

SPARKS

P.O. Box 342768 * Memphis, Tennessee 38134-2768 * Volume 56 * September 2020



Delta Amateur Radio Club (DARC)

Sparks Newsletter

Website: <http://deltaclub.org>

Facebook: <https://www.facebook.com/darcmem>

W4BS

REPEATER SYSTEM

146.820-107.2 * 147.360+107.2

146.625-107.2 443.200+107.2

224.420-107.2 443.700+107.2

144.390 Digipeater *Fusion

We do plan to meet this month via “ZOOM.”

Topic: September Delta Club Zoom Meeting

Time: Sep 8, 2020 07:00 PM Central Time (US and Canada)

Join Zoom Meeting

<https://us02web.zoom.us/j/84210658300?pwd=Mk1MTINKbDI3LzgzRWp6WVFQS0NzUT09>

Meeting ID: 842 1065 8300

Passcode: 215475

Program: **Members sharing their station details et al. (Show and Tell)**

Contact Jeff Krause, AJ4GY at AJ4GY@comcast.net or call at 901-301-6776 for information. **(Jeff has planned a test session on Saturday, September 19 at 10:00 am at Ellendale Church of Christ. Please contact him for details.)**

“Junk In The Trunk!” Interested hams et al are invited to a swap meet in the parking lot at Ellendale Church of Christ from 8 am to 12:00 pm on Saturday October 10. (Rain date is Saturday, October 17). 7365 HWY 70 in Bartlett

President's Corner

Submitted by Steve Frazier, KK4VPT

Congratulations - We have made it to September ! That may sound odd, but I think you will agree that this year nothing is unusual and that is how we feel. Way back in March, we all expected to be back to normal by now. But here we are in September and we are still learning the new normal.

Part of the new normal is using Zoom to have our monthly meetings. We will be doing a Zoom meeting again this month. While I have missed meeting in person, it has been nice that we can keep in touch each month. This month we plan to do Show and Tell. We want to have you help us with this meeting. We are looking forward to hearing from you. You can show off your shack or share any project you may have been working on or maybe share a website that you find interesting. This would also be a great time to ask questions or advice from other members. If you do not participate, my backup plan is to share slides from old trips I have been digitizing.

We do have something new planned this year and that is **Junk in the Trunk**. This will be a swap meet we will have at the Ellendale Church of Christ on Saturday 10/10 from 8am - Noon. This will be a great chance for you to find a new home for any "extra" equipment you may have or to find that item you did not know you had to have. Remember one person's junk is another person's treasure.

We are still working on the ballot for the Board of Directors election in November. We have several Directors that have served for multiple years and are ready to give you a chance to contribute your talents to the Delta Club. Please contact myself or another Director if you are interested or would like to suggest someone. Only requirement is to be a member and to have attended at least 6 of the last 12 meetings. We are counting zoom meeting to meet this requirement.

Keep in touch as often as you can by checking in on the net every night on the 146.82 repeater at 8pm. And don't forget to say thanks to the net control operator that night who is one of many that make the nightly net possible.

73 to all
Steve Frazier

Treasurer's Report

Submitted by David Jackson KM4SEC

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>

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

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

8/31/2020 Details & History - View Account Details & History - Regions Online Banking

Branch Lobbies are now open for Walk-in Service. [Get Details.](#)

DELTA AMATEUR RADIO CLUB

LIFEGREEN CHECKING FOR BUSINES *4140

POSTED BALANCE	PENDING	AVAILABLE BALANCE
\$25,300.10	\$0.00	\$25,300.10

Activity [Statements & Docs](#)

Date Range: Current month

Date	Type	Description	Amount	Balance
8/13/2020	Debit	RSC INSURANCE BR 617-330-57	-\$235.48	\$25,300.10
8/11/2020	Deposit	DEPOSIT	\$25.00	\$25,535.58
8/10/2020	Deposit	DEPOSIT	\$200.00	\$25,510.58

8/31/2020 Details & History - View Account Details & History - Regions Online Banking

Branch Lobbies are now open for Walk-in Service. [Get Details.](#)

DELTA AMATEUR RADIO CLUB

SMALL BUSINESS CD *0028

Available Balance	INTEREST RATE	YTD INTEREST	INTEREST EARNED NOT PAID
\$10,572.26	1.590 %	\$83.73	\$33.58

Activity

Pay with Personality - Personalize your Checkcard with Regions YourPix Studio® [Learn more.](#)

DARC Board of Directors Meeting Minutes

Submitted by Mary Jean Hall KN4FBL

DARC Board of Directors Meeting Minutes for September 1, 2020

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

Absent: N/A Scott Adams KM4PMU

The regular monthly meeting of the Delta Amateur Radio Club Board of Directors was held on Tuesday, September 1, 2020 at 6:30 p.m. on a Zoom video conference call, with the President serving as chair and the Secretary being present. Three guests were present. President Steve Frazier KK4VPT called the meeting to order. Due to the COVID-19 Pandemic, the board met online to abide by state and local guidelines.

