This month's meeting is CANCELLED because of the “stay at home” order. We will have a “ZOOM” meeting at 7:00 PM. Details to follow.

Program: none

TESTING SESSIONS are also CANCELLED for May.

Delta Club FCC testing sessions are held monthly except December. Registration begins at 5:30 PM; testing begins by 6:00 PM. Please bring a photo ID and another form of identification, copies of existing licenses or CSCEs, and your FCC Registration Number (FRN) if one has been issued. Please be on time for registration to allow our Volunteer Examiner (VE) team to complete their work prior to the club meeting. The 2019 test fee is $15 (cash or check). Individuals receiving their initial FCC license grant at a Delta Club test session or through a Delta Club training class will receive a complimentary individual club membership for the remainder of the current calendar year when they also show proof of ARRL membership. For more information, please email our VE Liaison, Jeff Krause, AJ4GY at AJ4GY@comcast.net or call at 901-301-6776.
During all the craziness and uncertainty during the Coronavirus, one common question is - when will things return to normal? I am glad to say that the Delta Club did their part recently to return things to normal. We have returned the 146.82 repeater to its location at the WATN TV tower in Brunswick and we replaced the antenna with a new Sinclair SD-224 antenna!! In the overall scheme of what is going on during the Coronavirus pandemic this may be a small thing, but to the Delta Club this is a big deal. The fact that we had 62 check ins on the Net on April 30th on Thursday night the switch over was done, shows how much everyone wanted to hear for themselves that the 146.82 repeater was once again the best repeater in the Memphis area. This was possible due to the work of several Delta Club members; but we owe a special thanks to Joe Lowenthal WA4OVO, Rick Tillman WA4NVM and mainly Barry McDonald W5CJ. I recommend that after doing this we refer to Barry as Barry1A instead of Barry2.

For the April monthly meeting, we did Delta Club’s first virtual meeting on Zoom. It was great to see and talk with the 50+ members who joined the meeting. We will use Zoom again for the May meeting and hope you will be able to join us. We will send an email on Monday May 11 with a link for the meeting. During the meeting we will do normal monthly business and announcements and open the meeting to comments and concerns from members. We also plan to discuss Field Day. We think it would be a good idea to discuss options to do Field Day individually if we are not able do Field Day as a group this year.

During these ongoing days of social distancing, remember we can keep in touch with each other using our network of repeaters. Thanks to the dedication of our Net Control Operators, the Delta Net every night at 8pm on 146.82 is a great way to keep in contact while we are apart.

73
Steve Frazier
KK4VPT
Please RENEW your Delta membership right away, so you won’t forget about it! Download the new member or renewal form: [https://img1.wsimg.com/blobby/go/58124ffd-d6ca-4502-9af3-7fa04c033729/downloads/application-15-3.pdf?ver=1574454355059](https://img1.wsimg.com/blobby/go/58124ffd-d6ca-4502-9af3-7fa04c033729/downloads/application-15-3.pdf?ver=1574454355059)

Membership for one is $20 or family is $25. You can fill out the form online and email to David Jackson KM4SEC. davidjkson@bellsouth.net

If you prefer you can print the form and bring the completed form, along with the membership fee to any meeting.

Treasurer’s Report
Submitted by David Jackson KM4SEC

Delta Amateur Radio Club Treasurer’s Report
04/30/2020
Submitted by H. David Jackson

1. ENDING BALANCE on
   current statement:  28,136.58

2. DEPOSITS not credit
   to current statement:  0.00

3. Total of 1 & 2:  28,136.58

4. CHECKS, PAYMENTS,
   not listed on current
   statement:

   CHECK NO.  1535  (3,276.00)

5. Subtract line 4 from line 3.
   This should be your checkbook
   balance for current month:  24,860.58
DARC Board of Directors Meeting Minutes
May 5, 2020, submitted by Mary Jean Hall KN4FBL

Attendees: Steve Frazier KK4VPT, Mary Jean Hall KN4FBL, David Jackson KM4SEC, Joe Lowenthal WA4OVO, Bob Vawter KW4RJ, Ian Lucas KN4OEK, Scott Adams KM4PMU, Barry McDonald W5CJ and Len Grice W4MKS.
Absent: Bob Van Keuren KM4SEB

Steve F. called the meeting to order at 6:30 p.m. Due to the COVID-19 Pandemic, the Delta Amateur Radio Club Board of Directors held the meeting online through Zoom, which is a video conference platform.

David J. read the Treasurer’s Report. The board discussed the review of memberships per the club’s bylaws. Mary Jean H. made a motion to approve the Treasurer’s Report and membership applications. Ian L. seconded the motion. The motion unanimously passed.

Barry M. told the board about the 146.820 repeater’s antenna replacement. He was impressed by the team that did the work. He said that there seems to be a few other problems with the repeater, but now that the antenna issue has been resolved, he will work on the other smaller issues.

Joe L. said that the Technician Class still has ten individuals waiting to be tested. He hopes to plan for a testing session on May 30. The board then discussed the possibility of remote testing and if it was an option for our area. Joe L. said that he hopes to have another class offered in July, and he would consider offering it as a hybrid class of in-person and Zoom meetings.

