

# CARS CARRIER

Charleston Amateur Radio Society June 2022 Newsletter

CARS Web Site --- <http://www.wa4usn.org>

CARS generally meets the second Monday of each month at the Golden Corral near Tanger Mall.

**Our next meeting will be held at 7:00 PM, Monday, June 13, 2022 at the Golden Corral near the Tanger Mall.**

## MESSAGE FROM YOUR PRESIDENT

June is here. May events recap:

Armed Forces Day Cross band event. A good turnout for set up and to aid the MARS group with back up operators and loggers. Everyone learned some good operating modes.

Memorial Weekend Event. Saturday afternoon on the U.S.S. Yorktown hanger deck. We tried to honor the people that made the "Ultimate Sacrifice" for this great nation. They are only lost when we forget them.

A proposed slate of Club Officers will be announced at the June meeting. If you would like to serve as a Club Officer contact Bryce, K4LXF who is chairman of the nomination committee. At the July meeting floor nominations will be accepted and of course the Club votes at the July meeting.

Besides the 3rd Saturday Club room operating days some other events could be arraigned. Perhaps the Club could choose to operate on Veterans Day November 11, or support the Scouts for JOTA/JOTI in October.

June Events: Museum Ships will be completed by the arrival of this letter. Expect some results at the June meeting.

Field Day: On June 25-26 the annual premiere event from the ARRL. This event will be held on the Yorktown but NOT using permanently-installed

equipment. We will set up temporary operating stations on the ship's catwalks, port side.

Try some new modes, ask for help on a new mode. The Club has members with a wealth of knowledge willing to share that knowledge with anyone that asks. If you have a special mode you use share that knowledge with others. Enjoy the summer operating months.

73 Rick Valentine, N8BKN

## NEWS FROM THE VP

I try to tell my wife that my hobbies don't eat up that much time, and I'm usually home with her. Two hours a month for club meetings, one afternoon at the State Park, three hours at a VE session. Then comes June, with a 48-hour Museum Ships Weekend event followed by 24+-hour Field Day plus VE testing plus State Park and the club meeting. On my first Field Day I didn't know what to expect and stayed out so late my wife thought I wasn't ever coming home.

This morning Rick and I set up a second station on the Yorktown to support activating four museum ships. Practice makes it easy; I think Rick spent more time getting the antenna off the wall rack and cursing at it than it took to actually install the antenna. Field Day veterans know that we can set up in an hour if pressed; maybe next year we start setup at 2pm Saturday and gain four extra operating hours.

73 Tom, AJ4UQ.

## MEMBERSHIP

We have one second reading to vote on this month at the June 13th meeting, Joe Thibodeau NE1JT. As of this publication we have two new applications for membership for first reading, Roberto Soto WP3WI, and Renata Sierzega KQ4ASH.

I will try to have receipts and membership cards ready for those who wish to pay their dues early at the June meeting. If you do decide to pay then, please be mindful of meeting time so that we don't hold up the proceedings. Actual due date is August 1<sup>st</sup> so if you're not yet ready to pay it's not "hang them up by their thumbs" time yet (that comes later).

Hope everyone is enjoying their early summertime. I'm ready for fall already.

Lee Miller KI4LLJ,  
CARS Membership Committee Chairman

## **EMERGENCY PREPAREDNESS**

June is the start of Hurricane season. Potential Tropical Cyclone # 1 (PTC01) is in the Gulf of Mexico after coming from the Pacific side. Going to be another busy year with lots of named storms (14-21), Hurricanes, and 3-6 Major Cat 3 or better storms predicted. Stay aware and heed the warnings. Check out the following radio frequencies: 14.325 MHz on 20 meters, the Hurricane Watch Net. Five days out this net will activate out of Florida weather Service. On 40 meters try 7.188MHz, the Caribbean Emergency Net.

Charleston County annual certification exercise went well on June 1<sup>st</sup>. This year a major earthquake event happened. Also a split EOC was used. The Palmetto Commerce EOC and the Public Service Building off of Leeds Ave EOC was used with Communications connecting the two offices. A couple of early hiccups but worked well.

Summer brings different weather, enjoy the beach but be prepared for Rip Currents and warnings, also watch for water spouts, remember these are

tornadoes over water and can be more powerful than they appear.

Supply chain issues mean less product on store shelves so start stocking up when you can. Supplies will be scarce when bad weather is coming. Also remember your neighbors, stock a little extra for them too. Check your vehicles for evacuation, get them up to speed for a long drive and get snacks.

Also now is the time to plan your route out if evacuation is required. Road work and conditions can change over time, take that summer drive now and see the conditions. Also if new to the area talk to locals streets flood around here at high tide during a significant weather event your planned route may require a boat. Always have a plan A, B, and even C.

