AMATEUR RADIO CLUB OF COLUMBIA COUNTY, INC.



THE ARCCC, INC. WELCOMES YOU!

The meeting will begin at 7 PM

AMATEUR RADIO CLUB OF COLUMBIA COUNTY, INC.



GENERAL MEETING

MEETING #144

Tuesday, August 6, 2024

7 PM



INVOCATION

MEETING AGENDA



- Welcome & Introductions
- Presentation: 3D Printing
 - Daniel Nelms (KK4CNM)
- Membership Applications
- Monthly Reports
- Upcoming Events
- Business Items
- Committee Updates
- Amateur Radio Club of Augusta
- North Augusta Belvedere Radio Club
- East Central/Columbia County ARES
- AmRRON
- Review Motions and Assignments
- Adjourn

SWAP TABLE

KAKINS

COLUMBIA COUNTY, ST

Now at

https://arcccinc.groups.io/g/swapsellortrade/topics





Welcome and Introductions



- Please Sign In on the Attendance Log
 - Please <u>PRINT</u> Legibly

- Introductions
 - QUICKLY Go Around the Room and Provide Your Name and Call Sign

Presentation



3D Printing

Daniel Nelms (KK4CNM)

INTRO TO 3D PRINTING

KK4CNM

BASIC 3D PRINTING TERMS TO KNOW

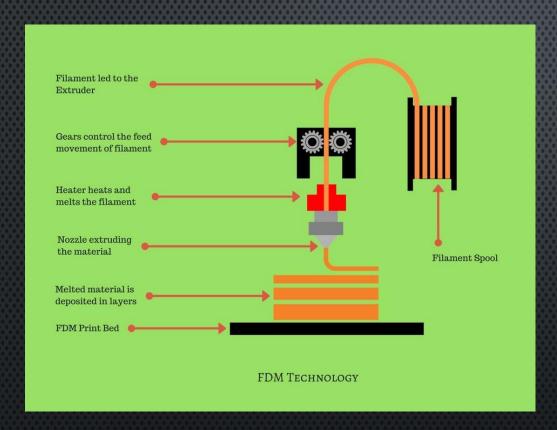
- FDM (Fused Deposition Modeling)
 LAYERS OF MATERIAL ARE BUILT ON TOP OF ONE ANOTHER TO PRODUCE A 3D OBJECT.
- SLA (Stereolithography)

 Uses lasers to cure or solidify photoreactive resin layer by layer to produce a 3D object.

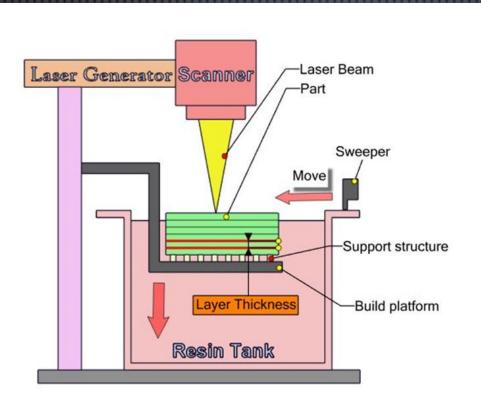
USE IN AMATEUR RADIO PRACTICAL APPLICATION

- Custom Parts: Enclosures, Cases, Antenna Mounts, Insulators, and Coil Forms.
- TOOLS AND FIXTURES: SOLDERING JIGS, ALIGNMENT TOOLS, AND CUSTOM CONNECTORS.
- EXPERIMENTAL PROJECTS: PROTOTYPING ANTENNA DESIGNS AND CREATING PORTABLE SYSTEMS.
- AND MORE...

BASIC 3D PRINTER OVERVIEW FDM & SLA



HOW FDM PRINTERS WORK



HOW SLA PRINTERS WORK

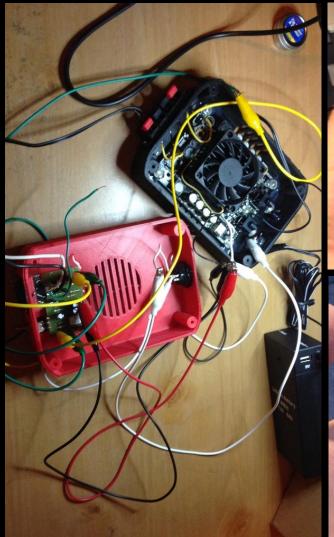
ADVENTURES IN 3D PRINTING AND DESIGN

I'VE HAD THE PLEASURE OF WORKING WITH A LOT OF AMAZING AND TALENTED PEOPLE SINCE I STARTED THIS TWELVE YEARS AGO.

I'VE WORKED ON PROJECTS IN INDUSTRIES SUCH AS AEROSPACE, LARGE-SCALE MANUFACTURING, MEDICAL, PROTOTYPING, CONSUMER AND BOUTIQUE ELECTRONICS, AND EVEN THE MOTION PICTURE INDUSTRY.

While a significant portion of my work is confidential and protected by NDAs, I have prepared a sampling of projects that showcase some of my skills in hopes that it will inspire you to do the same.

