Joe L. received a quote for a bus to the Huntsville Hamfest, assuming it will still occur. The company quoted just over $1,700 for a 44-passenger bus and just over $2,000 for a 55-passenger bus. He said that the prices are higher than in previous years. Since we are unsure if Huntsville Hamfest will be held anyway, he will wait to confirm an option closer to June.

The board discussed ARRL Field Day, which is scheduled for June 27-28. Currently, it appears as though local participation may have to fall on individuals operating from their own locations. The board members discussed options of how to make that work. A few ideas included using the local 146.820 repeater for local communications during the contest, as well as having
smaller groups of people, for those comfortable doing so, who could meet to operate stations from individual houses.

Bob V. said that our previous email platform has halted the mass emails, so he has had to break the Sparks email list into smaller groups to send. He is looking into alternative options for the Sparks email list in a more efficient way.

Len G. said that how he publicizes Field Day activities will depend on how we participate in it, whether it is as a group or individually. He will publicize the event once we determine that.

Without objection, Steve F. adjourned the meeting at 7:19 p.m. The next Board of Directors meeting is scheduled for Tuesday, June 2, 2020 at 6:30 p.m. at Ellendale Church of Christ. Should that not be possible, the board meeting will be held online through Zoom.
DARC Meeting Minutes for April 14, 2020
Submitted by Mary Jean Hall KN4FBL

Call to Order and Opening Remarks
Club President Steve Frazier KK4VPT called the meeting to order at 7:02 p.m. on a Zoom conference call and welcomed everyone to the meeting. Due to the COVID-19 Pandemic, the club met online to abide by state and local guidelines. At least 61 members and guests were present for the meeting.

Several former members who have left the Memphis area were able to join the meeting, and they gave an update on how they have been. They also shared excitement about being able to see others from the club.

Announcements
Joe Lowenthal WA4OVO said that the Technician class has completed the classroom material but is yet to test. Joe said he is working to find an option for the students to take the test. Steve Frazier KK4VPT said there have been issues with mass emailing and Sparks. Bob Vawter KW4RJ is working on the issue.

Secretary’s and Treasurer’s Reports
Barry McDonald W5CJ moved to approve the previous meeting’s minutes and the Treasurer’s Report as published in Sparks. Dennis Foster KJ4BDU seconded the motion. The minutes and the Treasurer’s Report were unanimously approved by the club.

Discussion
Steve Frazier KK4VPT said that Field Day planning has started, though it is up in the air if it will occur as it normally does. More will be announced later. Dennis Foster KJ4BDU thanked everyone who helped to prepare for the MARA FreeFest, as well as everyone who donated for the tickets. The club members discussed different ways to help the medical workers in our area, such as making and donating masks. Dennis Foster KJ4BDU reminded the club members that anyone who missed the MARA FreeFest ticket drawing can watch the replay on Tom Medlin W5KUB’s website, W5KUB.com.

Steve Kellett KF4SJU, the West Tennessee Assistant Section Emergency Coordinator for TNARES, thanked those who volunteered to go to Putnam County for the tornado relief back in February. Though the volunteers were not deployed to the area, he thanked them for their
willingness to go. He informed the club about the updates to the TNARES Operations Manual and how TNARES is getting more organized.

Club members discussed some of the classes and projects that they have worked on during the quarantine. Steve Kellett KF4SJU said that several of the Memphis-area ARES members have been sending in the ICS course certificates for the ARES Taskbook. He followed-up saying that the ARES Taskbook is in the process of being restructured, too. When asked about the April Shelby County ARES meeting, John Reiners KN4BVH said that the previous meeting was held on the 146.850 repeater. He is unsure about the April meeting, but assuming ARES is unable to meet in person, it could be held on the repeater again. He updated the club on the status of the simplex test that the ARES members did after the March meeting.

Steve Frazier KK4VPT shared his opinion that the ARRL Field Day is likely to fall on the responsibility of individuals, especially if groups are not allowed to meet in June. He said that the local groups will still look into Field Day planning, but he encouraged everyone to plan for Field Day if they have to participate from their own locations. If that does happen, he mentioned the possibility of using the 146.820 repeater to keep in touch as the local members participate in Field Day.

Barry McDonald W5CJ updated the members on the status of fixing the 146.820 repeater antenna. He will continue to update the club as he makes progress in getting someone to replace the antenna.

Closing Remarks
Joe Lowenthal WA4OVO moved to adjourn. With no objection, Steve Frazier KK4VPT adjourned the meeting at 7:54 p.m. The next Delta Amateur Radio Club meeting will be Tuesday, May 12, 2020 at 7:00 p.m. at the Ellendale Church of Christ. If it isn’t possible to meet in person, club members will be notified of an alternate meeting plan.
There is no charge for classes, but the student is responsible for the purchase of the license manual and the $15 ARRL FCC examination fee.

If you want to take a class, send an email to Joe at wa4ovo@gmail.com with the class name; ie, Tech Class, General Class, or Extra Class, on the Subject line and name, callsign if you have one, email address, and cellphone number in the text.