Until Next Month 73 Rick, N8BKN

## **FIELD DAY**

Greetings from the Flight Deck!!! Last month the members at the monthly meeting voted to go forward with participating in the annual Field Day in June.

Michael White N4OBR has accepted the responsibility of heading up the phone portion of the operation and Dr Steven Saef AA2BB has accepted the job of heading up the CW side. Both of these fine gentlemen are looking for operators and recorders. If you can donate some time, please do so. We will be operating for 24 hours this year.

Now no activation like this can take place without the support of the club engineers. Our president, Rick Valentine N8BKN along with Bryce Meyers K4LXF will be handling the setting up and taking down the antennas and stowing the gear. Help here would be appreciated. Set up will be on Friday before the start of Field Day and take down will be on Sunday. Helping hands would be appreciated.

Now with all this "work" being done, nourishment will be required. Michelle Mantooth KK4WQO has offered to be the Commissary Chief and ensure that adequate meals and midrats are provided.

Last but not least the GOTA Station will be set upon the Hangar Deck by the forward brow. A gentle summer breeze with shade and beverage dispenser (soda machine) will be on hand. Mr. Bill Dean N4JKA and yours truly will be manning this station again this year. (Unless Bill jumps ship and goes to the dark side -CW.) This station is manned during museum operating hours only on Saturday and Sunday. It's a great place to meet people and talk about amateur radio and the club. Help will be needed here as well.

Now, not to exclude anyone, if all the time slots on the phone and CW stations are not filled. And they are usually not. Operators in the dark art of FT8 and the other dark sciences will be called upon to fill the air time. If you are interested in operating in this area, please let me know.

While some of this has been a little tongue in cheek, on a serious note I would like to see a strong showing from the club members to make this Field Day a great success.

To recap we need the following:

- People to help set up and break down
- CW operators and recorders
- Phone operators and recorders
- Help on the GOTA station possibly on Saturday and on Sunday
- People to help load stores for the meals and snacks

I am looking forward to making this a great FUN Field Day event.

KN4EXJ, Brian Smith, Field Day Captain

## **HAMFEST**

Still looking for a venue. Send us your suggestions.

Steve, KE4THX

## **MUSEUM SHIPS**



N4NHT as WA4USN, computer logging on the right.

As the Carrier goes to press, the club is activating four ships at Patriots Point.

Tom, AJ4UQ

## **RACES / PUBLIC SERVICE**

No report.

Tom, K4WJC and Doug, KU4OC

## **SCHOOL CLUBS**

K4PSA is out for the summer, but TARC and CARS members will be working over the summer to build out an antenna system for the fall.

Tom, AJ4UQ

## **COMMUNICATIONS TRAILER**

Mike reminds us that while he has found a home for the trailer and he performs maintenance, he is not equipped to tow the trailer. If you plan on using the trailer for an event, you will need to coordinate transport.

/for Mike, KY4BO

## **FINANCIAL REPORT**

CARS Treasurer's Report			
-------------------------------	--	--	--

<b>April 2022</b>			
<b>Checking Balance March 31, 2022</b>			\$ 4,712.05
Cash Receipts - April			
	Dues	-	
	Memberships	-	
	Raffle Proceeds	79.00	
	Interest	0.04	
Total Receipts			79.04
Cash Disbursements -April			
	Lee Miller - Postage	(19.39)	
		-	
		-	
	ARRL 1 Membership	(47.00)	
	Bank Fee	(5.00)	
Total Disbursements			(71.39)
<b>Checking Balance April 30, 2022</b>			\$ 4,719.70

Charlotte, KJ4PLX

## **MINUTES of the MARCH MEETING**

The monthly Club Meeting was held at the Golden  
Corral at 4968 Centre Pointe Dr. in North  
Charleston 29418

Monday May 9, 2022 at 7:00 PM

**MINUTES:** The Charleston Amateur Radio Society, Inc. Meeting was called to order by President Rick Valentine, N8BKN, at 7:00 PM on Monday May 9, 2022, at the Golden Corral in North Charleston, SC.

**Introductions:** There was only about 30 members and 6 guests at the meeting

**Secretary's Minutes: Warren, KK4EVI:**

The April 2022 meeting minutes were published in the May 2022 CARS Carrier. A motion was made to accept the minutes as published, the motion was seconded and passed.

**Treasurer's Report: Charlotte, KJ4PLX:**

The March 2022 Financial Reports were published in the May 2022 newsletter and accepted as information.

