

# MERIDEN AMATEUR RADIO CLUB

# KEY KLIX

# SEPTEMBER 2022 KW VERSION

PRES W1YSM ED SNYDER VP KB1JL ERIC OLSSON SECT N1BRL BART TOFTNESS  
TRES K1WJL DAVE SWEDOCK S.A.M. K1RCT ROB CICHON

WEBSITE WWW.W1NRG.COM OFFICIAL MAILING ADDRESS,  
MERIDEN AMATEUR RADIO CLUB, POB 583, MERIDEN CT 06450

ALL "IN PERSON" BUSINESS AND ACTIVITY MEETINGS ARE CURRENTLY POSTPONED AT THE EOC HOPE HILL FIREHOUSE, 143 HOPE HILL ROAD, WALLINGFORD, ZOOM MEETINGS CONTINUE UNTIL AT LEAST SEPTEMBER AND THEN HOPEFULLY WILL BE OFFERED IN A HYBRID MODE.(CONCURRENTLY).  
**THE SATURDAY MORNING SESSIONS ARE BACK IN FULL OPERATION.**

KEY KLIX EDITOR DAVE SWEDOCK K1WJL  
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## HAPPY 75TH ANNIVERSARY MERIDEN AMATEUR RADIO CLUB

THE MARC WAS AWARDED AN ARRL GRANT FOR IT'S MARCONI PROJECT, THE BRANCHCHILD OF OUR PRESIDENT ED W1YSM. MARCONI STANDS FOR MOTIVATING AMATEUR RADIO CLUBS TO OPEN NEW INITIATIVES . ED WILL ELABORATE ON THE PROGRESS AND PATH FORWARD FOR THIS EXCITING PROJECT OF THE MARC.

VE SESSIONS AT THE OEC, 143 HOPE HILL ROAD, WALINGFORD.  
EVERY 2ND SATURDAY, NEXT ONE IS SATURDAY OCT 8TH

THE NEXT BUSINESS MEETING WILL TAKE PLACE ON THURSDAY  
OCTOBER 13TH AT 7:30PM ON ZOOM.

NEXT ACTIVITY MEETING IS ON THURSDAY OCTOBER 27TH , 7:30PM ON ZOOM



# Secretary Report & Minutes of the Meriden Amateur Radio Club

**Bart Toftness N1BRL , Secretary**

**BUSINESS MEETING AUGUST 11, 2022 ZOOM**

Meeting was called to order by President Ed Snyder, W1YSM at 19:30 EDT

Normal introductions were omitted as all attendees (34) are self-identified in 'Zoom' , KA1BED, W1EDX, KC1OYN, KC1QWH, N1BRL, KC1OCS, W1DQ, WB1GYZ, K1VDF, KC1NQE, K1RCT, N1BRI, N1GNV, W1BJG, N1LES, KB1JL, N1API, K1STM, KC1DOY, W1YSM, KC1KQH, KC1SA, K1LHO, KC3UKG, W1IKW, KC1HQX, K1JCF, KC1PBQ, N1ZN, K1LYP, WV2LKM, KE1AU, K1WJL, and Spencer Rygiel.

Announcements (W1YSM), Business Meetings will be on Zoom through November. Contact W1YSM for the second round of 75<sup>th</sup> Anniversary Coffee Cups. Contact N1BRL for Business Cards/Membership Certificates. No news about the ARRL Grant Award yet. 75<sup>th</sup> Anniversary Special Event Station call will be W1N during 1 to 15 of October (K1RCT). The Year in review meeting will be first Thursday in December and the CQ Santa date will be determined by the town.

Secretary's Report (N1BRL)

July business meeting minutes were approved by majority vote. We recognized one returning member, Seth Kolasinsk, W1RPN. No correspondence to report.

Treasurer's Report (K1WJL) was read by Dave K1WJL. The complete Treasure's Report is available to members upon request.

Station Manager's Report (K1RCT) The Station Activity Manager reported sustained Saturday morning activities at the OEM. There are plans for a Diploma/Certificate for stations that work our Special Event Station W1N during it's activation Oct 1 -15. It will be available for self-completion by way of an email distributed link.

The full SAM report is available upon request.

Entertainment/Activities, Upcoming activities include; August 25 will be the history of MARC volume 1 and September 22 will be history of MARC volume 2. October may be a presentation on the Young Amateurs Radio Club by N2RTS. November is Thanksgiving while December will be the year in review and CQ Santa. We could begin the new year with a presentation on CW by the LI CW club.

Publicity , Technical /Interference, Scholarship and Publicity had nothing new to report.

Repeater Committee EchoLink was down for a short time during a local power failure which exceeded the capacity of the battery backup.

Other Activities, Saturday/Sunday morning continue to be steady at the OEM. The CW class is working on a plan for a CW net. The Diamond & Gold Challenge stats and awards are published on the club *Bulletin Board System (Forum)*. The 75<sup>th</sup> Anniversary Special Event Station Call W1N is scheduled for 1 Oct to 15 Oct. Contact K1RCT for details. KC1QWH announced he is looking for operators to support the Masonic Lodges on the Air Special Event Station W9C, Sept 24 from 10AM to 6 PM. N1API reported on the Castle Craig activities. The CERT team is requested to provide support Oct. 1 and 2 for Celebrate Wallingford.