The board discussed the “Junk in the Trunk” swap meet event that will be Saturday, October 10, 2020 from 8 a.m. to noon at the Ellendale Church of Christ parking lot. October 17, 2020 will serve as the rain date, if necessary. Though Delta Amateur Radio Club and the Mid-South Amateur Radio Association (MARA) are co-hosting the event, all licensed amateur radio operators in the area are welcomed to participate. Rick Tillman WA4NVM said that it could be possible to spread out parking for those selling radio-related items from their trunks. He encouraged anyone who may need a table to bring his or her own.

David Jackson read the Treasurer’s Report. Ian Lucas moved to accept the Treasurer’s Report. Bob Vawter seconded the motion. The motion unanimously passed.

Joe Lowenthal said there was a good turnout at the testing session for the Technician class students. Eight students passed, with two making General. He described the extra precautions that were taken for the students to be able to test safely, which included spacing out each student around the gym with each one having his or her own table. He is working on a possible General class that would start in November, likely on Zoom.

Joe Lowenthal said that Jeff Krause is hoping to offer another testing session soon. He also said that Bob White has been offering test sessions in Atoka on the third Monday of each month.

Ian Lucas said that the September meeting program would be a “Show and Tell,” which would offer a chance for club members to show off their quarantine projects. He is working on an idea for the October program.

There were no applications for new or renewing members this month.

Dan Wehner KN4FBJ recommended the addition of a Membership Director on the board to decrease some of the workload. After brief discussion, the board members said that they will think on it and discuss it more at the next meeting.

Joe Lowenthal updated the board on the ARRL Delta Division leadership positions.

Joe Lowenthal moved to adjourn. Without objection, Steve F. adjourned the meeting at 7:12 p.m. The next Board of Directors meeting is scheduled for Tuesday, October 6, 2020 at 6:30 p.m. at Ellendale Church of Christ. Should it not be possible to meet in person, the board meeting will be held online through Zoom.

Respectfully submitted by Mary Jean Hall KN4FBL, Secretary

Minutes of Last Month's Club Meeting

Submitted by Mary Jean Hall KN4FBL

DARC Meeting Minutes for August 11, 2020

Call to Order and Opening Remarks

The regular monthly meeting of the Delta Amateur Radio Club was held on Tuesday, August 11, 2020 at 7:00 p.m. on a Zoom video conference call, with the President serving as chair and the Secretary being present. Club President Steve Frazier KK4VPT called the meeting to order and then welcomed everyone to the meeting. Due to the COVID-19 Pandemic, the club met online to abide by state and local guidelines. At least 42 members and guests were present for the meeting.

Steve Frazier KK4VPT said that the D.A.R.C. Board of Directors thought it was likely that the remainder of the club meetings in 2020 will be digital.

Minutes and Treasurer's Report

Jeff Krause AJ4GY moved to "approve the Treasurer's Report as published in Sparks." Joe Lowenthal WA4OVO seconded the motion. The motion was unanimously adopted by the club.

Len Grice W4MKS moved to "approve the previous meeting's minutes as published in Sparks." Jeff Krause AJ4GY seconded the motion. The motion was unanimously adopted by the club.

Announcements

Steve Frazier KK4VPT said that the board will look at the Coronavirus situation month-by-month to determine whether or not the club could meet in person.

Steve Frazier KK4VPT announced that the program for the September Delta Club meeting will be a "Show and Tell" type program. Members can take turns showing off their quarantine projects that deal with amateur radio.

Steve Frazier KK4VPT said it is the time of year to start thinking about who may be interested in serving on the Delta Amateur Radio Club Board of Directors. Though all positions are open each year, some of the Board members have expressed interest in serving another year. There are several roles that will need someone to fill, however, including President, Treasurer, Secretary and possibly others. The main requirements to serve on the board include being a paid-up member and having attended six meetings within the past year. The Zoom meeting attendance will be included for this requirement. Anyone who may be interested in serving should contact a board member for more information.

