SHARK NEWS

THE OFFICIAL NEWSLETTER OF CMARC

OCTOBER 2021

From the Desk of the President:

Please read the weekly updates from the President, this will keep you up on what we are doing for the club week to week. This is on the Club News & Newsletter page of the Website.

NAS Wildwood Aviation, Air Fest was on September 3 -6, 2021, the club had a good turnout of members. We hope to work on this point of contact for new hams.

MS Bike Ture City to Shore was on September 25 – 26,2021. The weather was great and had a good time. Hope to see more club members get out next year. on the Club News & Newsletter page of the Website.

Constitution & By-Laws Draft Copy is posted on the "Members Only"page. Please read this Draft, it will be voted on at the October meeting and if past will start January 1, 2022.

Next Club meeting will be 10/20/2021 7:00 PM

Southern NJ Section News October 2021

Tom Preiser N2XW SNJ Section Manager
n2xw@arrl.org

It was great to meet many people at the Gloucester County Hamfest/SNJ Convention. I would like to thank the Gloucester County Amateur Radio Club for putting on another great event. There were many compliments received by many of the attendees. The turnout was good despite the tornado from the week prior. Thanks again to everyone at Gloucester County ARC for your hard work.

The ARRL has begun conducting monthly online meetings for Section Managers. This usually takes place at the end of the month and after I have written the Section News. ARRL members should keep an eye out for updated information via email for the latest ARRL news updates.

I hope many of you were able to participate in the NJ QSO Party. I did hear that there were quite a few stations on the air. Some people were reporting some pretty high scores. We will have to see what the results show. Thanks to the Burlington County Radio Club for sponsoring this event.

For anyone interested the 2021 Virtual National Hurricane Conference Amateur Radio Workshop that was held on Tuesday June 15th, 2021 is posted on YouTube. It can be seen at the following link: https://www.youtube.com/watch?v=9ecZRKVgIG0

In the interest of time to get this posted on YouTube since it has been several months since the conference, it is one long workshop video of 4 hours and 8 minutes but in the description of the video, they provide the rough start time for each of the workshop topics. It should be useful to anyone in the coastal areas that are threatened by tropical systems each year.

Registration Opens for USA Amateur Radio Direction Finding Championships

Registration is now open for the 2021 USA and IARU Region 2 Championships of Amateur Radio Direction Finding (ARDF), set for October 13 – 17. Competition venues will be near Asheboro, North Carolina. Postponed from 2020, these championships will be conducted in accordance with CDC COVID-19 guidelines.

“The USA ARDF Championships are an ideal opportunity to watch and learn from the best radio-orienteers in the US,” said ARRL ARDF Co-coordinator Charles Scharlau, NZ0I. “Winners who qualify by citizenship or residence may be selected for positions on ARDF Team USA, which will travel to Serbia for the 2022 ARDF World Championships.”

Check this website for more information: https://backwoodsok.org/us-2021-ardf-champs-bulletin-one

- - - Tech Corner - - -

What is a Resonant Antenna

We often have heard reference to an antenna as resonant or non-resonant. Actually all antennas are resonant at some frequency. The main point about an antenna as being non-resonant is that it is not resonant at the desired frequency or is not resonant at or for a usable amateur band or frequency.

Very often a random length wire antenna, be it end fed or a dipole are not resonant (as per the above definition). Now with the aid of an antenna tuner they often become very effective with nice results.

OK now a resonant antenna for most 50 Ohm Z amateur radio use will be resonant at its feed point for at least one amateur band frequency. Many times they are also usable and resonant at some harmonics.

Typically, at the feed point of a resonant 50 Ohm Z antenna at it's resonant frequency it will have a Z (impedance) of 50 Ohms, that being 50 Ohms of resistance and at or near 0 (zero) Ohms X (reactance). In this case a transmission line such as 50 Ohm coax will very nicely present to your amateur radio a very nice matching Z (impedance) of at or near 50 Ohms of "R" and near 0 Ohms "X". This will yield an at or near 1:1 SWR match.

Also in this case the transmission line is delivering near all of the Radio's output transmitted RF power to the antenna's feed point and the coax will not itself radiate RF, which is the ideal situation for a resonant antenna operating at one of it's resonant points / frequencies.