Nutmeg Hamfest, The state convention will return on October 9 at the Best Western in North Haven. The associated VE Session will be held the day before (8 Oct.) at the OEM. MARC will co-sponsor the ARES Annual Symposium with SARA during the Nutmeg Hamfest.

Big E, Sept 21 will be Connecticut Day at the Big E and MARC will coordinate staffing of the Amateur Radio Booth in the Better Living Center for the day. Contact Rick, KC1OYN for details of volunteering and scheduling.

New Business, K1RCT made a motion which was seconded to request a budget of about \$450 to complete the installation of the Eggbeaters for satellite communications at the OEM. A discussion followed. Next month will have details for the upcoming election of club officers. There was a discussion about the need to have a single person to coordinate the many forms of media exposure by the club. The idea of creating an officer position to be the liaison between MARC and the town was discussed with the consensus agreeing that an elected officer position was not the better way to move forward.

Voting Summary for the June meeting

July meeting minutes were approved.

Returning member Seth Kolasinsk, W1RPN was recognized.

Next month will be the vote on K1RCT's \$450 request

Meeting was adjourned at 21:04

Respectfully submitted,

Bart Toftness, N1BRL



## **The Dog Just Caught the Car – Now What?**

There is an old saying--- many a truth is said in jest. Well that adage applies to this column. MARC just received a Club award from the ARRL. Our submission was found worthy of funding, and we received the requested \$11, 620. Our award entry was entitled, MARCONI – an acronym for Motivating Amateur Radio Clubs to Open New Initiative. [It seemed to be a sign of Devine intervention that the acronym worked out.] MARCONI is designed to position MARC as a “Club Elmer” for other less robust amateur radio Clubs in CT.

To answer a question some may have as to “Why are we doing this?” let’s use an FAQ format.

### **WHY NOW?**

MARC is growing in membership and influence. The opportunity to obtain new gear, and upgrade our equipment was too important to ignore. Also, there is now an “expectation of leadership” directed as us. We needed to step-up, and we did. We are very well thought of in the ARRL thanks to all that we do. We are a poster child for a well-functioning Club. We are now functioning at higher level than previously. We need to continue to show leadership.

### **WHY SO MANY SECTIONS (ELEMENTS = 7)**

MARCONI was designed to reflect what we do routinely – thus we can Elmer other Clubs without MARC members requiring major training or dramatically altering our amateur radio routine. The 7 sections- POTA; FOX HUNTS; CW; SATELLITE COMMS; VE SESSIONS; NCS & TRAFFIC ; SERVED AGENCIES reflect most of our major activities – a little something for everyone. Satellite communications is a newer area we will be exploring with our new equipment. This allows us to help different clubs with different needs -some will want help with VE or CW sessions, others with POTA, etc. We can provide Elmering in all these areas. That was the key to the success of the grant application. We have a LOT of members, and many are NEW and have less rings in their tree trunks (younger). We need to give all our ~140 members something to do in amateur radio and help the Community we live in. MARCONI will help us achieve this goal.

### **CLUB MEMBERS ARE TOO BUSY – WHO WILL DO ALL OF THIS WORK??**

The plan was to do what we already do – and thereby Elmer other Clubs and new Hams who ask us for help. Having other hams join us on POTA or Fox Hunts or CW training classes or satellite outings, does not require MARC members to do anything extra except teach and train. We can easily assimilate other club members into these activities without over-burdening our members. Plus, so many more of our members will have the opportunity to participate in these 7 activities as they choose and wish to consider joining. Seems like a win-win.

### **I ONLY LIKE TO DO 2 OR 3 OF THESE ACTIVITIES**

Great – just participate as you wish and enjoy.

### **HOW CAN WE TRAVEL ALL OVER THE CT COUNTRYSIDE TO DO THIS?**

We do not need to – as they say in the Commercial “The lenders come to Linda.” The other clubs will come to our events and training, in person or via Zoom. If we wish to go to their town to do an event, we certainly can decide to do so. It would be a mutual decision with MARC and the other Club. This is a MARC-based Program

### **IF MONEY IS LEFT OVER, CAN WE KEEP IT?**

No, unused funds need be returned. The trick is to use it all –wisely. And yes, all monies will be segregated from current MARC funds and will be tracked scrupulously.

### **WHAT DO WE NEED TO DO TO SHOW WE ACCOMPLISHED OUR GOALS?**

The 7 Element Leaders will keep a Log of attendees which will record what club they are affiliated with, call sign, and contact information. We are working on appropriate logs for each Program Element.

### **WILL WE APPLY FOR ANOTHER GRANT?**

If we have a good proposal and ARRL has more money – we certainly can consider it

### **CAN I SEE THE WHOLE GRANT AND THE BUDGET?**

Absolutely, it will be made available for all to see. The officers will address this issue and I will talk about it at the September Business Meeting.

These are just some questions I have anticipated. We will have lots more questions and we will answer every one of them.

For now, CONGRATULATIONS MARC! We did good!

Ed W1YSM

President MARC



## ***Our annual awards from WA1TRY***

Recently there has been some discussion about our "Ham of the Year" and "Elmer" annual awards. Let's go way back to the early years, when I was doing some of the early Christmas Party setups. I was the occasional "emcee" a few times. As the unofficial chairman of the event (usually working with the then club president W1KKF (or other presidents over the years) I often had a small "committee" of a couple volunteers who worked to come up with some kind of entertainment and awards program. That party was always the last official meeting of the year, and was when we introduced the new officers. It was decided in those early years to make it an "annual event" combining the December official business meeting along with a party. For years we would get together and come up with a bunch of things (commendations, awards etc.) along with some humorous anecdotes to entertain the party goers.