Rick Tillman WA4NVM announced that MARA, along with Delta Club, will host an outdoor swap meet from 8 a.m. to 12 p.m. Saturday, October 10, 2020. October 17, 2020 will serve as the rain date. They are looking at options for a venue. More information will be announced at a later time.

According to Joe Lowenthal WA4OVO, the Technician class tested on July 30, 2020 in the Germantown United Methodist Church gym so there could be adequate social distancing. Eight of the 12 students passed the exam.

Joe Lowenthal WA4OVO said that he hopes to have a General class in November. He will announce more details after he schedules the class.

Mary Jean Hall KN4FBL said that she has been sending out the current batch of membership cards and welcome emails. If you have used a "Rittermail" email account with the club, please make sure you email Mary Jean at kn4fbl@gmail.com with a new email address to use for Delta Club news and information.

Barry McDonald W5CJ updated the members on the status of the 146.820 repeater. He made a few adjustments, but everything seems to be good now.

Discussion / Program

Joe Lowenthal WA4OVO presented the program on ARRL, including the leadership, programs and major contests.

Closing Remarks

The meeting adjourned at 8:08 p.m.

The next Delta Amateur Radio Club meeting will be Tuesday, September 8, 2020 at 7:00 p.m. If the meeting is held in person, it will be at the Ellendale Church of Christ. If it is not possible to meet in person, the meeting will be held online, likely via Zoom. Check the current edition of Sparks or the Delta Amateur Radio Club Facebook page just before the scheduled meeting time for more information on where/how the meeting will be held.

HAM LICENSE TRAINING for 2020

By Joe Lowenthal WA4OVO, Director of Training

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

20 Technician

5 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 Ninth Edition with question pool that became effective July 1, 2019 for four years.

The current ARRL Extra Class License Manual is the Twelfth Edition with question pool that became effective July 1, 2020 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 General class will probably start in early November.

The next Amateur Extra class will probably start in early January.

SCHEDULED CLASSES

None

CURRENT CLASSES

None

COMPLETED CLASSES

Tech Class 3-20 – June 25 – August 13, 2020

Tech Class 3-20 is being held starting June 25th on six Thursday nights from 6:15-9:30pm on a combination of Zoom online and planned in person classes. There are twelve students in the class. One of the students is eight years old. Both of his parents are in the class. The classes are being held on June 25, July 2, 9, 23, 30 and August 13. The Zoom classes continued thru the July 23rd class. The Laurel FCC test session was held in the gym at Germantown United Methodist Church, 2323 West Street, using social distancing.



Tech Class 3-20 Test Session

Photo by Rick Tillman WA4NVM

Congratulations to Carla Andrews KO4FVX, Ryan Bednar KO4FVY, Ransom Bowen KO4FVZ, David Harkleroad KO4FWB, Phillip Green II KO4FWC, Brian Richards KO4FWD, Cynthia Spain KO4FWE, and Philip Thomas KO4FWF for obtaining their Technician licenses. Additional congratulations to Ryan KO4FVY and Cynthia KO4FWE for also upgrading to General. Thanks to Joe WA4OVO, Perry N4GJ, Barry W5CJ, Jelly N4HLT and Rick WA4NVM for providing the Laurel VEC test session.



Laurel VEs Jelly N4HLT, Joe WA4OVO, Perry N4GJ, Barry W5CJ with photographer Rick WA4NVM. The instructors were Joe Lowenthal WA4OVO, Paul Roberts KA9VAU, Len Grice W4MKS, Perry Hayes N4GJ, John Reiners KN4BVH, and Pat Lane W4OQG.

On August 13th the class met via Zoom for some of the equipment demonstrations. Rick Tillman WA4NVM gave a very informative instruction on satellite operations. Rick Pellicciotti KJ4NWQ informed the class on APRS. Joe WA4OVO presented more detailed information on Repeater Basics. The HF Wire Antennas by Pat W4OQG and programming handhelds has been deferred until we can meet. John KN4BVH provided FM digital instructions on DMR, Fusion, and D-STAR during an earlier class. Barry W5CJ provided earlier demonstrations on Echolink and information on Allstar.

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. Congratulations to Debra Johnson from the Tech 2-20 for earning her General as noted below.