A non-resonant antenna generally requires an antenna tuner to develop a match for the amateur radio to then deliver its power to the antenna tuner, and then for the antenna tuner will do its best to deliver RF power to the non-resonant antenna.

Now it is important to know that everything on the output side of the tuner will now be part of the transmitting antenna system. By that we mean that the coax transmission line will also radiate some of the RF power. Again, for a non-resonant antenna.

Note: Many radios have built-in antenna tuners and they are fine generally for coax fed SWR correction that is not initially much greater then about 3:1 (+/-). External free standing tuners can often handle larger initial mismatches and in some cases have a built-in balun and binding posts to feed an end fed antenna.

It is important to know that all tuners do have their limits on how much of a mismatch they can handle and develop into a match for the radio.

If the tuner is far from the antenna and the initial SWR is very poor then after the antenna tuner (if possible) develops a match for the radio there will be increased RF radiated off the coax transmission line output from the antenna tuner to the antenna. Now if there is no tuner, the coax will still radiate the increased RF as well as have the reflected RF energy now coming back in on the radio's final RF amplifier and could damage the radio.
Always check your radio's manual.

Many times the amount of transmission line radiated RF (because of the just stated above) may be small but it can also be large. In this case be advised that RF is now in the environment along the coax path to the antenna.

By the way this is why many Hams use remote automatic antenna tuners for non-resonant antennas.

Note: All of the above is a lot of information and to qualify and quantify values and amounts as well as means and methods are beyond the scope of this Tech Corner's highly simplified presentation, and is just intended to touch the surface of this subject. If it piques your interest you may choose to seek and read detailed text books and more detailed presentations on Antennas, Transmission Lines, Tuners and impedance matching, and / or discuss it with your fellow Hams.

Please note - - - Tech Corner - - - is for everyone.
If you have any information or experience please send it in to be posted in - - - Tech Corner - - -.

Enjoy Amateur Radio,

Lou
WA2GKH

Regional (Atlantic & Hudson Divisions) Hamfests & Special Event

October 2, 2021 : Drumlins Amateur Radio Club Hamfest, Palmyra VFW Post 6778, 4306 Route 31,
Palmyra, NY. www.drumlinsarc.us
October 2, 2021 : Red Rose Repeater Association Hamfest, Garden Spot Fire and Rescue, 331 East
Main Street, New Holland, PA. www.w3rrr.org
October 3, 2021 : Columbia Amateur Radio Association, CARA Fest 2021, Howard County Fair-
grounds, West Friendship, MD. www.carafest.org
October 16, 2021 : Wayne Radio Amateur Emergency Team, WRAET Hamfest, United Methodist
Church, 99 Parish Drive, Wayne, NJ. www.wraet.com
October 23, 2021 : Carroll County Amateur Radio Club, Mason-Dixon Hamfest, National Guard Ar-
mory, 350 Hahn Road, Westminster, MD. www.k3pzn.net
October 23, 2021 : Harrisburg Radio Amateurs' Club, OktoberFest, Vietnam Veterans of America, 8000 Derry Street, Harrisburg, PA.

10/09/2021 | WWI Code Talker Commemoration

Oct 9-Oct 11, 1400Z-0200Z, W5D, Tuskahoma, OK. Vm Okla Nan Ola ARC. PSK31: 7.070, 14.070, 21.070; LSB: 7.218; USB: 21.318 14.318 . Certificate. WI5ND Attn: Holly Sharrock KG5SSJ, 12715 N 410 Road, Hulbert, OK 74441. https://www.facebook.com/Vm-Okla-Nan-Ola-104220878292184/ or https://www.qrz.com/db/wi5nd