Over time I began to think that all these awards (which WERE always researched and ultimately well deserved) had ONE thing in common that was missing. And that was it was always a select few members who did the research and provided the list of potential recipients to be awarded. I then said, "We need to create a "special" award. Something to honor our best and brightest and most deserving members that were determined BY THEIR PEERS by a vote cast by ALL the members and not by a small number of committee members. It was generally agreed by the then committee members that we should look into that.

And of course our first thoughts were to honor that outstanding member for that year to be called "The Ham of the Year" award. We also thought about beginning a 2nd annual award also to be determined by membership vote. That second award was inspired by the then continual efforts of a long time member, Adolph Goodsell W1ICQ who had become a constant source of mentoring to our then current and potential new club members over many years. He was at that time our "unofficial club Elmer", who was instrumental in countless ways, creating interest, helping, educating and actually taking car loads of ham radio students to the FCC office in New York City, to pass their exams.

Those two special annual awards were to be decided by "vote" as part of our annual election of officers. This was started and continues to be part of our club officer elections but has never been officially put into our constitution or mentioned in our bylaws. But it has remained a coveted and respected award given out every year for the past several decades.

And that is how the Ham of the year, and Elmer awards were started. They were the first and only permanent awards in the club history created to be specifically honored BY MEMBER VOTE each year. Over the years we still had an annual club meeting / holiday party where the organizers handed out well deserved acknowledgements, but the annual HOY and Elmer awards are to this day the only club awards that are confirmed by the entire club membership.

To extinguish this important part of our club history and not allow our most hard working and talented members to continue to be honored throughout time would be IMHO, a sad day.

While I can understand the evolving complexities with today's modern world of instant gratification and Social Media onslaught, we have to remember the ever growing wide reaching of this club's popularity will bring new and challenging demands that will warrant some changes. I've been watching this club grow for 50 years and have been a full time active member for the last 48 and understand.

I do not want to see our current or future hard working and deserving members no longer be honored each year with the HOY and Elmer awards. We have NOW many of the best and hardest working members EVER. I look forward to seeing THEIR calls added to list of recipients of past years accolades. Let THEIR history be acknowledged and forever be part of this continuing saga of the "The Meriden Amateur Radio Club".

Don't forget the legacy of this club started and continues for 75 years on the shoulders of a long list of past members. Let the "new" members continue to add their own page to that legacy and keep the HOY and Elmer annual awards alive!

***de WA1TRY - Rich Aubin - Club Historian.***

## FROM ERIC KB1JL WARG COORDINATOR

Wallingford OEM is offering a CERT training course starting in October 5, 2022. The course will be on Wednesday nights at the OEM Yalesville firehouse and will run from 6:30 PM to 8:30 PM for 8 weeks. To be a member of WARG, and be able to be deployed in the field, CERT training is required.

Completed applications can be dropped at Central Fire Headquarters or by email to [Wlfdcert@gmail.com](mailto:Wlfdcert@gmail.com) no later than 10/1/22. They can also be dropped off at the OEM building on any Saturday morning in September. Please note students will need a laptop for the delivery of didactic materials. .

Applications must be accompanied by the required Core 4 FEMA Incident Command courses.

To get on the town CERT (WARG) team, this is the process:

First step is to take the on line FEMA Core 4 courses

The courses are here on line:

<https://training.fema.gov/is/crslist.aspx> <<https://training.fema.gov/is/crslist.aspx>>

You have to register with FEMA and get a FEMA ID. The courses you want are IS-100, IS-200, IS-700 and IS-800.

Write down and save your FEMA ID and log in info and password.

Each course can be scrolled through in an hour or two. Then you take an open book test on line at the end of the course. Upon successfully passing, you will receive a PDF certificate for each course passed. Save the PDFs upon completion and you can forward them.

IS-100.C: Introduction to the Incident Command System, ICS 100

<https://training.fema.gov/is/courseoverview.aspx?code=IS-100.c>

IS-200.C: Basic Incident Command System for Initial Response

<https://training.fema.gov/is/courseoverview.aspx?code=IS-200.c>

IS-700.B: An Introduction to the National Incident Management System

<https://training.fema.gov/is/courseoverview.aspx?code=IS-700.b>

IS-800.D: National Response Framework, An Introduction

<https://training.fema.gov/is/courseoverview.aspx?code=IS-800>.

The core 4 course package is also the basic requirement for ARES participation. This is a nationwide requirement for both FEMA and ARES organizations. It is important to know how the incident command structure operates in both large scale and small scale disaster management.

If you are interested, email me at [kb1jl@outlook.com](mailto:kb1jl@outlook.com) and I will send you an application form.