**Museum Ships on the air: Tom, AJ4UQ + Jim, KW4UL:**

June 4<sup>th</sup> and 5<sup>th</sup>, plan to operate 2 stations for 24 hours. Will use CW and Digital/Voice. May have trailer operating near the PBR station.

**Field Day: Brian, KN4EXJ:**

Dr. Steve will be in charge of the CW station and is asking for anyone with CW experience to contact Dr. Steve and help out. When the CW station is not in use, it will be used for digital/voice station.

**Races: Doug, KU4OC + Tom K4WJC:**

No report

**Hamfest Report: Steve, KE4THX:**

No report

**Repeater Report: Bryce K4LXF:**

There was a lot of man-made interference on the Weather Net last Wednesday.

**Membership: Lee, KI4LLJ & Jeanette, KO4BPH:**

Applications for regular membership:

First Reading:

Joseph Thibodeau Jr NE1JT

**Emergency Prep:**

Charleston: Rick, N8BKN – ARES Team meets on 3<sup>rd</sup> Saturday of the month

There have been 4 earthquakes in Elgin SC.

There will be no ARES meeting on May 21<sup>st</sup>, due to Technician class

Dorchester: Beverly, W3BRB – Meets on 2<sup>nd</sup> Saturday of the month, at the EOC.

Primary Repeater is down

Berkeley: Linda KJ4EUVV – Meet on last Saturday of the month.

Primary Repeater is down

**Nets:**

LowCountry Storm Spotters Net 146.79 meets on 1<sup>st</sup> and 3<sup>rd</sup> Wednesdays at 8:00 PM

When using a low power hand held radio, it may be hard to check into the Nets.

**Newsletter / Cars Carrier & Website: Tom, AJ4UQ:**

Still looking for anyone that has an article for the CARS Carrier.

**Education & VE Testing: Connie, NR4CB:**

Connie will be moving to online registration at <https://hamstudy.org/sessions/laurel/29407/inperson> for her test sessions.

The next scheduled test session, at Tall Pines Baptist church, will be June 11, 2022, at 9:00 AM. Contact Connie, nr4cb.ve@gmail.com, by email to register or use the online registration website.

If you wish to join the new Laurel VE team, contact Connie at nr4cb.ve@gmail.com.

Connie will be starting their odd month testing the third Sunday, May 15, 2022, at 3 PM, at Reforge inside Citadel Mall next to Belks. This is a smaller room and will not handle as many people as the Tall Pines Baptist Church will handle. Pre-registration is required here also. If attendance is good, we may have more odd Sunday test sessions in the future

Technician Training Class down at the VA Hospital May 21<sup>st</sup> and 22<sup>nd</sup>.

**School Programs: Alene, KG4NKD – K4DMS:**

**School Clubs: Tom, AJ4UQ – K4PSA:** End of school year – may run antennas during summer

**Communications Trailer: Mike Whisenant, KY4BO:**

### **Old Business:**

A vote was taken weather to have Field Day or not. Vote was to have Field Day. Another motion was made to request \$1,000 for Field Day meals and fuel for generators. Voted on and approved.

### **New Business:**

A motion was made requesting \$110 to renew website dues, voted on and approved.

May be asked to move our second Monday meeting to another time. Golden Corral expects a lot of graduation banquets. [Editor's note: We have confirmed with Golden Corral that our usual meeting time is still good].

### **Announcements:**

No operating day May 21<sup>st</sup> due to Technician Training Class.

### **Drawing:**

No drawing due to Larry couldn't make meeting won the drawing this month for a one-year ARRL membership

Being no further business, at 7:43 PM a motion was made, seconded and passed to close the meeting.

Respectfully submitted by Warren, KK4EVI.

## **FCC RF Exposure Evaluations Due by May 3, 2023 Dave Stamps, K8UM**

BLUF (Bottom Line Up Front): FCC Rules issued a year ago require RF Exposure evaluations be performed and documented for all amateur radio stations. Completion deadline is May 3, 2023.

On May 3, 2021, new FCC rule changes detailed in a lengthy 2019 Report and Order (R&O) governing RF exposure (RFE) standards went into effect. The revised rules do not change existing RF exposure limits but now require that stations in all services, INCLUDING AMATEUR RADIO, be evaluated against existing limits, unless they are exempted. For stations already in place, that evaluation must be completed by May 2, 2023. After May 3, 2021,

any new station, or any existing station modified in a way likely to change its RFE profile, examples: different antenna, location or greater power, was expected to conduct an evaluation by the date of activation or change.