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. On July 30th with Tech Class 3-20 testing Michael Ehrhardt KO4FWA earned this Technician license.

Congratulations to Chris Smallwood for earning his Technician license on May 18th at the Tipton ARC 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 4th 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 25th. Congrats to Brett Johnston KN4SMV for upgrading at the February 11th Delta Club test session. Congrats to Jim Harris KF5TPT for upgrading at the Olive Branch ARRL exam session on February 19th.



Dean Honadle N2LAZ demonstration left hand rule for Extra Class 1-20
Photo by Joe Lowenthal WA4OVO

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 15th 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.



All five passed with great scores. Congratulations to Judit Aubets Macia KO4BPP, Josue Bohorquez KO4BP Hammontree 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.

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 KN4ZNI, 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 KN4SQQ 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 Shawn Thomas 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-2000 HF SSB setup with a long wire and talked about MARS.

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 KI5DWP 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.

ARRL Benefits

ARRL amateur radio community. When you renew, a few of the benefits you will enjoy are:

- Your choice of a print magazine. Eligible US-based ARRL members can elect to receive QST, the official membership journal of ARRL or On the Air, aimed at helping new and emerging radio communicators get active and on the air.
- Digital access to all four ARRL publications -- QST, On the Air, and now QEX, covering topics related to radio communications experimentation, and National Contest Journal (NCJ), covering radio contesting.
- Access to ARRL's Technical Information Service to assist with technical problems and help with your projects.
- Free FCC license renewal and modification service.

To secure these amazing members-only benefits and many more in the coming year, visit www.arrl.org/join/WE1 to renew or call us toll-free at: 1-888-277-5289 (US Only) , Monday-Friday, 8 a.m. to 5 p.m. ET. International members call (860) 594-0338.

ARMED FORCES DAY 2020

Joint services have postponed the Crossband test until late 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 airtime. 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 News
submitted by Linda KJ4CTX

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

Many times we use computer programs for our ham radio activities. Most of us have a computer in the radio room to run ham radio software and digital transmission programs. When our old systems need updating we usually buy a more modern machine. One of the new types of computers is the PC MINI. These machines which are available from several manufacturers have lots of advantages. They have powerful newer processors in them. They use a lot less power than older equipment. The MINI PCs also have a very small size of about 8 by 8 by 2 inches. Most are totally silent as they have no fan noise for cooling. The units also use a solid state drive for fast boot-up and program loading speed. Plug in a monitor, mouse, and keyboard



and you are ready to go. With several USB ports you can also plug in accessories like an external DVD drive or extra memory. I bought a used ACEPC running Windows 10 for about \$40.00. Companies like Lenovo, HP, Acer, ACEPC, and ZOTAC all make this style of computer. This

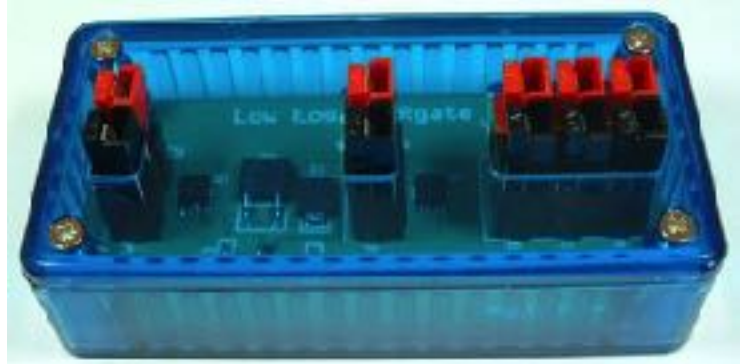
saves a lot of space in the radio room. To see all the MINI PCs, you can get on eBay and see new and used units. Do a search for “MINI PC” to see all the different computers in this style.