More info on the course here:

### **WALLINGFORD CERT BASIC CLASS**

**Fall 2022 CLASS TIMES: 6:30 p.m. (Sharp) - 8:30 p.m.**

**CLASS LOCATION: Wallingford OEM, 143 Hope Hill Rd., Wallingford, CT 06492**

**Prerequisite: ICS 100, 200, 700 and 800 to be completed prior to the first class.**

**October 5- INTRODUCTION, DISASTER PREPAREDNESS &**

**DISASTER PSYCHOLOGY, D. Craig Newton, LCSW**

#### **Introduction**

**October 12 - CERT ORGANIZATION/RADIO EQUIPMENT ISSUE**

**Guercia and Joe Murray**

**October 19 - TERRORISM AND CERT**

**Police Chief Eric Olsson (ret)**

**October 26- LIGHT SEARCH & RESCUE OPERATIONS**

**CT US&R TF-1 All Instructors**

**November 2 - UTILITY CONTROLS and SAFETY Warren Rogers**

**November 9- DISASTER MEDICAL OPERATIONS, PART 1 & 2**

**Lt. Keith Schaffer and Len Guercia**

**Stop the Bleed Course**

**November 12 - CPR and AED**

**November 16 - FIRE SAFETY AND, REVIEW & PRACTICAL**

**November 30 - GRADUATION/ADMINISTRATION OF OATH**

**All Instructors; Fire Chief; Wallingford Town Officials;**

**OEM Teams Members**

**To register please email completed application to [wlfdcert@gmail.com](mailto:wlfdcert@gmail.com)**

# My HeckKits FET Dip Meter Build

## By James M. Surprenant, AB1DQ



As I venture deeper into scratch building I've recently become aware of how useful it would be to have an old school dip meter on the workbench to verify the resonance of LC circuits in the receiver circuits I've been experimenting with.

In the back of my mind I've always been aware of the existence of the dip meter and the tube era term "Grid Dip Meter" seems to have been rooted in my mind going back to childhood. I'm fairly certain the term appeared on amateur licensing exams I've sat for, and I know it was ubiquitous in many of the old 60s era Pop Electronics I used to read in my grandfather's radio shop.

I started a search online to learn more about the history, design, use and availability of dip meters, sometimes called 'dippers' today. In the solid state era, field emission transistors (FETs) and sometimes bipolar junction transistors (BJTs) have largely replaced .

**FUN FACT:** FET based dippers are sometimes called Gate Dip Oscillators while BJT based dippers are sometimes called Emitter Dip Oscillators.

The dip oscillator isn't a precision instrument by today's digital standards and several factors could lead to inaccuracies. Despite that, it has numerous practical uses in the amateur radio station. In addition to being used to measure the properties of resonant circuits, filters, and antennas, a grid dip oscillator can also be used as a signal generator, to measure individual component capacitance or inductance and they may also be used for transmission line testing.

I discovered that back in the day, the amateur radio builder had several options to assemble their own GDO from kits. As expected, Heathkit offered several dippers in kit form throughout their history including the Model GD-1 and later, the HD-1250.

continued on next page



THE HEATHKIT GD-1B GRID DIP METER



THE HEATHKIT HD-1250 DIPMETER

CONTINUED ON THE NEXT PAGE

I found several of these old Heathkit GDOs available online and at pretty reasonable asking prices. But as always, when buying used vintage electronic gear, it's a crap shoot in terms of whether the item bought sight unseen will come complete and be operable. So I decided to explore whether any of the niche kitters offered a modern day equivalent that I could build myself.

This is where I discovered HeckKits ([www.heckkits.com](http://www.heckkits.com)) operated by kit designer and ham radio operator WA7OIB, Darrel Heckendorf. Darrel offers several kits priced under \$100 that may be of interest to the QRP builder including an SWR Bridge/Frequency Counter, a Step Attenuator, a CW Keyer, and of interest to me, an FET Dip Meter.

I ordered the FET Dip Meter kit online and quickly received an email from Darrel, thanking me for my purchase, asking me to confirm my shipping address and to inquire whether or not I wanted him to include the optional 6M coil. I had initially missed this email and by the time I replied a day later, I had discovered Darrel had already shipped the kit with the 6M coil at no extra charge and the kit arrived a couple of days later... wow!

I sat down to build the kit this weekend and it was the perfect project for a relaxing Saturday afternoon at the workbench. My initial HeckKit experience was everything I look for in kit building.

The kit was well packaged and parts were in clearly labeled zip lock bags. The quality and the fit and finish of the PCB and project case were exceptional. The plastic case fit together precisely and has a nice quality feel about it. The PCB was not thin and flimsy and it featured double sided holes. While it did not have silk screening for parts placement, that was not a problem because the instructions included a large easy to follow diagram of parts placement on the PCB.

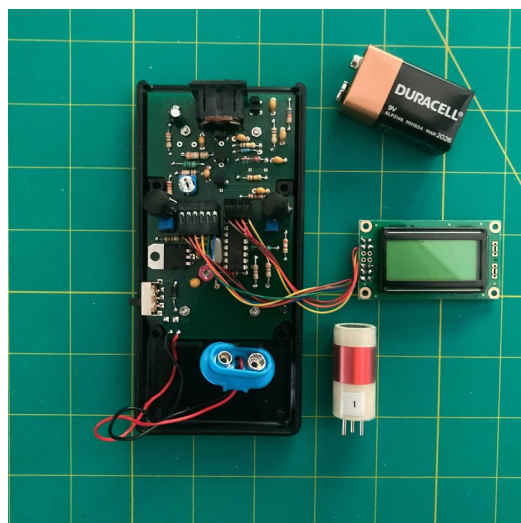
Overall, the instructions and documents which Darrel sent by email as a PDF along with my order confirmation was exceptional. Darrel provides a nice introduction to the product and includes several links to learn more about the theory and operation of the dip oscillator and the step by step directions are very easy to follow. Documentation included not only the PCB parts placement diagram, but also full schematics and very clear easy to understand directions for winding the interchangeable coils.