Licenses Earned in 2020 from Delta Classes
  10 Technician
  3 General
  4 Extra

Note:
The current Technician ARRL Ham Radio License Manual Fourth Edition with question pool that became effective July 1, 2018 for four years. This is the new question pool.

The current ARRL General Class License Manual is the Eighth Edition with question pool that became effective July 1, 2015 for four years.

The current ARRL Extra Class License Manual is the Eleventh Edition with question pool that became effective July 1, 2016 for four years.

As of September 3, 2015 there is no longer any charge for Vanity callsigns.

As of late 2019, expired Amateur Radio license holders can get their license back by taking the current Technician exam and show proof of their previous license class. A previous Advanced Class licensee will only be able to get a General Class license.

PROPOSED CLASSES

All classes will be 3-1/4 to 4 hours long for six sessions; one per week on a week night 6:15pm-9:30pm or Saturday day 9am-1pm. The next class will probably be a Technician level class starting early July.

SCHEDULED CLASSES

None
CURRENT CLASSES

None

General Class on Zoom – March 24 – April 10, 2020

Working with K1ZG in Massachusetts, I helped provide instruction with an online General license class on the Zoom platform. This General class was offered to the Tech Class 2-20 students. One student did participate from 1-2:30pm on week days. Students were from Massachusetts, upstate New York, Indiana, Texas and Tennessee. Barry W5CJ and Ed KV4LF were also instructors. When FCC testing resumes, we will see how well the students retained their learning. Congratulations to Kyle KD2TCA for upgrading on April 3rd at a drive-thru test session.

Tech Class 2-20 – February 22 – April 4, 2020

Tech Class 2-20 was held from February 22nd to March 21st on four Saturdays except March 14th from 9am to 1pm. The first three sessions were at the Memphis Police Department Appling Farms Station precinct, 6850 Appling Farms Pkwy. Due to the coronavirus the last instructional class was held online on GoToMeeting. While the order for 10 or less people in a meeting was active, we had arranged to have the Laurel VE team provide testing at a student’s shop with only five students testing at a time. However, the Safer at Home order cancelled those plans. Congratulations to Jennifer Boardman KX4YG for Tech, General and Extra; Deborah Johnson KO4DEP for Tech and General; and Thomas Clark KO4DEQ, Elliot Pope KO4DER and Marc Tester KO4DES for Tech. Thanks to the Tipton County ARS VE team led by Bob AI4GI with Ronny WA4RW and Bill KI4BIY for offering the test session. FCC testing for the others will be in the future after the Safer at Home declaration is lifted.

Tech Class 2-20 on first day of class. Photo by Joe Lowenthal WA4OVO

The instructors were Paul Roberts KA9VAU, Pat Lane W4OQG, John Reiners KN4BVH, Perry Hayes N4GY, Len Grice W4MKS, and Joe Lowenthal WA4OVO. There
were no demonstrations for this class. Joe WA4OVO did cover the Repeater Basics at the end of the fourth class.

**Extra Class 1-20 – January 4 – February 15, 2020**

Extra Class 1-20 began on January 4\textsuperscript{th} with six students for six Saturdays from 9am to 1pm at Memphis Police Department Neighborhood Watch training room at Appling Farms Station, 6850 Appling Farms Blvd. Congratulations to Bobby Stroud KK5PAC for upgrading early to Extra at the Jackson MS Capital City Hamfest on January 25\textsuperscript{th}. Congrats to Brett Johnston KN4SMV for upgrading at the February 11\textsuperscript{th} Delta Club test session. Congrats to Jim Harris KF5TPT for upgrading at the Olive Branch ARRL exam session on February 19\textsuperscript{th}.

Dean Honadle N2LAZ
demonstration left hand rule for Extra Class 1-20

![Photo by Joe Lowenthal WA4OVO](image)

The instructors were Joe WA4OVO, Paul KA9VAU, Dean N2LAZ, Barry W5CJ, Dave AD4Q, David W4DWW and Pat W4OQG. The FCC testing was available on February 15\textsuperscript{th} by the Delta Club ARRL VE team led by Jeff Krause AJ4GY.
Tech Review for CBU – February 5, 2020

A Tech Review class was held on February 5th for five Christian Brothers University students in the Engineering Department upper division elective course, Introduction to Unmanned Aerial Systems. Dr. Eric Welch WD5FTA requires the students to earn their FCC Technician license for this course.

CBU Tech Review Class
Photo by Joe Lowenthal WA4OVO

All five passed with great scores. Congratulations to Judit Aubets Macia KO4BPP, Josue Bohorquez KO4BPHammontree KO4BPT, Oscar Mendoza KI5ICD, and Samuel Ruleman KO4BPS.
The Laurel VEC team provided the FCC exam session. The VEs were Bill Stevens WC9S, Barry McDonald W5CJ, Len Grice W4MKS, Jelly Thompson N4HLT, Eric Welch WD5FTA, and Joe Lowenthal WA4OVO.

CBU Introduction to Unmanned Aerial Systems Tech Class with professor Dr. Welch WD4FTA on left and instructor Joe Lowenthal WA4OVO on right. Photo by Eric Welch WD4FTA
General Class 4-19 – November 7 – December 19, 2019

General Class 4-19 was held on six Thursday nights from November 7th thru December 19th from 6:15-9:30pm. The 11 students began with eight completing the class. The location was at the Germantown Police Department training room, 1930 South Germantown Road.