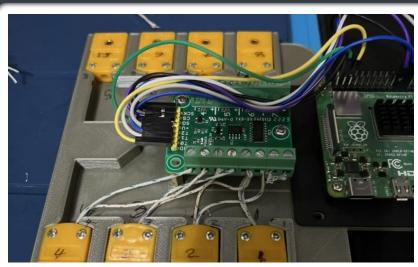




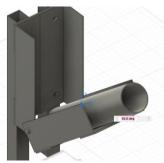




SOLVING PRACTICAL PROBLEMS FOR FUN AND PROFIT



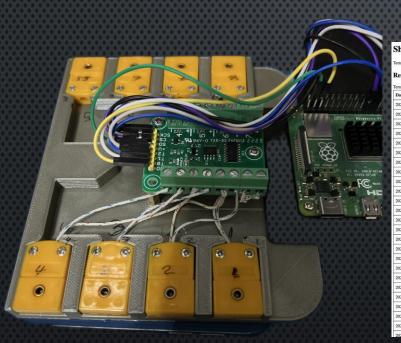




3D PRINTING IS MORE THAN JUST DOWNLOADING AND PRINTING THINGS OTHERS HAVE DESIGNED

DOWNLOADING AND PRINTING PROJECTS OTHERS HAVE MADE IS EASY AND OFTEN FREE; HOWEVER, THE REAL MAGIC BEGINS ONCE YOU START THINKING OUTSIDE THE BOX AND DEVELOP SOLUTIONS FOR YOURSELF AND OTHERS.

MOST RECENT HAM RADIO PROJECTS REMOTE TEMP MONITORING SYSTEM



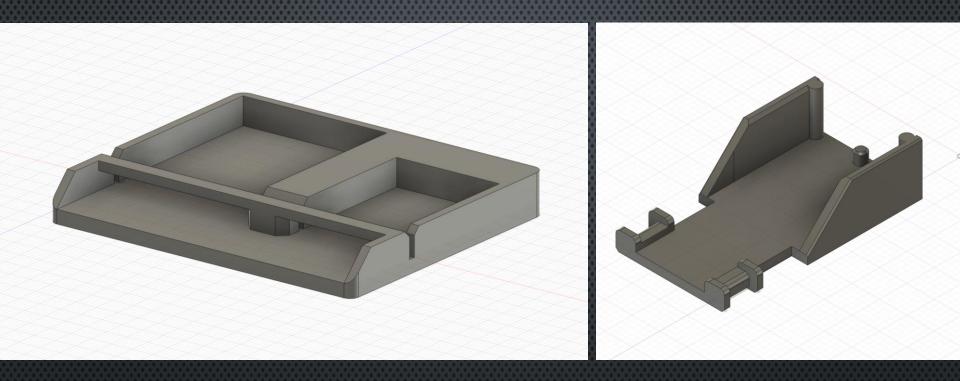
Shackmon Data

Rename Temperature Columns										
Temp1: Temp1	mp2	Temp2 Temp3	: Temp3 To	cmp4: Temp4	Temp5: Temp5	Temp6: Temp6	Temp7: Temp7	Temp8: Tem	p8 Update	Names
Date		Time	Temp1	Temp2	Temp3	Temp4	Temp5	Temp6	Temp7	Temp8
2024-06-27		16:49:45	79.7	79.25	79.25	84.65	79.7	79.7	81.95	80.6
2024-06-27		16:49:32	79.7	78.8	79.25	84.65	79.25	79.25	81.95	80.6
2024-06-27		16:49:19	80.15	80.6	79.7	84.65	79.7	79.25	81.5	80.15
2024-06-27		16:49:06	79.7	81.05	80.15	84.65	79.7	80.15	81.5	80.15
2024-06-27		16:48:53	80.15	80.15	80.15	84.65	80.15	80.15	81.95	80.15
2024-06-27		16:48:40	80.15	79.7	80.15	84.65	80.15	80.15	81.95	80.15
2024-06-27		16:48:27	80.15	79.7	79.7	85.1	80.15	79.7	81.95	79.25
2024-06-27		16:48:14	80.15	80.15	79.7	84.65	80.15	79.7	81.95	78.8
2024-06-27		16:48:01	80.6	80.6	80.15	84.65	79.25	79.7	81.5	80.6
2024-06-27		16:47:48	80.6	80.15	80.15	84.65	80.15	80.15	81.5	80.15
2024-06-27		16:47:35	79.7	80.15	79.7	83.3	80.15	79.7	81.95	80.15
2024-06-27		16:47:22	80.15	80.6	79.7	85.1	80.15	80.15	81.95	80.15
2024-06-27		16:47:09	79.7	80.15	79.7	85.1	80.15	80.15	81.95	80.15
2024-06-27		16:46:56	80.15	79.7	79.7	84.65	80.15	79.7	81.5	80.6
2024-06-27		16:46:43	79.25	79.7	79.7	84.65	80.15	80.15	81.5	80.6
2024-06-27		16:46:30	80.15	80.6	79.7	85.1	79.7	79.7	81.5	80.15
2024-06-27		16:46:17	80.15	80.6	79.7	85.1	79.7	80.15	81.95	80.15
2024-06-27		16:46:04	80.15	80.15	79.7	85.1	80.15	79.7	81.95	80.6
2024-06-27		16:45:51	80.6	80.6	79.7	84.65	80.15	80.15	81.5	80.6
2024-06-27		16:45:38	79.25	80.15	78.8	84.65	80.15	80.15	81.5	80.15
2024-06-27		16:45:25	80.15	80.15	79.7	84.65	79.7	79.7	81.95	80.15
2024-06-27		16:45:12	80.6	80.15	80.15	84.65	80.15	81.95	85.1	83.75
2024-06-27		16:44:46	80.15	80.15	79.25	84.65	79.7	80.15	81.95	80.6
2024-06-27		16:44:33	80.15	80.15	79.7	84.65	80.15	79.7	81.5	80.15
2024-06-27		16:44:20	80.15	80.6	80.15	84.65	79.7	80.15	81.95	79.7