Amateur Packet Update

Submitted by James Butler, KB4LJV

Many times at home and in the field we want a way to switch from 120 VAC commercial power to 12 volt backup power for our radio equipment. Since most radio equipment run on 12 VDC this means we need a way to transfer from our normal source of power to battery backup. A nice unit is available from Flint Hills Radio. The unit called PWRGATE is a box with power pole connections to hookup two power sources. At home the DC output of you power supply and battery are the two to use. If you lose home power the box instantly switches to battery power. When power comes back on it goes back to normal power. The PWRGATE will also keep the battery charged while operating on normal power. One advantage to this unit is the use of power MOSFET transistors for a lower voltage drop when there is a transfer from house AC to backup DC. If you are looking for a backup power controller for your equipment check out this one from Flint Hills radio. The web address is <http://ki0bk.no-ip.com/~pwrgate/LLPG/Site/Welcome.html>



Three New Satellites with Amateur Payloads Launched and Contest Offered

Vega launch of three satellites with ham radio payloads

Christophe Mercier reports three satellites with amateur radio payloads will be on the Vega VV16 launch expected to take place early morning on September 2

On the AMSAT Bulletin Board he writes:

The Vega rocket (VV16) is scheduled to leave Kourou on 02 september 2020 at 3h36 CEST with 53 satellites on board.

One of the satellites that will be leaving is the Amicalsat satellite built by the CSUG (Centre Spatial Universitaire Grenoblois). The measurements made by the satellite will be available to all. They will allow radio amateurs to use them for propagation predictions.

The project's website (in english) has just been put online:
<http://amicalsat.univ-grenoble-alpes.fr/>

The Amsat-Francophone supported this project:
<http://site.amsat-f.org/amicalsat/>

A software (Linux & Windows) is provided for decoding the telemetry and sending it to the database (SatNogs). The user manual is available (in English)

<https://code.electrolab.fr/xtof/josast/-/blob/master/ApplicationAmicalsat/src/site/markdown/UserManual.md>

UHF 436.1 MHz AFSK 1200 RS17S
S band 2,415.3 MHz GFSK 1000 kb/s
<http://amsat-f.org/AMSATLIST/SatellitePage/UK/0Amicalsat.html>

Reports are welcome. Thank you for your help.

**The first 5 people who receive a frame from AmicalSat will receive a gift.
To submit your frame uses the satnogs SIDS or email satellite@adri38.fr**

Two other satellites :

UPMSat-2
UHF 437.405 MHz AFSK 1200 UPMST2

<http://amsat-f.org/AMSATLIST/SatellitePage/UK/0UPMSat-2%20.html>

TTU100

Primary 435.450 MHz 1k2 and 9k6 and CW
Secondary 10465.000 MHz OPSK 62.5 Kbs and 20 Mbs
See this link

TLE

1 74001U 20500A 20246.14839410 .00000000 00000-0 50000-4 0 05 2 74001
97.4424 319.0247 0002779 53.5911 328.5572 15.10021350 09

73

Christophe Mercier
Amsat-F chairman

AMSAT Bulletin Board <http://www.amsat.org/mailman/listinfo/amsat-bb>

Vega Flight VV16 <https://www.arianespace.com/mission/vega-flight-vv16/>

Storm Spotter Training

The National Weather Service Memphis Office will be conducting a series of 14 Storm Spotter Training classes from late September to early November via GoTo Webinar. These sessions will be two hours long and usually in the evenings. The schedule will be posted in early September. To see the schedule go to https://www.weather.gov/meg/skywarn_meetings

New Repeater in West Memphis

There is a new System Fusion repeater in West Memphis.
The frequency is 442.400 with a PL Tone of 107.2 for non System Fusion users.

Thanks to Marc Gwin AG5QY for this information.

Channelling RTTY

When you start playing with radio your first interaction is likely to be voice. It could be SSB, AM, FM or something more recent like FreeDV or DMR. Your next challenge is likely going to be a digital mode like Morse Code, Radio Teletype or my recommendation for your first adventure, WSPR or Weak Signal Propagation Reporter.

I've previously discussed WSPR, today I would like to look at Radio Teletype or RTTY. It's a digital mode that allows you to send and receive free-form text. It's a mode with a long and illustrious history and it's a good next step after WSPR.

The way it works is that using an alphabet made up from two tones, information is transmitted, one character at a time at a specific speed. The code that describes the alphabet is called the Baudot code, invented by Jean-Maurice-Emile Baudot in 1849. In computing terms it's a 5-bit alphabet and in amateur radio it's traditionally sent at 45.45 baud or bits per second, in case you're wondering, named after the very same man.

The two tones have names, a Mark and a Space and they're a set distance apart. In amateur radio, they're separated by 170 Hz but there are plenty of other frequencies and speeds in use. In amateur radio the standard Mark and Space frequencies are 2125 Hz and 2295 Hz.

In a traditional RTTY capable radio the two tones are generated by transmitting a carrier whilst switching the transmitter frequency back and forth, called Frequency Shift Keying or FSK. Think of it as having a Morse key that sends dits on one frequency and dahs on another, having the radio change frequency whilst you're keying.