Congratulations to Rodney KN4WGV, Robert KN4KFL, Mike KM4MRW, Bobby KK5PAC and Robert KN4RBW who upgrade to General at the class test session. Congratulations of Russell Rutledge KO4ASW who earned his Technician and General licenses. Congratulations to Shawn KN4WKF for upgrading at Delta Club test session on March 10, 2020.

The instructors were Joe WA4OVO, Barry W5CJ, Paul KA9VAU, Len W4MKS, John KN4BVH and Pat W4OQG. The Delta Club ARRL VE Team tested on December 19th. Thanks to the VE team of Jeff AJ4GY, Stacy KJ4MDA, Barry W5CJ, Tom KK4ZZZ, Warren KC7ND and Joe WA4OVO for providing the testing opportunity.

Perry Hayes N4GJ introducing the aura of digital modes. Photo by Joe Lowenthal WA4OVO

General Class 4-19 ARRL FCC Test Session Photo by Joe Lowenthal WA4OVO
General for CBU - November 20, 2019
A General test session was held on November 20th for six Christian Brothers University students in the Engineering Department upper division elective course, Unmanned Aerial Systems Design. Congratulations to Matthew Donnelly KN4ZNI, Nicholas Ireland KN4ZNK and Zhaoliang Ni KN4ZNN for upgrading to General.

Tech Review for CBU - October 30, 2019
A Tech Review class was held on October 30th for eight Christian Brothers University students in the Engineering Department upper division elective course, Unmanned Aerial Systems Design. Dr. Eric Welch WD5FTA requires the students to earn their FCC Technician and General Class licenses for this course. There are 11 students in the class with three who had earned their Tech license last February in the Intro class.

All eight students earned their Technician license and five upgraded to General. Congratulations to Mat Donnelly KN4ZNI, John Clark KN4ZNJ, Nicholas Ireland KN4ZNK, Jonathan Looney KI5GZS, Pablo Marin KN4ZNM and Zhaoliang Ni KN4ZNN who earned their Technician licenses. Congratulations to Riggs Markham KN4ZNL and Zach Yancy KN4ZNO who earned Tech and also upgraded to General. Congratulations to Josue Becerra KN4SQK, Ian Dover KN4SQO and Bryce Whitfield KI5DLE who upgraded to General.

Dr. Welch WD5FTA is the Department Chair of Electrical and Computer Engineering. The Laurel VE Team of Dr. Welch WD5FTA, Joe Lowenthal WA4OVO, Bill Stevens WC9S, Barry McDonald W5CJ and Perry Hayes N4GJ administered the FCC test session.

Tech Class 3-19 – July 8 - August 12, 2019
Tech Class 3-19 was held on six Monday nights from July 8th thru August 12th from 6:15-9:30pm The location was at the Germantown Police Department training room, 1930 South Germantown Road. Eleven students originally registered for the class, two more became students, and two resigned. So, eleven students completed the class. There was one ham who audited the class.

Congratulations to Rodney Adams KN4WGV, Daniel Brieck KN4WGW, Robert Broom KN4WGX, David Cary KN4WGY, Jim Dollar KN4WGZ, Joshua Foster KN4WHA, Vicky Gamber KN4WHB, Lauren Martin KN4WHC, Matthew Massey KI5FYA, Jonathan Pesce KN4WHD, and ShawnThomas KN4WKF who earned their Technician licenses. Congratulations also to Robert Broom and David Cary who also earned their General licenses, as well as, Mary Jean Hall KN4FBL who upgraded to General. Six more of the students tried for General but did not pass.
The instructors were Joe WA4OVO, Paul KA9VAU, Pat W4OQG, John KN4BVH, Perry N4GJ, and Len W4MKS. Barry W5CJ presented Echolink and Allstar information. John KN4BVH demoed DMR with information on D-Star and Fusion. On Monday, August 12th there was equipment demonstrations. Joe WA4OVO and John KN4BVH provided repeater basics and a CHIRP demo. The students checked into the Delta Net. Rick WA4NVM and Richard K4DXF made a live SO-50 satellite contact while Rick KJ4NWQ informed on APRS. Pat W4OQG showed off the non-FM side of ham radio with his Kenwood TS-200O HF SSB setup with a long wire and talked about MARS.

Tech Class 3-19

The Laurel VE team of Joe WA4OVO, Bill WC9S, Jelly N4HLT, David W4DWW, Karen AG4CC, Barry W5CJ, Len W4MKS and Perry N4GJ administered the 20 exams.

Tech Class 2-19 – February 21-March 28, 2019

Tech Class 2-19 was held on six Thursday nights from February 21 thru March 28th. The location was the Germantown Police Department training room, 1930 South Germantown
Road. Sixteen students signed up for the class with thirteen attending the first class and a self-study Tech auditing the class. Eight students earned their ham radio licenses.