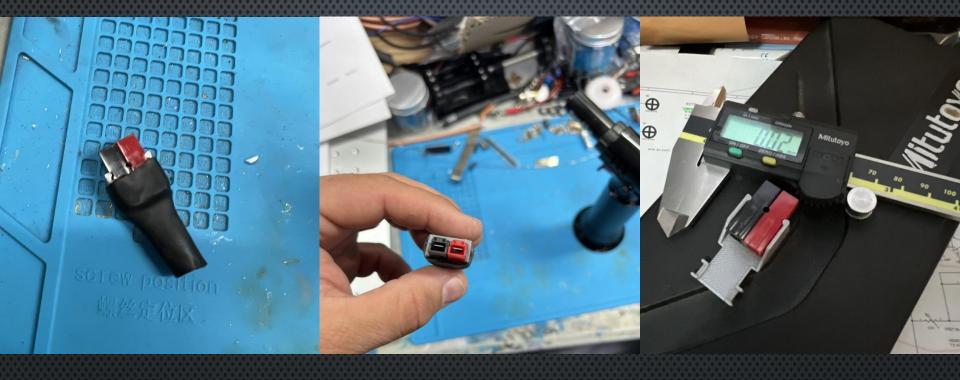




LMR 400 AND 1/2" HARDLINE CLAMPS



FREE SAMPLE PROJECT POWERPOLE STRAIN RELIEF



THANKS TO K9PAL FOR THE IDEA TO USE HEAT-SHRINK TUBING RATHER THAN ZIP-TIES

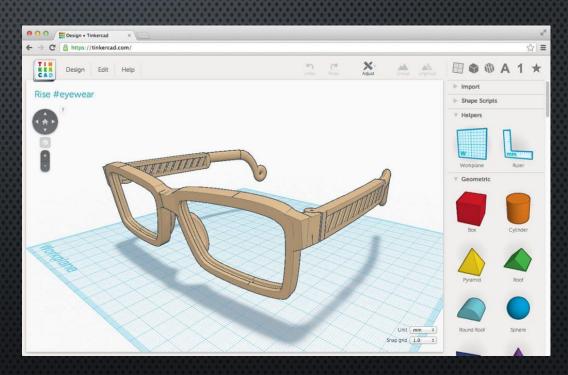




DESIGN SOFTWARE WHERE THE MAGIC HAPPENS

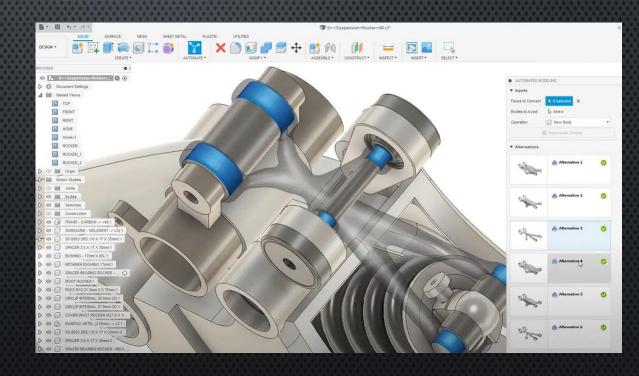
AUTODESK TINKERCAD

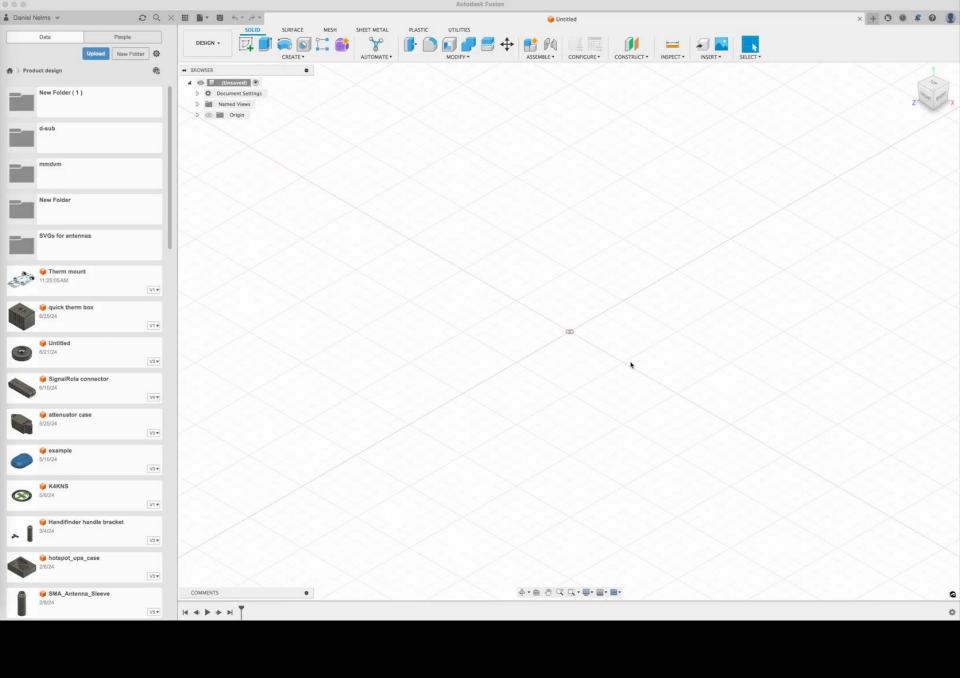
- TINKERCAD BY AUTODESK
- A WEB-BASED 3D MODELING PROGRAM THAT IS FREE TO USE
- PROS: FREE, EASY TO LEARN
- CONS: LIMITED FUNCTIONALITY, LIMITED PRACTICAL APPLICATION, CHALLENGING TO MODEL EVEN SOME BASIC GEOMETRY, AND IMPOSSIBLE TO MODEL COMPLEX GEOMETRY



AUTODESK FUSION 360

- Fusion 360 by Autodesk
- CROSS-PLATFORM SOFTWARE THAT RUNS ON WINDOWS AND MAC.
- PROS: ADVANCED, LARGE LIBRARY OF PLUGINS, GREAT FOR 3D AND 2D MANUFACTURING DESIGN AND PROTOTYPING.
- Cons: Price \$545/Year
 Steeper learning curve





QUESTIONS? COMMENTS? AMA (ASK ME ANYTHING)

FIN.