10/09/2021 | USS Midway Museum Ship Special Event: US Navy Birthday

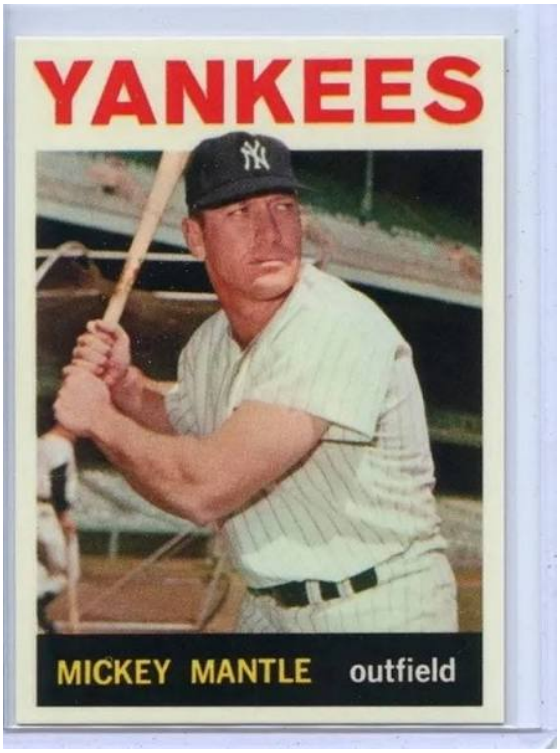
Oct 9, 1600Z-2300Z, NI6IW, San Diego, CA. USS Midway (CV-41) Museum Ship. 14.320 7.250 PSK and CW on various HF bands DSTAR on various reflectors. QSL. USS Midway Museum Ship COMEDTRA, 910 N Harbor Drive, San Diego, CA 92101. Please check spotting networks to find us on HF. Consult www.dstarusers.org to find our call sign NI6IW and Reporting Note to see what reflector we're using. Note: Typical QSL turn-around time is 4 to 6 weeks after receiving request with SASE. www.qrz.com/db/ni6iw

10/16/2021 | Yorktown Surrender Day Event

Oct 16, 1400Z-2000Z, K4RC, Williamsburg, VA. Williamsburg Area Amateur Radio Club. 14.265 7.265. Certificate & QSL. QSL Manager, P.O. Box 1470, Williamsburg, VA 23187. 240th anniversary of the British surrender to the joint American and French forces in Yorktown, VA, ending the American Revolutionary War on October 19, 1781. K4RC.net

10/22/2021 | Mickey Mantle Day

Oct 22-Oct 24, 0000Z-2300Z, W5M, Spavinaw, OK. Mayes County Amateur Radio Club. 3.850 7.240 14.285. QSL. Mayes County ARC, PO Box 1195, Pryor, OK 74361. Sixth Annual Mickey Mantle Day. Honoring the birth of baseball legend Mickey Mantle from his birthplace, Spavinaw, Oklahoma. See www.qrz.com/db/wx5mc or www.mcarc.me



Jamboree On-The-Air/On-The-Internet October 15 - 17, 2021
www.jotajoti.info

SKYWARN

Regional Skywarn websites for on-line and in-person training classes
Philadelphia/Mt Holly Skywarn : www.weather.gov/phi/skywarn State College, PA Skywarn : www.weather.gov/ctp/skywarn
Pittsburgh, PA Skywarn : www.weather.gov/pbz/skywarn

October 13, 2021 : Skywarn Spotter Basic In-Person Training Holiday Park VFD Station 236, 415 Old Abers Creek Road, Plum, PA See Pittsburgh, PA Skywarn : www.weather.gov/pbz/skywarn

Skywarn Weather Net: Every Monday at 19:30 HRS on 146.610 PL 88.5 repeater. You do not have to be a member to participate.

ARRL Now Provides Free RF Exposure Calculator

The FCC has adopted guidelines and procedures for evaluating environmental effects of RF emis- sions. The new guidelines incorporate two tiers of exposure limits based on whether exposure occurs in an occupational or "controlled" situation, or whether the general population is exposed or exposure is in an "uncontrolled" situation.
Under the new FCC rules, some amateurs need to perform routine station evaluations to ensure that their sta- tions comply with the RF exposure rules. This can be as simple as running an online calculator to determine the minimum safe distance between any part of your antenna and areas where people might be exposed to RF energy from your station. Although amateurs can make measurements of their stations, evaluations can also be done by calculation.
To make this easy for amateurs, ARRL now provides an RF Exposure Calculator (http://arrl.org/rf- exposure-calculator) on its RF Exposure page. To use the calculator, enter your transmit peak-envelope power (PEP) and operating mode, and answer the questions about the maximum amount of time you might be transmitting. The calculator will give you the minimum distance people must be from your antenna and human exposure.
You can print the results and keep them in your station records. There is no requirement to send your results to the FCC.
Article Credit : The ARRL Letter for August 5, 2021 - www.arrl.org