I give Darrel and HeckKits high marks for putting together what I would consider a perfect DIY kit. It's worth mentioning too that the kit came complete with no parts missing.

From start to finish I spent less than 3 hours on the build with the exception of winding the coils, which I still need to do. Generally I don't mind winding toroids and coils, but the coils for this kit are just a bit small and a tad fiddly for my aging eyes and increasingly shaky hands to easily manipulate, so I thought I'd complete the other coils later on this weekend when I'm feeling fresh. The kit did come with the first coil covering the 1.3 – 2.8 MHz range pre-assembled and it allowed me to verify that my meter worked properly upon

### MY COMPLETED FET DIP METER KIT WHICH NICELY CAME TOGETHER IN LESS THAN 3 HOURS ON A SATURDAY AFTERNOON

If you're a QRPer and a builder like me check out Darrel's offerings at [www.heckkits.com](http://www.heckkits.com). As I mentioned, there are several other projects on his site that have caught my eye, particularly the Step Attenuator and the QRP mW meter. I look forward to putting my dipper into use on the workbench as well as my next HeckKits build. completion of the build.





**MARC CALENDAR OF EVENTS  
SEPTEMBER TO DECEMBER 2022**

SEPT 16 .....BIG E OPENS UP. CALENDAR INSIDE  
SEPT 21 .....CONNECTICUT DAY AT THE BIG E  
SEPT 22.....ACTIVITIES MEETINGS ZOOM HISTORY OF MARC PART II  
SEPT 24.....MASONIC LODGES ON THE AIR @WALLINGFORD MASONIC LODGE  
OCT 1 TO 15.....MARC CELEBRATION 75TH ANNIV W1N OPERATING EVENT  
OCT 1 &2..... CELEBRATE WALLINGFORD MARC / WARG BOOTH  
OCT 2.....WALLINGFORD YMCA FISHBEIN ROAD RACE  
OCT 5.....WALLINGFORD CERT COURSE BEGINS details within  
OCT 8.....VE SESSION  
OCT 9.....CT NUTMEG HAMFEST  
OCT 13.....BUSINESS MEETING....NOMINATIONS OPEN FOR OFFICERS ZOOM  
OCT 27..... ACTIVITY MEETING.....  
NOV 3.....MARC OFFICIAL NOMINATION MEETING  
NOV 10.....NOV BUSINESS & ELECTIONS  
NOV 12.....VE SESSION  
DEC 1.....YEAR IN REVIEW at the OEM  
DEC 8 .....XMAS PARTY at SERAFINO'S DETAILS BELOW  
DEC 10.....VE SESSION

**W1YSM ANNOUNCES 2022 MARC CHRISTMAS PARTY**

Thursday December 8, 2022

6:00p to 9:00p

Serafino's 72 South Turnpike Road, Wallingford (across from Oakdale Theatre)

Cash Bar

\$33.00/person - ALL IN (includes tax and tip)

Max attendees N= 75 (Minimum = 50) by November 25th cash, check or PayPal

Entertainment by AB1DQ ---James (Show TBA)

The Facilities deposit has been paid - Reservations are open cost is \$33 per person  
Secure your seat(s) by sending payment to Dave K1WJL to clup POB or PAYPAL-

Buffet Dinner Salad; Stuffed Sole w/Lobster Sauce; Penne ala Vodka;  
Chicken Parmesan; Roast Potatoes; Veggies/Bread;  
NY Cheesecake; Chocolate Fudge Cake

FRIDAY, NOVEMBER 25 CASH; CHECK; OR PAYPAL

# THE BIG E

Sept. 16 - Oct. 2, 2022

## Big E Space Chat

**MAP KEY**

- Information Services
- Security
- Nursing/Warriors Center
- Restrooms
- Unisex Handicap Restrooms
- Baby Changing Stations
- First Aid Station
- ADA Accessible
- Parade Route
- Westfield Bank ATM
- Official Big E Merchandise

**SPONSORS**

- Blue Chair Bay Rum - The E Stage
- Chenavert - Official Truck of The Big E
- Coors-Coke - Official Beverage of The Big E
- Downeast Cedar - The West Side Grille Cedar Garden
- Leaf Filter Gutter Protection - Safety Drive Racing Pig
- Master Spa - Official Spa of The Big E
- Master Spa - Court of Honor Stage
- MEGM Springfield - The Big Parade
- Truly Hard Softwear - The Big E Tennis
- United Ag & Turf - Official Equipment Supplier of The Big E
- Westfield Bank - Official Bank of The Big E
- The Food Patch

**BIG E ham radio booth**

**BIG E Space Chat**

**N1E**  
@ The BIG E

Today's amateur "ham" radio:  
A modern, educational family activity.

Contests. Robotics.  
Space. Scouting.  
Weather. STEM.  
Emergency Communications.  
More!

Photo credit: [unreadable]

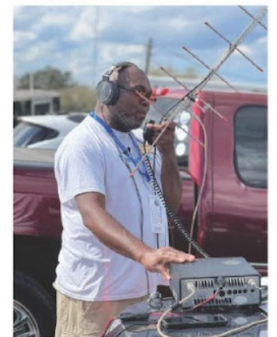
Conversation with: \_\_\_\_\_ at The BIG E Date: \_\_\_\_\_

Ham radio is a hobby for the entire family. It lets you make friends around the world, help your community in times of local emergencies, assist with public safety, keep in touch while in the great outdoors, expand your love of technology...and that's just the beginning!

