sandwich Day | 3 ARES Net 8:30 PM 146.745 PL 110.9 | 4 | 5 | 6 | 7 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers | 8 |
| 9 | 10 Lazy Day | 11 Ham Breakfast Eat'n Park Austintown 8:30 A.M. | 12 | 13 | 14 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers | 15 |
| 16 | 17 ARES Net 8:30 PM 146.745 PL 110.9 | 18 WRARC Meeting 7:00 P.M We Hope | 19 | 20  Last Day WaveBender Articles Due | 21 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers | 22 |
| 23 / | 24 / | 25 Eat'n Park Austintown 8:30 A.M. Ham Community Breakfast | 26 | 27 | 28 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers | 29 |
| 30 | 31 | | | | | |