Presentation



3D Printing

THANK YOU!!!
Daniel Nelms (KK4CNM)

UPCOMING EVENTS



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CSRAHamExams Exam Session

• 08-17/18-2024

Huntsville Hamfest

• 08-30/09-01-2024

Shelby Hamfest

• 09-14-2024

CSRAHamExams Exam Session

• 10-05-2024

Oliver Hardy Festival

• 10-05-2024

Rockhill Hamfest

• 10-12-2024

CSRAHamExams Exam Session

• 10-19/20-2024

Jamboree-on-the-Air

• 11-02/03-2024

Stone Mountain Hamfest

• 11-09-2024

CSRAHamExams Exam Session

MEMBERSHIP APPLICATIONS



Are there any ARCCC, Inc. Membership Applications for consideration?

ARCCC, INC. MONTHLY REPORTS



Treasurer's Report

- Update from Treasurer
 - July 2024 Update
 - August 2024 Update

Secretary's Report for July 2nd, 2024 meeting:

<u>07-02-2024 Meeting Minutes</u>

KROGER COMMUNITY REWARDS



- Simply visit <u>www.KrogerCommunityRewards.com</u>
- Login to your existing account or create an account
- Click on Community
- Enter "<u>DF873</u>" and <u>Amateur Radio</u>
 <u>Club of Columbia County, Inc.</u> should appear.
- Select our organization and donate!

\$24.28 Received!!!









Amateur Radio Club of Columbia County, Ga Name Badge



ARC of Columbia County, Ga Badge price \$13.50

MEGA-STRONG Magnetic Bar

\$3.75

The SignMan of Baton Rouge

Order at this link:

https://thesignman.com/clubs/columbiacogacart.html

Business Items



- HamClubOnline.com
 - **NOTE: Membership Expiration Notices are sent 60 Days prior to the date of expiration.
 - **NOTE: There is a 7 Day Grace period where you can pay and not have to reapply for membership.
 - ARRL Email Addresses are not valid, please update your email address within HamClubOnline
 - ARRL Forwarding Email System is unreliable
- Groups.io
 - https://groups.io/g/arcccinc

HamClubOnline - Club Self-Check (ARCCC)

Member Statistics:

Active Members 99 Expiring Soon Members 0 Inactive Members 45 Non-Members Affiliates 0

Rank Statistics: (Active Members)

Member 93 Trustee 1 Officer 5 Total 99

Member Types Statistics: (Active Memberships)

 Family Membership
 9

 Family Membership (Free)
 6

 Full Membership
 67

 Full Membership
 1

 Honorary Membership
 1

 Life Membership
 15

 Total
 99

Pending Applications:

 Name
 Status
 Application Date

 IOHN MORRISON KQ4NTI
 Pending Membership 2024-02-07 00:44:47

 Christopher A Campbell NOSX
 Pending Approval
 2024-06-30 21:47:18

Members with Invalid E-Mail Addresses:

 Name
 Callsign
 E-Mail

 JOHN T CARTER II
 KJ4MC
 kj4mc@arrl.net

 CHARLES A PENNINGTON JR K4GK
 k4gk@arrl.net

New Members: (Last 90 Days)

 Name
 Callsin
 Join Date

 Michelle M.Zavala
 KWSWWW
 2024-05-08

 RICHARD LOAVIDOW
 WUPAKW
 2024-05-08

 RICHARD WBELLIA
 WUPAKW
 2024-05-08

 Chase Ryals
 KQ4RFW
 2024-05-08

 Loseph LLongacre
 KQ4RFW
 2024-07-08

 Edwin E Davis Jr
 KQ4SRF
 2024-07-08

Inactivated Members: (Last 90 Days)

 Name
 Callsign
 Remove Date
 By

 JOSEPHL PATRICK Dennis E LaPierre
 2024-07-24
 ERIC J CAGLE KK4ZHT

 Samatha M Lytter
 2024-06-16
 ERIC J CAGLE KK4ZHT

 Michael S McMahor
 2024-06-20
 (HCOL SYSTEM)

 JAMES N KELLY
 WX4JNK 2024-05-28
 ERIC J CAGLE KK4ZHT

New Memberships: (Last 90 Days)

Name	Callsign	Membership Type	Amount	Start Date	End Date		Poster	Post Date
Walter A Brumbeloe	W4EFS	Full Membership	\$25.00	2024-07-08	2025-07-07	Walter A I	Brumbeloe	2024-05-09
Randy A Dunaway	KN4CAX	Full Membership	\$25.00	2024-07-14	2025-07-13	Randy A I	Dunaway	2024-05-22
Arthur D Dickerson	KM4UDR	Full Membership	\$25.00	2024-05-22	2025-05-21	Arthur D	Dickerson	2024-05-22
Charles C Terry	KJ4IKZ	Full Membership	\$25.00	2024-07-25	2025-07-24	Charles C	Terry	2024-05-25