The Amateur Service is no longer categorically excluded from certain aspects of the rules, as amended, and licensees can no longer avoid performing an exposure assessment simply because they are transmitting below a given power level. Ham station owners must determine if they either qualify for an exemption based on the R&O or must perform a routine environmental evaluation. The R&O adopted a 2-year period for parties to ensure compliance under the new rules (ending May 3, 2023). This order can be found at: <https://docs.fcc.gov/public/attachments/FCC-19-126A1.pdf>

The ARRL has established a significant library of information on this subject, and there are several on-line calculators available to aid in evaluating a station.

Go to [www.arrl.org](http://www.arrl.org) and Website search for RF Exposure.

Ed Hare, W1RFI, the ARRL Lab Manager has an excellent article "Understanding the Changes to FCC RF Exposure Rules" at <http://www.arrl.org/files/file/Technology/QST20210901.pdf>

Some on-line calculators and technical information sources:

- <http://www.arrl.org/rf-exposure-calculator> (from ARRL website)
- <http://www.arrl.org/rf-exposure-calc-instructions>
- <https://rsgb.org/main/technical/emc/emf-exposure/> (from Radio Society of Great Britain website)
- Lake Washington Ham Club (Kirkland WA – from SC SSB Net website) <http://www.lakewashingtonhamclub.org/resources/rf-exposure-calculator/>
- LWHC has a YouTube video at: <https://www.youtube.com/watch?v=oq5h-Kyinfq>



- W4/VP9KF Public Domain Program (from SC SSB Net website) [http://hintlink.com/power\\_density.htm](http://hintlink.com/power_density.htm) This program estimates a field strength so it can be compared to what is allowable. It also is based on distance to the center of the antenna, something that probably is easier to estimate.

It would be instructive to make evaluations using multiple calculation programs to get a sense of how the results can vary.

Calculations can be simplified by choosing the most extreme conditions your current station might exhibit. If results are satisfactory for these conditions, no further calculations are needed.

- Use full transmitter output power with 100% duty cycle;
- Transmit Duty Cycle – 10 Min on/ 10 Min off;
- Disregard coax line loss;
- Include Ground Reflection effects;
- Use shortest distance between any part of your antenna and location where people might be;
- Evaluate for Uncontrolled Conditions

Calculation instructions provide guidance for estimating antenna effects. Results are dependent on transmission frequency. However, if the same antenna is used on multiple frequency bands, the results for the lowest band will be the most limiting. For example, I have a multi-band terminated folded dipole that can be used for all HF ops from 160 M to 10 M.

## Calculation Results

Performed on: \_\_\_\_\_ By: \_\_\_\_\_

Average Power at the Antenna	100 watts
Antenna Gain in dBi	2.2 dBi
Distance to the Area of Interest	15 metres 49.21 feet
Frequency of Operation	1.8 MHz
Are Ground Reflections Calculated?	Yes
Estimated RF Power Density	0.0151 mW/cm <sup>2</sup>

	Controlled Environment	Uncontrolled Environment
Maximum Permissible Exposure (MPE)	277.78 mW/cm <sup>2</sup>	55.56 mW/cm <sup>2</sup>
Distance to Compliance From Centre of Antenna	0.13 metres 0.41 feet	0.26 metres 0.86 feet
Does the Area of Interest Appear to be in Compliance?	Yes	Yes

## Calculation Results

Performed on: \_\_\_\_\_ By: \_\_\_\_\_

Average Power at the Antenna	100 watts
Antenna Gain in dBi	2.2 dBi
Distance to the Area of Interest	15 metres 49.21 feet
Frequency of Operation	29.7 MHz
Are Ground Reflections Calculated?	Yes
Estimated RF Power Density	0.0151 mW/cm <sup>2</sup>

	Controlled Environment	Uncontrolled Environment
Maximum Permissible Exposure (MPE)	1.03 mW/cm <sup>2</sup>	0.21 mW/cm <sup>2</sup>
Distance to Compliance From Centre of Antenna	1.84 metres 6.02 feet	4.09 metres 13.4 feet
Does the Area of Interest Appear to be in Compliance?	Yes	Yes

Results using the W4/VP9KF program.

While the Estimated RF Power Density is the same on 1.8 MHz or 29.7 MHz, the exposure effects in an Uncontrolled Environment are substantially different. The MPE at 10M is only about 1/264 of that allowed at 160M for my power and antenna setup. But since my Estimated Power Density is below the MPE for 10M, exposure calculations for

higher bands are not needed. Likewise, in both cases the Distance to Compliance from Antenna Center is much less than the actual distance to the center. This also demonstrates that compliance at 10M indicates compliance on the higher bands. Since I use a different radio and antenna for 2M operations, I'm obligated to make a similar evaluation for that equipment.

CARS CARRIER  
Charleston Amateur Radio Society



email: [carsinfo@wa4usn.org](mailto:carsinfo@wa4usn.org)