Congratulations to Chuck Chow KN4TMR, Al Dyer KN4TMQ, Brian Hagood KN4TME, Andrew Humphreys KN4TMG, Thomas Humphreys KN4TMF, Bryan Parker KN4TMH, Mark Parrish KN4TMO, and Bob Stroud K15DWP who earned their Technician licenses. Chuck also earned his General Class license. Since the class Chuck has upgraded to Extra as KX4RE. Congratulations to Tom Thibeault KN4SLP who audited the class and upgraded to General. Two others will test at a later date.

Thanks to the Laurel VEC team of Bill WC9S, Barry W5CJ, David KV4QI, Len W4MKS and Joe WA4OVO for providing the FCC test session.

Demonstrations were given on March 28th. John KN4BVH previewed DMR, Fusion, and Echolink. Joe WA4OVO instructed on programming FM radios and APRS while Pat W4OQG showed off HF and long wire antenna. Rick WA4NVM and Richard K4DXF made a satellite contact.

**Tech Review for CBU-February 20, 2019**
A Tech Review class was held on February 20th for 11 Christian Brothers University students in the second Engineering Department upper division elective course, Introduction to Unmanned Aerial Systems. All 11 students earned their Technician license. The students were either Electrical, Mechanical or Computer Engineering majors. Dr. Eric Welch WD5FTA is the professor. He is Department Chair of Electrical and Computer Engineering. The Laurel VE Team of Dr. Welch WD5FTA, Joe Lowenthal WA4OVO, Bill Stevens WC9S, Barry McDonald W5CJ and Len Grice W4MKS administered the FCC test session.

**Extra Class 1-19  January 5 – February 16, 2019**
Extra Class 1-19 began on January 5th through February 16th excluding January 26th (Jackson MS Hamfest) on six Saturdays from 9am-1pm at the Memphis Police Department Northeast Precinct, Appling Farms Station, at 6850 Appling Farms Parkway. Nine students began with seven completing the class.

Congratulations to Steve Evans KM4VYA, Carolyn Horne KX4QF, Jerry Kirkscey KX4QE, Robert Murry KN4OEF, and Bob Waters KN4PDW for earning their Extra Class license at the class ARRL FCC test session. Congratulations to Jim Martin KD4FUU who upgraded at the Delta Club test session on April 9th. The Delta Club VE Team of Jeff Krause AJ4GY, Joe Lowenthal WA4OVO, Barry McDonald W5CJ, Bill Stevens WC9S, and David Webb KV4QI provided the FCC test session on February 16th.
HOW TO PRINT YOUR FCC LICENSE

1. Go to https://wireless2.fcc.gov/UlsEntry/licManager/login.jsp

2. Enter your FCC Federal Registration Number (FRN) and Password
   a. If you do not know your FRN, go to Search box and click on License
      Click on Amateur; Enter your callsign in Callsign box;
      Your FRN is in center of page after your name
      (If you do not know your Password, click on Contact Tech Support after Forgot
         your Password)

3. In When My Licenses screen comes up, click on Now in the green line reading “Change your paper authorization preferences here, or download your official electronic authorizations now”

4. In Under Download Authorizations screen, highlight your callsign in the My Authorization area at the bottom left.

5. Click on ADD to right of the highlighted callsign.

6. Highlight your callsign in Authorization to Download and then click on Download on bottom right of screen.

7. If pop-ups are blocked, click on Allow One

8. Click Open at bottom.

9. Print your License.
HQ 101 is for new hams, old hams, and hams that want to know more about their hobby. This class is for you and I need to know what you want to learn about, so if you have a subject you are curious about let me know and if there is enough interest I will offer it one month. Email me at w4gmm@bellsouth.net.

Ham 101 meetings are upstairs above the Delta Club meeting hall beginning at 5:30 pm just before the Delta Club meeting.

Ham 101 is on hold due to COVID-19. We will resume when the club resumes their meeting. I and still looking for ideas for programs after the one I had planned for April. If you would like to have something covered then e-mail me at w4gmm@bellsouth.net.

ARMED FORCES DAY 2020

Joint services have postponed the Crossband test until Fall due to Covid-19.

FALL, 2020 is the date of this years Armed Forces Day Cross band Communication Test. Due to the current restrictions I have not been able to recruit operators. WE will operate at NSA Mid-South at the MARS building N-100. We will operate from 1200z Saturday until 0100z Sunday. 6am till 8pm local time. This would be a great time for those that are interested in HF but don’t have the room or equipment to get some on air time. We will be operating two stations most of the day. If you can come for just an hour or two we would welcome the help. We will be joining with other stations operating from military locations. This is an important test as it gives the military knowledge that in an emergency it can enlist the help of Ham Radio operators across the country. It is not a contest except for bragging rights among the military stations. Anyone interested may contact W4GMM at w4gmm@bellsouth.net.
YL NET – Please join us each Saturday night at 8:45 p.m. on the 146.820 repeater for the YL Net. We enjoy hearing from you.

Amateur Hardware Update
Submitted by James Butler, KB4LJV

Equipment does not last forever. One item that gets lost or a lot of wear are the knobs. If you are doing a perfect restoration or just looking for one that will fit, a great place to look is eBay. Radio equipment parts are sold including old knobs. I have seen complete knob sets for Ten Tec and Heathkit equipment for sale. A lot of older equipment uses knobs that mount on a ¼ inch shaft with a set screw. Some equipment uses push on shaft with splines. The newest variable resistors use a 6-millimeter size shaft with a push on knob. Newer knobs can be bought in different colors or black with metal or plastic inserts. For more money you can buy all metal aluminum knobs of different styles. If you are looking for a replacement knob for your old radio equipment just do an eBay search for “knobs potentiometer”.