Susan L Messick	WA0B	Full Membership	\$25.00	2024-07-21 2025-07-20 Susan L Messick	2024-05			
Sean K Stanley	KM4NSG	Family Membership	\$25.00	2024-05-25 2025-05-24 Sean K Stanley	2024-05			
Andrew B Stanley	KO4DPU	Family Membership	\$25.00	2024-05-29 2025-05-28 ERIC J CAGLE	2024-05			
Edwin E Davis Jr	KQ4SRF	Full Membership	\$25.00	2024-06-09 2025-06-09 Edwin E Davis Jr	2024-06			
Gary D Borba	KR4XC	Full Membership	\$25.00	2024-08-11 2025-08-10 Gary D Borba	2024-06			
Christopher A Campbell	N0SX	Full Membership	\$25.00	2024-07-03 2025-07-03 Christopher A Campbell	2024-07			
Cindy M Cunningham	KM4DBA	Family Membership	\$25.00	2024-07-08 2025-07-07 Cindy M Cunningham	2024-07			
Stephen H Collins	W4WHS	Full Membership	\$25.00	2024-08-02 2025-08-01 Stephen H Collins	2024-0			
Robert L Reeder	KO4WWG	Full Membership	\$25.00	2024-07-14 2025-07-13 Robert L Reeder	2024-0			
Stacey M Sharp Jr	KK4RFL	Full Membership	\$25.00	2024-07-16 2025-07-16 Stacey M Sharp Jr	2024-0			
David E Reid	K2ECC	Full Membership	\$25.00	2024-07-20 2025-07-20 David E Reid	2024-0			
Camilla B Reid	K2CBR	Full Membership	\$25.00	2024-07-20 2025-07-20 Camilla B Reid	2024-0			
Richard S Sturgis	KR4XN	Full Membership	\$25.00	2024-07-15 2025-07-14 ERIC J CAGLE	2024-0			
Robert S Reeder	WW4ZT	Full Membership	\$25.00	2024-07-26 2025-07-25 Robert S Reeder	2024-0			
LEROY W FREEMAN JR	WA4YJD	Full Membership	\$25.00	2024-07-28 2025-07-28 LEROY W FREEMAN JR	2024-0			
Michael J Bitetti	KQ4IUP	Full Membership	\$25.00	2024-08-01 2025-07-31 Michael J Bitetti	2024-0			
1.				Club Menu				
2.	Main Menu							
3.				Logoff				



ARCCC, INC. MEMBERS

COMMITTEES

BOD



Directors provide QUICK UPDATES on their committees

- IT
- Repeater
- Net Control
- Volunteer Examiner
- Constitution and Bylaws
- Field Day
- Asset/Inventory
- Nomination
- Chaplain and Visitation
- Fundraising
- Mentoring
- Outreach

Appointed Positions:

- K4KNS Trustee
- Public Information Officer
- QSL Manager



FOX HUNTS



 Beginning March 5, 2024 there will be Fox Hunts before each ARCCC, Inc. General Meeting starting at 6 PM.

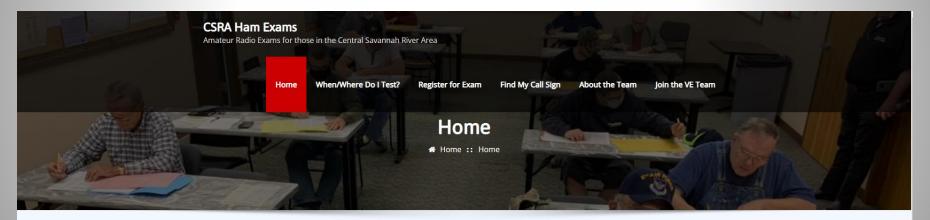
- Fox #1 = 146.5650 MHz
- -Fox #2 = 146.0000 MHz

 Contact David Corsiglia (WA6TWF) for More Info





- Examinations
- CSRAHamExams.com



Welcome to CSRA Ham Exams.com!

Are you looking to take an Amateur Radio Exam within the Central Savannah River Area? Centered in Columbia County/Richmond County, Georgia, the CSRA Ham Exams Team is excited to help you get started in the Amateur Radio Hobby or to help you advance to the next level License Class. Either way we look forward to helping you achieve your goals!

To ensure you are prepared to take an exam with the CSRA Ham Exams Team please follow the instructions on the https://www.csrahamexams.com/when-where-do-i-test/ webpage.



- Fund Raising Committee
 - Pull out your tickets!!!



- Bylaws Committee
 - Intent (After Dry Run Election)
 - Section 2.07 Board of Directors Elections
 - Miscellaneous Updates and Grammatical Error Corrections

Section 2.07 Board of Directors Elections

The Board of Directors will be elected every two years at the November meeting of the organization and the new Board will assume their roles effective January 1 of the following year. Nominations will be offered at the September or other designated meeting by the Board and nominations will also be accepted from the floor. Nominees must confirm that they are willing to accept if they are present or in writing if they are not present. Nominees will be listed and the list distributed to Full Members via email at least two weeks prior to the November meeting. Only Full Members in good standing and at least 18 years old may hold office in the organization. A term for a Board Member is defined as two years. A Board Member can serve in the same position for no more than 5 years. The nominating committee will be the Board, unless a nominating committee is established by the Board of Directors.