Next SpaceX Commercial Crew To ISS Comprised Of Radio Amateurs

Four radio amateurs will head to the International Space Station (ISS) aboard a commercial flight, thanks to Amateur Radio on the International Space Station (ARISS - https://www.ariss.org).
They are :
Raja Chari, KI5LIU
Tom Marshburn, KE5HOC
Kayla Barron, KI5LAL
Matthias Maurer, KI5KFH, a European Space Agency (ESA) astronaut.

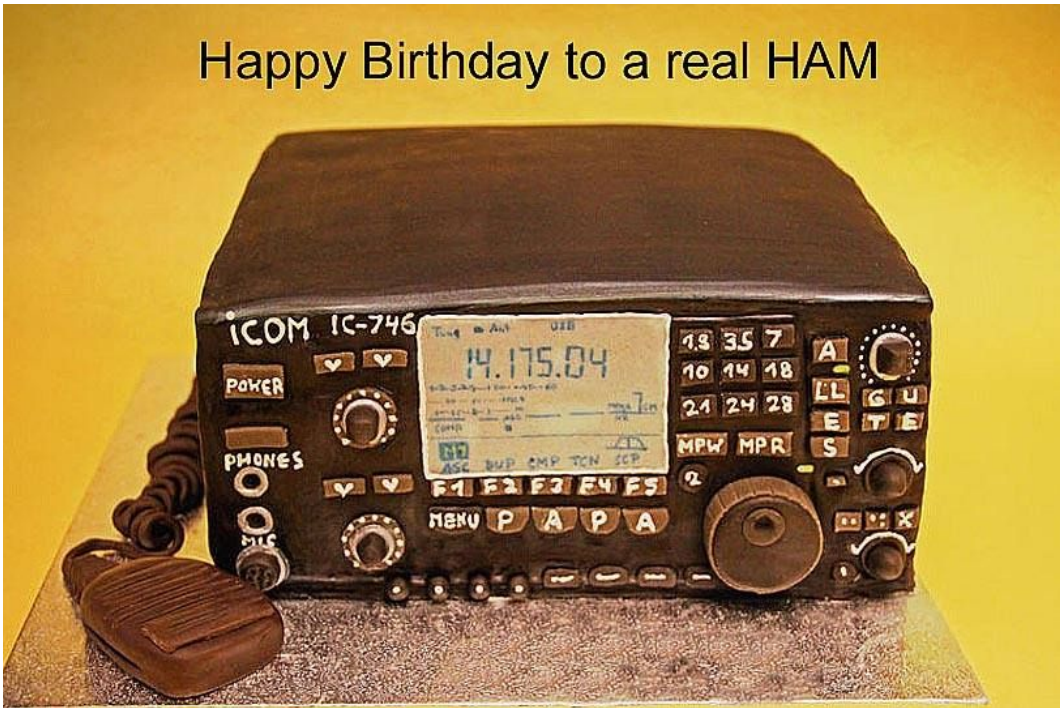
The targeted launch date is no sooner than October 31, from Kennedy Space Center in Florida. The launch will mark the third SpaceX Crew Dragon spacecraft and Falcon 9 rocket launch combination as part of NASA's Commercial Crew Program (https:// www.nasa.gov/exploration/commercial/crew/ index.html), which provides transportation to and from the ISS. The crew is scheduled for a 6-month stay aboard the orbiting laboratory, living and working as part of what's expected to be a seven-member crew. The launch will be the first spaceflight for Chari, Barron, and Maurer, and the third for Marshburn.