James Butler
KB4LJV
One company that builds ham radio equipment is Elecraft. They have been making amateur radio equipment for years. They make first class kit radios for QRP like the K2, KX2, and KX3. The K3 transceiver has been sold for years as a base station unit. Their newest radio the K4 is a direct sampling radio with a large color LCD screen. This screen shows all the radio functions with frequency and also includes a frequency display. All together Elecraft has a complete line of radios, amplifiers, tuners, antennas and accessories. If you are looking for high quality equipment for your ham shack check out the Elecraft website. Their web address is https://elecraft.com/collections/transceivers

James Butler
KB4LJV
ARRL members will now receive digital access to four ARRL magazines beginning with their latest issues. Joining QST and On the Air magazines on a digital platform will be the bimonthly editions of QEX — The Forum for Communications Experimenters and NCJ — National Contest Journal. QEX includes articles, columns, and other features ranging from construction projects to more advanced technical information in radio theory and practice. NCJ, published since 1973, targets radio amateurs active in radiosport. NCJ includes scores, technical articles, contributions from top contesters, and advice for beginners and seasoned radiosport enthusiasts alike.

“Feedback from ARRL members and our readership surveys has shown that our magazines are one of the most valued member benefits,” said ARRL Publications Manager Steve Ford, WB8IMY. “Our investment in digital access provides another channel through which we can deliver content to our members across the expanse of interests and activities in amateur radio. All members can enjoy specialized content and a high-quality reading experience whether at their desk or on the go. Offering this suite of digital magazines is an opportunity for us to give members more of what they want while adding value to ARRL membership.”

ARRL’s digital magazine editions provide replicas of the printed editions with added functionality, allowing users to fully search issues, enlarge pages, share articles, and more. The free ARRL Magazines app also supports downloading complete issues onto your mobile device or tablet for offline reading.

Members who have elected to receive a printed QST or On the Air as part of their membership benefits will continue to have this service. Members may not substitute a print subscription of QEX or NCJ as their delivered magazine member benefit. Print subscriptions of QEX and NCJ will continue to be available at additional cost for those who want to receive them.

All four magazines are easily accessed through any web browser from members-only links. The free ARRL Magazines app is available for iOS and Android in the Apple App Store and Google Play. If you’re already an ARRL member and previously created an arrl.org website account, your username and password will provide you access to the digital editions, whether online or in the app. Members who have not previously registered will need to create a new account. If you’ve forgotten your password, visit www.arrl.org/forgot-password, or email circulation@arrl.org for assistance.

Previous and prospective members can join ARRL and take advantage of this and other membership benefits.      SOURCE: ARRL
Virtual FreeFest raises money for LeBonheur!

Mid-South Amateur Radio Association  
P.O. Box 343358  
Bartlett, Tennessee  38134-3358

April 24, 2020

Dear Delta Amateur Radio Club,

MARA is very thankful and appreciative of your donation of the 20Ahr BLF-1220A Lithium Iron Phosphate Battery for FreeFest 2020! Delta Amateur Radio Club and your prize were listed on every ticket we sold. This helped us to get people to buy tickets, but with Covid-19 guidelines this year we had to cancel the gathering. We were not happy, but the main reason we have this event is to raise money for LeBonheur!

After this decision, we chose to keep selling tickets, and to keep raising money for LeBonheur! So we sold more tickets and on April 11, 2020, we had a live broadcast of our drawing. You can watch our video of the event on www.w5kub.com. Well, your donation helped us to raise $5556, the most we have ever raised! As always, we donate 100% of the proceeds from the sale of the tickets to LeBonheur Children’s Hospital. The Methodist Hospital Foundation usually matches our donation, and that will bring our total for FreeFest 2020 to over $10,000!

Thank you for your support! Thank You for your impressive donation!

Sincerely,

Dennis Foster K4BDU  
FreeFest 2020 Chairman
The 146.82 repeater got a new breath of life on Wednesday, April 29th. A crew from Wallace Towers in Franklin, AR installed a new SD-224-SF3PASNM 6dB 4 element dipole antenna on the 500-foot level of the WATN TV tower in Brunswick. About 7:30am W4BS Repeater Trustee Barry W5CJ (now known as B1A) led a crew to the Brunswick site on that Wednesday morning. The crew consisted of Rick WA4NVM, Richard K4DXF, Steve KK4VPT and Joe WA4OVO. The Wallace Tower group laid out the 3200-foot rope preparing for the climb. They had to wait until about 10:30am to start climbing due to a rain front that came through Brunswick. There were 15 MPH winds on the ground. On the way up the climber traced all three hardlines that we have possession of as well as pulling up the rope. Two of the hard lines stop at the 500-level and the vacant third one goes up another 120 feet. Rick checked the SWR on the hardline to make sure the hardline was not the problem. SWR tested good at 1.36 for the hardline on the 800-foot trek to the dummy load at the antenna location.