Deleted: October

BOARD OF DIRECTORS ELECTIONS 2025-2026



- September Nominations
- October Elections
 - Allows for any Runoffs in November
- November Runoff Election (if needed)
- January Take Office

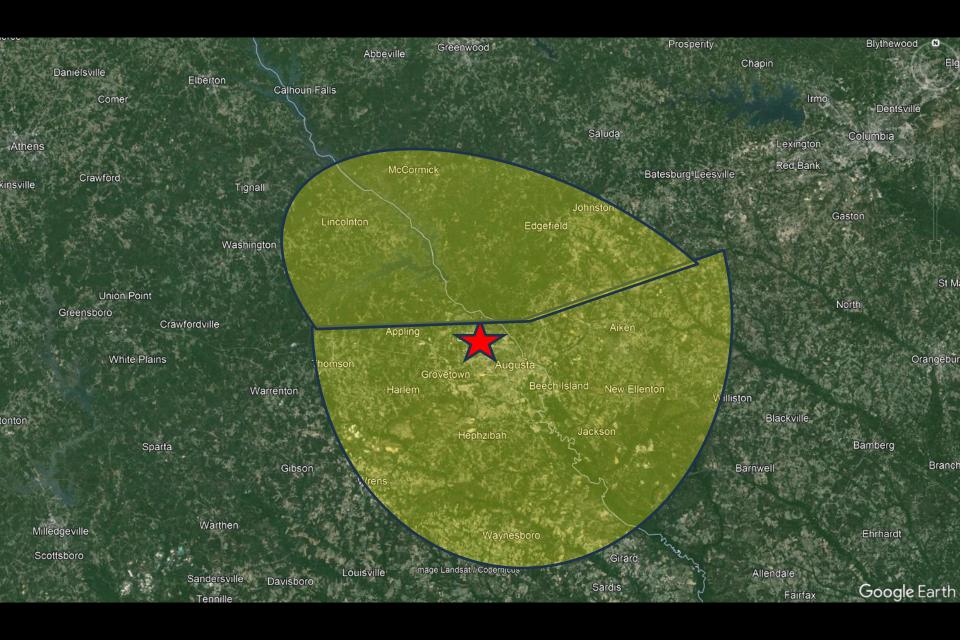


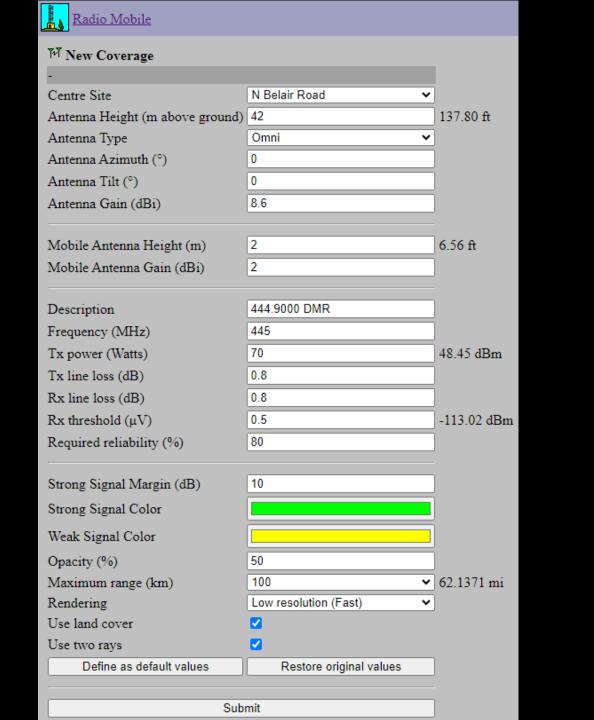
- Repeater Committee
 - Randall Blumberg (KN4FYG) Co-Director
 - Walter Brumbeloe (W4EFS) Co-Director



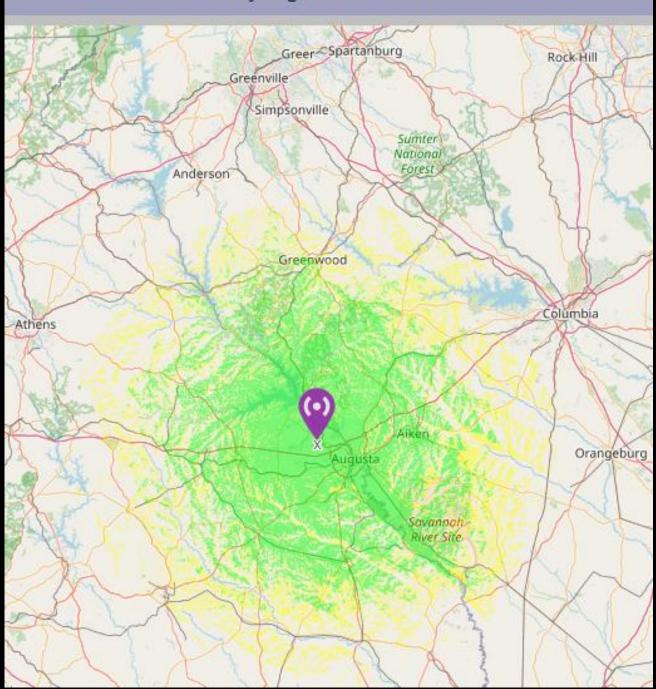
- Repeater Committee
 - Randall Blumberg (KN4FYG) Co-Director
 - Walter Brumbeloe (W4EFS) Co-Director

- DMR Repeater Coverage Testing
 - Near Plant Vogtle (Mobile)
 - North Leg, Highland Avenue/Gordon (Mobile)
 - Aiken County EOC (Portable)
 - Harlem (Portable in vehicle)
 - I-20 Westbound at MM 165 (Mobile)