Interested in astronomy? Rockets? Robotics? Coding? It can help fuel those interests, too. It's a modern all-ages hobby!

Find out more! Bring your family to a club meeting. There's probably a club right in your home town. Take a look here: <https://bit.ly/MyLocalClub>

Or you can jot us a note at: [FunHamRadio@gmail.com](mailto:FunHamRadio@gmail.com)



ARRL New England Division

Additional great info about ham radio is here: <https://bit.ly/FunHamRadio>

[www.kb3ifhqlscards.com](http://www.kb3ifhqlscards.com)



## Space Chat at the Big E



### Greetings from the ARRL New England Division

Hundreds of [The Big E](#) attendees and spectators will be able to watch a live contact with an astronaut aboard the International Space Station (ISS) from The Big E Arena.

Hams who show up with an official copy of their FCC license on the day of The Big E Space Chat will receive **free admission** for themselves and three more people.

The exact time and date of the contact will be posted soon at key locations throughout The Big E, or visit the Amateur radio booth (#103) inside Door 6 of the **Better Living Center**. Be sure to spread the word to your friends and fellow radio club members!

Hams who show up with an official copy of their FCC license on the day of The Big E Space Chat will receive **free admission** for themselves and three more people. The exact time and date of the contact will be posted soon at key locations throughout The Big E, or visit the Amateur radio booth (#103) inside Door 6 of the **Better Living Center**. Be sure to spread the word to your friends and fellow radio club members!



- The Big E free admission for amateur radio operator and up to three guests (maximum 4 people) good on Space Chat Day only. Actual date will be announced soon.
- Official copy of FCC license to be presented to Gate Captain at The Big E pedestrian gates 1A, 1B, 4, 5, 7 or 9A to receive free admission on Space Chat Day.
- Parking is not included.
- The Big E is at 1305 Memorial Ave, West Springfield, Massachusetts.

As with all ARISS school contacts, the actual day and time for the scheduled contact won't be known until approximately one week prior to the contact. Currently, the Space Chat "window" is September 27-29, 2022. Check The Big E Space Chat [web page](#) (sponsored by the ARRL New England Division) for up-to-date information. Or, [fill out our survey](#) and we'll contact you with the date and time when it's known.

Visit [this ARRL webpage](#) for instructions on downloading a copy of your FCC license.

Download and print-at-home the [2022 The Big E Brochure](#) or [2022 Fairgrounds Map](#). Both are sized to fit letter-sized paper.



**Radio in  
the Park**

# POTA IN THE MARC ALIVE & WELL

Parks On The Air is still very much alive at the Meriden Amateur Radio Club. Our own Three Musketeers of POTA (Potateers?), Shawn KC1NQE, Ted KC1DOY and Dave NZ1J made a triple activation at Sleeping Giant State Park, K-1717 in Hamden on Wednesday, September 14th.

Antennas went up, radios switched on and contacts were made on multiple bands and modes. Our Potateers have setup and take down procedures down to a fine art. As well as being fun, this is also great practice for other deployments such as community support, ARES and CERT.

It's not just the activators that make POTA what it is. A shout out also goes to the hunters who participate and support the activators. Our Potateers thank them all, especially Paul W1EDX and Nancy (aka Storm) KC3UKG, both MARC members who helped to add to our number of contacts that day.

So get off your chair and head out to the park for some Ham radio fun!



# RF Exemption & Compliance

KC1SA STEVE

September 2022

KC1SA

## Overview

- The RF exemption and compliance docs are from the FCC.
  - <https://www.fcc.gov/sites/default/files/lms-radiofrequency-exposure-compliance-worksheets-radio-broadcast-stations.pdf>
- But the ARRL docs are much easier to understand;
  - [http://www.arrl.org/files/file/Technology/tis/info/pdf/rfex1\\_2.pdf](http://www.arrl.org/files/file/Technology/tis/info/pdf/rfex1_2.pdf)
- And the ARRL exposure compliance calculator does a good job calculating if you located a safe distance from your antenna.
  - <http://www.arrl.org/rf-exposure-calculator>

## Conclusions

- Running barefoot (less than 100W)
  - Not too much to worry about.
- Mobile stations are exempt from this exercise
- Worksheet A determines if you need to perform Worksheet B.
- Must be kept on file at location of transmitter.

## Evaluation Worksheet A example

### WORKSHEET A: CATEGORICAL EXEMPTION FOR STATION EVALUATION WORKSHEET

Provided as a membership service by the American Radio Relay League, Inc., 225 Main St., Newington, CT 06111.

Use this worksheet for each band you operate to determine if you need to do a station evaluation on that band.

(A) Station Call Sign: KC1SA (B) Station License: KC1SA

(C) Station Location: WALLINGFORD, CONNECTICUT (FN31o1)

(D) Frequency Band: 10m

(E) Maximum Transmitter PEP used on this band: 100 W PEP

Refer to Table 1.1 — If the power on line (E) of this worksheet is less than or equal to the power limits given in the table for this band, you do not need to do an evaluation on this band. If the power exceeds the limits, continue with this worksheet.

#### Calculate Feed Line Loss in dB:

(F) Feed Line Type: David Bury flx (G) Feed Line Length: 70 ft

(H) Enter Feed Line Loss in dB per 100 ft: 0.8 dB  
(From Chapter 5 or manufacturer's specification. You can use 0 dB for a conservative estimate. If you use 0 dB, skip to step J and enter 0%.)