Wallace Tower Specialists

Barry chatting with the tower crew.
LOTS of cables!

The new Sinclair SD-224 antenna

View with tele...500’ up.

The old Sinclair on the ground
Photo by Joe WA4OVO
The old antenna came down first. It wound up being a Sinclair Omnidirectional monopole antenna with the wind-whipped hairy fiberglass showing in full glory. A split in the coax was obvious near the N-connector. The split was most likely the noisy culprit.

Break in coax on the old antenna
Photo by Joe WA4OVO

New Sinclair starting its journey to 500 feet. Photo by Joe WA4OVO
New antenna on its way up!

The wind was blowing so hard that the rope with the heavy steel carabiner landed on the far side of the transmitter building about 250 feet from the tower. The new antenna was lifted up on the outside of the tower using rope, pullies and a 4-wheeler.

Antenna settling into place. Carabineer at bottom of antenna used to hoist to tower location off elevator platform
Photo by Wallace Tower

When the climber came down he estimated that he had 60 MPH winds at the 500 foot level. About 6:30pm the Wallace crew packed up the pullies and put the rope in its storage barrel and off they went to Arkansas. It was a long day for the hams on the ground, but very rewarding that 82 could be back on the air on the Brunswick tower.
Check.
Set up the cans.

Testing, testing.....
It works!

Be sure and check into the net nightly beginning at 8:00 pm.
146.82, 107.2 tone, 600 hz -offset.
SPARKS is published monthly by the Delta Amateur Radio Club and emailed to club members. All information published in this newsletter is provided as a service. While every reasonable effort has been made to ensure accuracy, neither the Delta Amateur Radio Club nor its officers assume any liability resulting from errors or omissions. All correspondence may be mailed to:

**Delta Amateur Radio Club  *P.O. Box 342768 * Memphis, Tennessee 38184-2768**

Please note that you must provide your name and call sign if you’re requesting specific actions or personal follow-ups, and also be aware that any profane or mean-spirited comments will be unceremoniously discarded without consideration.

Delta Club Members Can Like Us/Follow Posts On Facebook! Go to [https://www.facebook.com/darcmem](https://www.facebook.com/darcmem).

### 2020 Board of Directors

**President**  
Steve Frazier, KK4VPT  
sfrazier1@bellsouth.net  
901-218-6385

**Vice President**  
Bob Van Keuren KM4SEB  
rtvk@hotmail.com  
901-853-0303

**Secretary**  
Mary Jean Hall KN4FBL  
kn4fbl@gmail.com  
901-356-1475

**Treasurer**  
David Jackson KM4SEC  
davidjackson@bellsouth.net  
901-487-3016

**Director of Training**  
Joe Lowenthal, WA4OVO  
wa4ovo@gmail.com  
901-628-4318

**Director of Publications**  
Bob Vawter, KW4RJ  
vawter.bob@gmail.com  
901-438-4563

**Director of Programs**  
Ian Lucas KN4OEK  
KN4OEK@gmail.com  
901-828-6209

**Director of Meetings & Special Events**  
Scott Adams, KM4PMU  
scottedadamsjr@hotmail.com  
901-573-6280

**Immediate Past President**  
Ken Laseter, KI4AOH  
KenLaseter@gmail.com  
901-487-9103

**Public Information Officer**  
Len Grice, W4MKS  
W4MKS@arrl.net  
901-522-6711

**Repeater Trustee**  
Barry McDonald W5CJ  
W5CJ@ARRL.NET  
901-853-0510
If you are interested in joining Shelby County ARES, complete an application at www.tnares.com. Click (do not pull down) on INFORMATION on the top right of the page. Then, go to TN ARES Membership and Appointment Application Forms and then click on ARES Membership Application: FSD-98. Complete the form and click on Submit at the bottom. You should get an acknowledgement soon after submitting.

### Public Service Events

If you are a coordinator for any of these events, please review the listed information. Please email corrections or additions to vawter.bob@gmail.com.

<table>
<thead>
<tr>
<th>2020 Date</th>
<th>Event</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 18</td>
<td>Swamp Stompers 50K/25K Run</td>
<td>Ken Laseter KI4AOH</td>
</tr>
<tr>
<td>FALL 2020</td>
<td>MARS contacts</td>
<td>?????????</td>
</tr>
<tr>
<td>June 27-28</td>
<td>Field Day TBA</td>
<td>Darrell Sheffield KK4D</td>
</tr>
<tr>
<td>Sep 12-13</td>
<td>MS-150 Bike Ride</td>
<td>Ken Laseter KI4AOH</td>
</tr>
<tr>
<td>Oct 10</td>
<td>Bluff City Blues Bike Ride</td>
<td></td>
</tr>
</tbody>
</table>