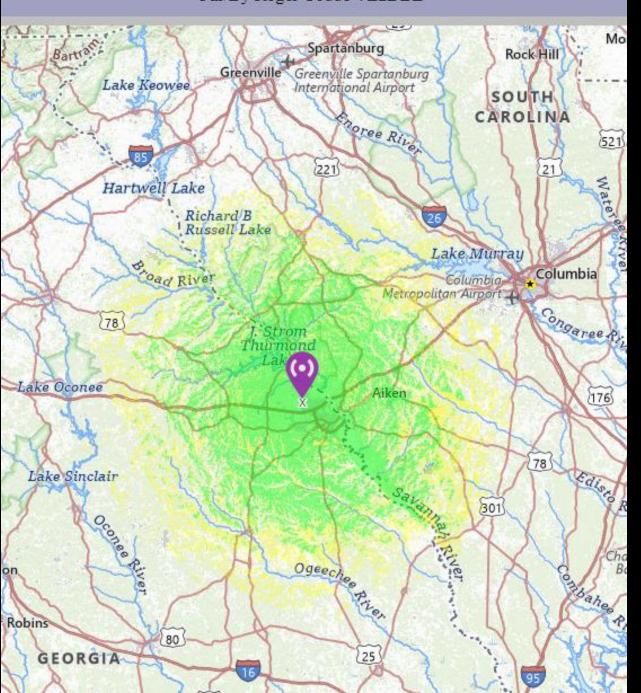


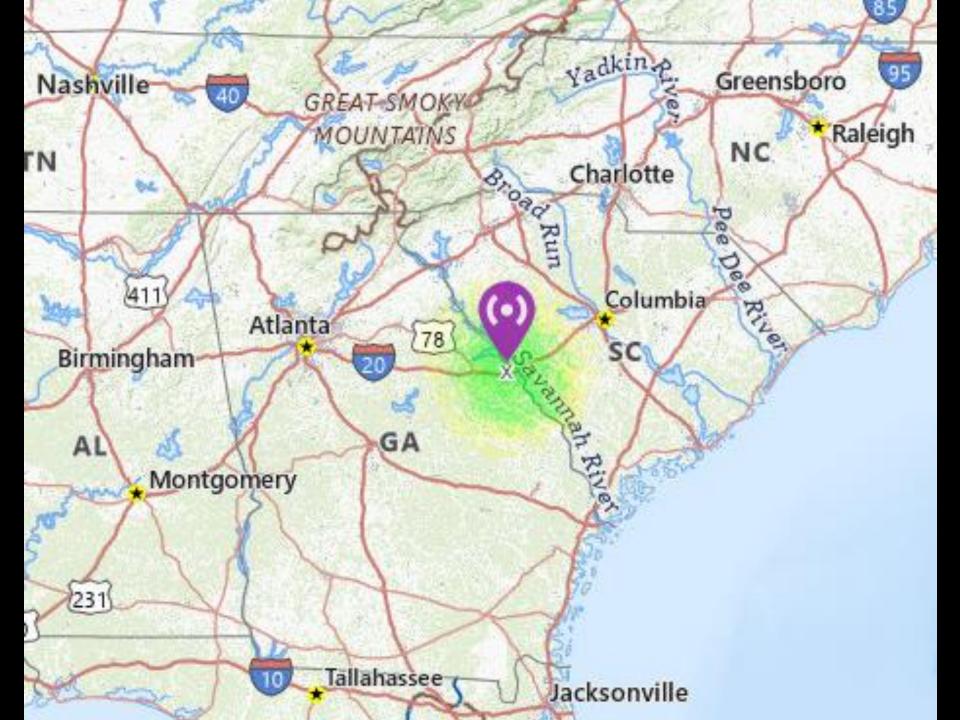


Par/By Roger Coudé VE2DBE



Par/By Roger Coudé VE2DBE







- Repeater Committee
 - Randall Blumberg (KN4FYG) Co-Director
 - Walter Brumbeloe (W4EFS) Co-Director
- DMR Repeater
 - CONVENTIONAL REPEATER OPERATION ONLY
 - 449.9000 In (Subscriber TX)
 - 444.9000 Out (Subscriber RX)
 - CC 15
 - Timeslot 1 TG358
 - Timeslot 2 TG985



- Field Day Committee
 - Marc Woodworth (KR4QT) 2024 Co-Director
 - Sam Reeder (WW4ZT) 2024 Co-Director
 - To Join the Field Day Committee
 - You must join via Groups.io
 - https://arcccinc.groups.io/g/fieldday/topics



Marc (KR4QT)



Sam (WW4ZT)



- Field Day Committee After Action Review
 - Summary
 - ARCCC Summer 2024 Field Day was conducted at the Boy Scouts of America Georgia-Carolina Council Adventure Center in Columbia County at 3J Road. Operations commenced on June 22, 2024 and ended June 23, 2024. Operations were conducted throughout the day and night starting at 1800 Zulu on 6/22/24 through 1500 Zulu on 6/23/24 under the club's callsign K4KNS. Prior to operations, setup of antennas began at about 0800 on 6/22/2024 followed by additional equipment setup at 0900. In general, Field Day operations was a success. Everybody who operated and attended the field day activity appeared to have a good time. Several positive attributes were identified as well as some technical and administrative challenges. In addition, suggestions have been identified to improve future field day operations.