NASA's SpaceX Crew-3 will be the third crew rotation mission to the ISS with astronauts on a US rocket and spacecraft and the fourth flight with astronauts, including the Demo-2 test flight (https:// www.nasa.gov/press-release/nasa-astronauts-launch-from-america-in-historic-test-flight-of-spacex- crew-dragon) in 2020, the Crew-1 mission in 2020 - 2021 (https://www.nasa.gov/press-release/nasa-s- spacex-crew-1-astronauts-headed-to-international-space-station), and the ongoing Crew-2 flight (https:// www.nasa.gov/press-release/nasa-s-spacex-crew-2-astronauts-headed-to-international-space- station) as part of the Expedition 65 crew.

Crew-3 astronauts plan to arrive at the station to overlap with NASA Astronauts Shane Kimbrough, KE5HOD, and Megan McArthur; Japan Aerospace Exploration Agency (JAXA) Astronaut Akihiko Ho- shide, KE5DNI, and ESA Astronaut Thomas Pesquet, KG5FYG, who flew to the station as part of the agency's SpaceX Crew-2 mission in April 2021.

Mission teams have a target launch date of no earlier than April 15, 2022, for the launch of the SpaceX Crew -4 mission. "NASA's Commercial Crew Program is working with industry through a public-private partner- ship to provide safe, reliable, and cost-effective transportation to and from the International Space Station, which will allow for additional research time and will increase the opportunity for discovery aboard humanity's testbed for exploration," NASA said. "The space station remains the springboard to space exploration, including future missions to the moon and Mars."

Article Credit : The ARRL Letter for September 16, 2021 - www.arrl.org



October Birthday

Frank Zervoulis ka2mpc

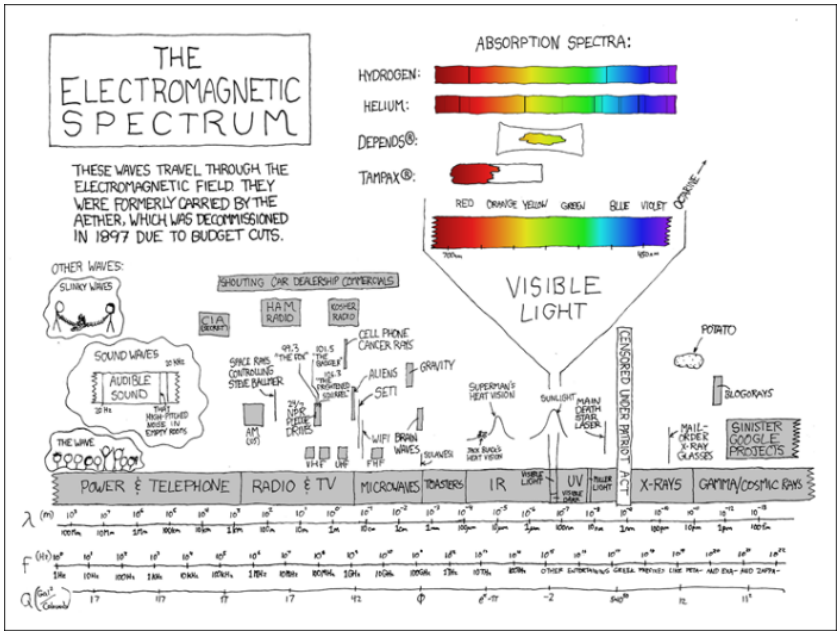
Lou Ernst wa2gkh

Rich Mayer kd2nrj

Lou Raniszewski kd2lfr

HERMAN®

"You never heard of a ham operator before?"




OCTOBER
BREAST CANCER
AWARENESS MONTH

THIS SPACE FOR “RENT” (aka Call For Articles)

For “Rent”? Sort of... Rather, do you have any news of interest to the SHARK readers. Have you run across Some amateur radio related news items? How about links to home brew projects or new equipment?
Have you worked or played with a new technology.
Or maybe you’re one of the more experienced operators in our community.

You don’t have to be a Pulitzer Prize winner to submit an article. I’ll take anything, but would love to get articles that are at least two pages in length (single-spaced). Photos are great, too! Please remember, any submissions
need to be free of copyrights. Creative Commons are okay, but I will need references to be able publish them with attribution.
Thanks & 73 DE KB2YJD, Editor