### Hamfests in the Southeast Area

<table>
<thead>
<tr>
<th>2020</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>January 24-25</td>
<td>Capitol City Hamfest in Jackson, MS</td>
</tr>
<tr>
<td>February 7-9</td>
<td>HamCation 2019 in Orlando, FL</td>
</tr>
<tr>
<td>February 16</td>
<td>LCARC’s 2020 Winterfest in Hoxie, AR</td>
</tr>
<tr>
<td>March 6 - 7</td>
<td>BirminghamHamfest 2019 in Birmingham, AL</td>
</tr>
<tr>
<td>March 14</td>
<td>MTARS Hamfest Tullahoma, TN</td>
</tr>
<tr>
<td>March 28</td>
<td>Ides of March Hamfest in Union City, TN - CANCELLED</td>
</tr>
<tr>
<td>March 28 - 29</td>
<td>April Fool Hamfest in Corinth, MS-- CANCELLED</td>
</tr>
<tr>
<td>April 11</td>
<td>Memphis FreeFest in Bartlett, TN - CANCELLED</td>
</tr>
<tr>
<td>May 15 - 17</td>
<td>Hamvention in Xenia, OH - CANCELLED</td>
</tr>
<tr>
<td>July 25</td>
<td>Greater Nashville &amp; Middle TN HamQuest in Lebanon, TN</td>
</tr>
<tr>
<td>August 22 - 23</td>
<td>Huntsville Hamfest in Huntsville, AL</td>
</tr>
<tr>
<td>October 16 - 17</td>
<td>Hamfest Chattanooga in Chattanooga, TN</td>
</tr>
</tbody>
</table>
As of October 2018, all you need to renew your ham tag is to provide a copy of your FCC license with a copy of your last year’s registration or a renewal notice, if you received one, and your payment.

The link below is for information and instructions about Tennessee ham radio call sign Emergency/Safety automobile license plates:


The application can be found at this link:

https://www.tn.gov/content/dam/tn/revenue/documents/forms/titlereg/f1312601Fill-in.pdf

The following link from the Tennessee Department of Revenue

### Memphis Area VHF/UHF Nets

**Updated January, 2018**

<table>
<thead>
<tr>
<th>Name of Net</th>
<th>Freq. MHz</th>
<th>Offset/Tone</th>
<th>Local Time</th>
<th>Day of Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta Club Information Net</td>
<td>146.820</td>
<td>- (107.2)</td>
<td>8:00p</td>
<td>Daily</td>
</tr>
<tr>
<td>YL Net</td>
<td>146.820</td>
<td>- (107.2)</td>
<td>8:45p</td>
<td>Sat</td>
</tr>
<tr>
<td>Mid-South Bullfrog Net</td>
<td>146.535</td>
<td>[simplex]</td>
<td>7:30p</td>
<td>Daily</td>
</tr>
<tr>
<td>Elmer Net</td>
<td>145.210</td>
<td>- (107.2)</td>
<td>9:00p</td>
<td>Sun</td>
</tr>
<tr>
<td>MedMERS Net</td>
<td>146.820</td>
<td>- (107.2)</td>
<td>12:00p</td>
<td>Wed</td>
</tr>
<tr>
<td>ARES Training Net</td>
<td>146.850</td>
<td>- (107.2)</td>
<td>9:00p</td>
<td>Thu</td>
</tr>
<tr>
<td>Sunday Super Niner Net</td>
<td>927.6125</td>
<td>- (146.2)</td>
<td>8:30p</td>
<td>Sun</td>
</tr>
<tr>
<td>TN Statewide DMR Net</td>
<td>Digital – DMR</td>
<td></td>
<td>8:00 p</td>
<td>Friday</td>
</tr>
</tbody>
</table>
## TENNESSEE HF NETS
As of January 2019  
All times are Central Time

<table>
<thead>
<tr>
<th>Net Name</th>
<th>Freq. MHz</th>
<th>Local Time</th>
<th>Day of Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tennessee CW Net</td>
<td>3.563</td>
<td>7:00p</td>
<td>Daily</td>
</tr>
<tr>
<td>Tennessee Slow CW Net</td>
<td>3.682</td>
<td>7:30p</td>
<td>Tue-Sun</td>
</tr>
<tr>
<td>Tennessee Alternate Phone Net</td>
<td>7.238</td>
<td></td>
<td>As needed</td>
</tr>
<tr>
<td>CUSEC</td>
<td>3.810</td>
<td></td>
<td>As needed</td>
</tr>
<tr>
<td>CUSEC</td>
<td>7.180</td>
<td></td>
<td>As needed</td>
</tr>
</tbody>
</table>

(Center for United States Earthquake Consortium)

### 3980 kHz – Tennessee Phone Net
Mon-Fri - 5:40 AM, 6:45 AM & 6:30 PM  
Saturday - 8:00 AM & 6:30 PM  
Sunday - 8:00 AM only  
Holidays - 8:00 AM only
If you would like to advertise equipment you have for sale, please email Bob. My email address is vawter.bob@gmail.com.

1. Alinco VHF/UHF Twin Band DR 735 (new in the box)
2. Alinco EDS 30 (new in the box)
3. 2 Speakers Kit HSN4039 (new in the box)
4. Kenwood THK 20A 144 mhz FM Transceiver (new in the box)
5. Galaxy Blue Light Digital Frequency Counter (new in the box)
6. Kenwood Charger (new)

If anyone is interested, please email me lelnicholson@gmail.com or call me @ 901-413-6096 Lel Nicholson