- Field Day Committee After Action Review
 - Positive attributes of Field Day Operations
 - 1. Four new hams made contacts during field day operations. In addition, the grandson of one of the new hams also made some contacts.
 - 2. Several Boy Scouts made contacts which will contribute to their attainment of the Radio Merit Badge.
 - 3. Three instructors were available to teach the Boy Scout Radio Merit Badge class.
 - 4. We got excellent coverage by the antennas. While some states were missing, we got overall coverage throughout the continental United States, Hawaii and some Canadian Provinces.
 - 5. We continued to have success with establishing a computer network for logging contacts. While paper logging will always work, having the network and associated expertise will always be the most convenient approach for conducting field day operations.



- Field Day Committee After Action Review (cont.)
 - Positive attributes of Field Day Operations
 - 6. People were available to offer use of their antennas and their ability to erect the antennas with plenty of spare time prior to commencement of operations.
 - 7. We continue to have success in utilizing loaned batteries.
 This time, two of the batteries were 100 aH (or 300 aH?)
 LiFePO4 batteries in addition to the two deep cycle AGM (or Lead Acid?) batteries used in past field operations.
 - 8. We were able to have four fully operational transmitting stations including a digital station for the duration of the field day activity.
 - 9. Three personnel conducted night time operations which contributed to the number of contacts made.
 - 10. Enough food and plastic dinnerware was available to support the operators as well as others who were in attendance.



- Field Day Committee After Action Review
 - Challenges
 - 1. Antenna feedline labels were inadequate.
 - 2. Propagation was less than adequate.
 - 3. Not enough operators were available to provide continuous coverage throughout the duration.
 - 4. Diet sodas/drinks were not made available for people with dietary restrictions.



- Field Day Committee After Action Review
 - Suggestions for future field day operations
 - 1. Labeling-Antenna and their corresponding feedline should be labeled inside the shack (operating station) so that it is easily identified. The label needs to designate the specific antenna connected to the feedline
 - 2. Bandpass Filters should be connected prior to commencing operations at the field day operating stations.
 - 3. A station diagram should be provided to the operators prior to setup of the operating station. This should be done as part of the Safety Brief. The diagram should show the following items:
 - a. The layout and orientation of the operating station including dimensions;
 - b. The location of each operating area and corresponding band of operation;
 - c. The layout and orientation of the field day antenna farm; and
 - d. The pre-defined band of operation assigned to each antenna.
 - 4. Each operating area within the station should have a large, laminated sign displaying the band of operation for that area.



- Field Day Committee After Action Review
 - Suggestions for future field day operations (cont.)
 - 5. Each operating area should have a large, laminated band plan for the band of operations assigned to that area.
 - 6. We should consider having a "Station Chief" to coordinate operations for field day. This position would work in shifts during operating ours and would be the point of contact and decision authority for all operations questions:
 - a. Changing operating area band;
 - b. Modifying antenna or feedline configuration;
 - c. Responsible for validating station setup prior to operation; and
 - d. Calculating and documenting RF exposure.
 - 7. Increased media coverage Our field day activity was announced in social media sites and news organizations (e.g., Visit Columbia County, Columbia County Magazine, WRDW Community Calendar) but we did not specifically invite media outlets to observe field day activities. Next time, we should have somebody coordinating invitations to media outlets and ushering such outlets through the field day site as operations are commencing and running during the day.



2 New Field Day Co-Directors
 Need to be picked now



Directors provide QUICK UPDATES on their committees

- IT
- Repeater
- Net Control
- Volunteer Examiner
- Constitution and Bylaws
- Field Day
- Asset/Inventory
- Nomination
- Chaplain and Visitation
- Fundraising
- Mentoring
- Outreach

Appointed Positions:

- K4KNS Trustee
- Public Information Officer
- QSL Manager







ARCA General Meeting

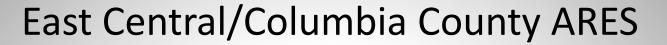
August 20, 2024 7:00 PM - 8:00 PM POB-1 (formerly H2U) Building

North Augusta - Belvedere Radio Club



NABRC General Meeting

August 12, 2024 7:00 PM - 8:00 PM
Aiken Regional Medical Center
6th Floor
302 University Parkway
Aiken, SC 29801







Susan Messick, WA0B

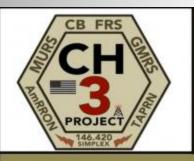
East Central District Emergency Coordinator
Columbia County GA ARES Emergency Coordinator

David Corsiglia, WA6TWF

Columbia County GA ARES Assistant Emergency Coordinator







AmRRON



The American Redoubt Radio Operators Network and The American Preparedness Radio Network (TAPRN)

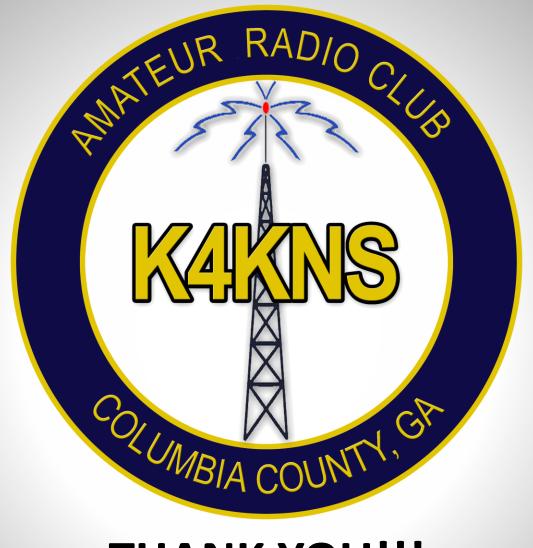
REVIEW



Review motions and assignments

 We would welcome your presentations and ideas for presentations.

Is there a motion to adjourn the meeting?



THANK YOU!!!