(G) 70 / 100 × (H) 0.8 dB = (I) -0.56 dB  
Feed Line Length divide by 100 then multiply by loss in dB per 100 feet equals Feed Line Loss in dB from (G)

#### Convert to percentage:

(I) -0.56 dB = (J) 12 %  
Feed Line Loss in dB Convert to percentage of power lost in the feed line. See Chapter 5 or use 0% as a conservative estimate.

#### Power to antenna:

(E) 100 W PEP × (J) 12 % = (K) 12 W PEP  
Maximum transmitter PEP times Percentage of power lost in the feed line equals Power lost in the feed line used on this band from (E)

(E) 100 W PEP - (K) 12 W = (L) 88 W PEP  
Maximum transmitter PEP minus Power lost in feed line equals PEP input to the antenna used on this band from (E)

#### Conclusion and decision:

Compare the power input to the antenna (L) to Table 1.1. If the power input to the antenna is less than or equal to this power level, you do not have to evaluate your station on this band.

## Evaluation Worksheet B example SSB

### WORKSHEET B: STATION EVALUATION WORKSHEET

Provided as a membership service by the American Radio Relay League, Inc., 225 Main St., Newington, CT 06111.

Use this worksheet for each band, mode and antenna combination you use to determine if your station complies with the FCC regulations for RF exposure.

(A) Station Call Sign: KC1SA (B) Station License: KC1SA

(C) Frequency Band: 10m (D) Operating mode being evaluated: SSB

(E) Maximum Transmitter PEP used on this band: 100 W PEP

(F) PEP input to the antenna on this band (from line (L) on Worksheet A): 88 W PEP

For a conservative estimate, you could use your maximum transmitter PEP and skip to step (L) and use this power for your evaluation. If you "pass," you do not need to do the other steps.

#### Mode and duty factor:

(D) Operating mode being evaluated: SSB (G) Duty Factor for this mode: 20 %  
(See Chapter 5 or use 40% for CW, 20% for SSB with no speech processing, 41% for SSB with heavy speech processing, 100% for FM or digital modes)

Maximum time the station could be transmitting in:

(H) 5-min period (controlled): 30 / 5 = 60 %

(I) 30-min period (uncontrolled): 30 / 30 = 100 %

#### Calculate average power — Controlled exposure:

(F) 88 W PEP × (G) 20 % × (H) 50 % = (J) 8.8 W avg  
PEP input to the antenna from (F) times Duty Factor from (G) times Controlled operating time percentage equals Controlled average power input to the antenna

#### Calculate average power — Uncontrolled exposure:

(F) 88 W PEP × (G) 20 % × (I) 100 % = (K) 17.6 W avg  
PEP input to the antenna from (F) times Duty Factor from (G) times Uncontrolled operating time percentage equals Uncontrolled average power input to the antenna

(L) Refer to any of the evaluation methods in FCC's OET Bulletin 65 or Chapter 5. Determine if the antenna is located far enough away from areas where people are present or that the field strength is below the maximum permissible exposure (MPE) limits, based on the frequency, mode, average power and antenna type being used.

(M) Describe the method used to do the evaluation: <http://arrl.org/rf-exposure-calculator>

Using this method, did your station exceed the FCC RF exposure limits? (Y/N)

Controlled exposure: Y (Y/N) Uncontrolled exposure: Y (Y/N)

If the station is not in compliance under all circumstances of its expected operation, attach a separate sheet describing any limitations of methods that the station operator will use to ensure compliance if people are present in areas that could be out of compliance.

From ARRL calculator: CE 1.5625mw/cm2 allowed exp., Min safe dis. 2.3643 feet

From ARRL calculator: UE 0.3125 mw/cm2 allowed exposure, min dis. 3.3436 feet

Antennas are 20 feet from shack vertically and 20 feet horizontally.

# MERIDEN AMATEUR RADIO CLUB

## MEMBERSHIP ROSTER

AB1DQ	James Surprenant	22R	KC1OMP	Damian Fries	22S	N1YLN	Edward O'Lena	22R
AB1HB	Charlie Dudac	22S	KC1OSR	Gunnar Steinle	22R	N1YLO	Andy Fiertek	22R
AF1HS	Art Fregeau	22S	KC1OST	Bryon Heath	22R	N1ZN	Jim Savage	22S
K1DMS	David Stack	22S	KC1OYN	Ricky Becker	22R	N2RTS	Tyler Schroder	22R
K1JCF	Joe Farrell	23S	KC1OYR	Brent Moyer	22R	N2TAG	Dave Taglianetti	22R
K1LHO	Mike Ash	22S	KC1PBQ	Randy Rivest	22R	NR1B	Bill Huggins	22S
K1LYP	John Yusza	23S	KC1PEN	David Henry	22R	NZ1J	Dave Tipping	22R
K1MMK	Mike MacKennedy	23R	KC1PHK	Lincoln Nichols	Y	UT3UY	Anatoly Kirilenko	22R
K1MVM	Mike Macri	22S	KC1PSK	Todd Dibiasi	22R	W1AJK	Andrew Kazimer	22R
K1PET	Debbie Purchia	22R	KC1PXX	Dave Alfredson	22R	W1BOB	Bob Lobley	22R
K1RCT	Rob Cichon	23R	KC1QHO	Mike Beaudry	22R	W1DQ	John Elengo	22S
K1SCI	Stuart Isaacs	22R	KC1QLS	Ray Cirno	22S	W1EDX	Paul Stasieluk	22S
K1SOX	Brian Freeman	22R	KC1QQV	Gary Getrost	22R	W1IKW	Ian K. White	22R
K1STM	Anne West	22S	KC1QQW	Randy Whitehouse	22R	W1BJG	Judy Wilkins	22R
K1TDO	Todd Olsen	22R	KC1QWH	Steve Rygel	22R	W1JKP	Kent Astrom	23R
K1TGX	Jerry Molaver	23S	KC1RHB	Jared Martin	22R	W1LV	Steve Morley	22R
K1MTD	Mary Duval	22S	KC1RLQ	Eric Barbour		W1POP	Fred Liedke	22S
K1VDF	John Blevins	22S	KC1RBY	Sergio Frutuoso	22R	W1RCI	Ron Isaac Jr.	22R
K1WJL	Dave Swedock	22S	KC1TAD	Tom DiPinto	22R	W1RPN	Seth Kolasinski	22R
K4AVM	Andrew Olsson	22R	KC1PU	Bob Woodtke Jr.	22R	W1TK	Ron Wakefield	22R
K0OZ	Brian Boccuzzi	22R	KC1SA	Stephen Allen	22R	W1UFO	Mike Cei	23R
KA1BED	Bill Green		KC2MLH	Adam Castracane	22R	W1UKX	Greg Gherardi	22S
KA1KJV	Bob Trussell	22S	KC3UKG	Storm Murrell	22R	W1YSM	Ed Snyder	22R
KB1EHE	Eric Knight	22R	KE1AU	Robert Kaczor	22S	W2OFR	Marc Dickson	22R
KB1FYL	Bob Carruthers	22S	KE1AY	Donald Mitchell	23S	W3APC	James Cook	23S
KB1IFZ	Elsie Mathews	22R	KR1U	Bob Eslinger	22S	W90TW	Deb. Foss	22R
KB1JL	Eric Olsson	22S	KO4EEL	Tom Williams	22S	WA1EXA	Mark Petruzzi	22S
KB1LWS	Jeanne Gherardi	22S	KX1USA	Rob Messercola	22R	WA1FFT	Ray Irwin	22S
KB1MFU	John Ramadei	22R	N1AKN	Jeff Dwyer	22S	WA1JKR	John Rogus	22S
KB1TJD	Gainne Jenkins	22S	N1API	Al Kaiser	22S	WA1K	Jack Chapman	22R
KB1TMC	Clare O'Lena	22R	N1BF	Patrick Dionne	21R*	WA1SFH	Douglas Sharafanowich	22S
KB1TTV	Jonathan Martin	26R	N1BRI	Brian Beegan	22R	WA1TRY	Rich Aubin	L
KB1YFJ	Glen Couture	22S	N1BRL	Bart Toftness	23S	WA1ZVY	Jim Martin	28S
KC1DOY	Ted Renzoni	22S	N1FNE	Rod Lane	22R	WB1DQT	Bill Bacon	22R
KC1GMD	Ralph Ring	22R	N1GNV	John Bartscherer	22S	WB1GYZ	Bob Biancur	22S
KC1HDB	Jeff Martin	28R	N1GY	Geoff Haines	22S	WB8IMY	Steve Ford	22R
KC1HQX	Preston Byrne	22R	N1HCA	Susan South	22R	WJ1B	Harold Kramer	22S
KC1ISI	Kristin Olsson	22R	N1IBE	Wade Martell	22S	WV2LKM	Steve Waldmann	22S
KC1KQH	John Kasinskas	22S	N1JEO	Joel Curneal	22R	WY1U	Tim Mik	22R
KC1MJZ	Michael Berube	22R	N1LES	Joe Murray	22R		Greg Ravizza	22S
KC1NLE	Jose Rodriguez	22R	N1MOB	Dan David	22R		Spencer Rygiel.....	Y
KC1NQE	Shawn Warren	22R	N1OKF	Bob Parisi	22R		Ex KB1HEA Loreen Heavens.....	22R
KC1NRD	John Lujic	22S	N1OKR	Frank Ciccone	23S			
KC1NXP	Andrew Paolillo	22R	N1QYB	William Wilecki Jr.	22S			
KC1OCF	Karl Polak	22S	N1XXU	Andy Purchia	22R			
KC1OCS	Richard DeWick							
KC1OGL	Paul Randazzo	22R						

### MEMBERSHIP STATS

TOTAL MEMBERS..... 134

**WEBSITE:** (USE LOWERCASE)

[www.w1nrg.com](http://www.w1nrg.com)

**FORUM / BBS:**

[www.w1nrg.com/forum/](http://www.w1nrg.com/forum/)

or go to website and follow links

**CASTLE CRAIG 10-10 WEBSITE:**

go to [www.w1nrg.com](http://www.w1nrg.com)  
and follow the links

**CLUB REPEATER W1NRG/R**

147.36MHZ +600 OFFSET

tone 162,2

### CLUB DUES STRUCTURE (JAN-DEC)

UP TO 64 YRS OF AGE--\$20/YR SENIOR DISCOUNT 65 & UP--\$15

ANY MEMBER WHO IS A LICENSED HAM, 18 & UNDER WILL BE GIVEN FREE DUES.

## MARC OFFICERS

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