If you use this method to create and decode RTTY by switching between two frequencies, your radio can generally only deal with one RTTY signal at a time, just the one you're sending and just the one that's being received. Receiving is generally achieved by showing some indication on your radio how close you are to the Mark and Space frequencies that you're trying to receive and decode.

Another way to make a RTTY signal is to use sound. If you alternately whistle at 2125 Hz and 2295 Hz and you do it at 45.45 bits per second, you're also generating RTTY. This technique is called Audio Frequency Shift Keying or AFSK. Think of it as using audio to simulate the shifting of frequency by transmitting two alternating tones.

There is a fundamental difference between the two. Before I explain, permit a diversion. It's relevant, I promise.

If you've ever spoken on the radio using SSB you might have noticed that if two stations are transmitting at the same time you get both signals. With a little practice you can even understand both. This isn't true for every radio mode. If you use FM, the strongest signal wins and if you use AM, you get a garbled beep from two stations being on slightly different frequencies. As an aside, this is why aviation uses AM, so any station not transmitting can hear that two stations doubled up.

Back to RTTY.

If you use audio to generate the two RTTY carriers, rather than shift frequency, you can deal with as many as you can fit into an SSB audio signal, as long as the Mark and Space for each station are 170 Hz apart you can have as many stations as you want, overlapping even. As long as your software knows what to do with that, you'll be able to decode each one at the same time, since they're essentially multiple SSB signals being transmitted simultaneously.

An added bonus is that you don't have to invest in an SDR to play with this. You can use an analogue radio, like my FT-857d, and use software to generate an audio RTTY signal with all the benefits I've just mentioned. The magic is in the software you use to do the decoding.

As it happens, I'm about to do a contest using RTTY and I'll let you know how that goes using my radio, a computer and a piece of software called fldigi. I'll be following in the footsteps of the first ever RTTY contest, held in the last weekend of October in 1953 and organized by the RTTY Society of Southern California. In as much as I'm following in the footsteps of Morse code by spark-gap.

Wish me luck.

I'm Onno VK6FLAB

Icom ID-52 VHF/UHF D-Star Handheld Announced

Icom ID-52 is the latest VHF/UHF D-Star handheld transceiver released by Icom and it's meant to replace the recently discontinued ID-51PLUS2. As expected, the USA version will be dubbed IC-52A while the European market counterpart will be ID-52E.

The Icom ID52A/E follows in the footsteps of the ID-51, with similar layout and slightly larger size. The most obvious difference is the display, as a more recent 2.3" color display with has replaced the (long dated) 1.7" dot matrix used in the previous model. The new screen uses transfective technology, which improves visibility in bright sunlight. Usually a light sensor is used with transfective displays to allow automated on-the-fly adjustments of brightness depending on ambient light, but we don't know yet if Icom has indeed implemented this.



Icom ID-52 (left)

Another welcome addition is Bluetooth, enabling connection to audio headsets, image transfer and remote control; USB charging is also finally here. Excuse me if I won't be jumping up for joy because amateur radio manufacturers are finally discovering technology from 15 years ago.

In the Icom ID-52 you will also see small improvements over the ID-51 like wider air-band coverage, 750mW of audio power instead of 400mW and improved D-STAR functionality that allows sending pictures. "Simultaneous reception in V/V, U/U, V/U or DV/DV" seems to be interesting; it's still not full-duplex though. We still get IPX7 ingress protection (1m depth for 30 minutes), internal GPS receiver, SD card slot, the DR function and Terminal/Access Point modes.

There is no information yet about the price, but we can expect something around (unofficial and purely personal estimation) US\$450 at launch. No words on availability either.

The big fat elephant in the room is the fact that there is no mention of the screen being a touch screen. If Icom is still relying on the same clunky, outdated user interface in the ID-51 (a joystick and a few buttons) for a product announced in 2020 ... the disappointment is off the scale.

<https://qrpblog.com/amp/>

73,
W4WTN

Sparks Newsletter and Delta Club Information

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>.

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ARES
Amateur Radio Emergency Service
Emergency Coordinator (EC) - John Reiners KN4BVH

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.

2020 Date	Event	Contact Information
Jan. 18	Swamp Stompers 50K/25K Run	Ken Laseter KI4AOH
May 12	MARS contacts POSTPONED UNTIL THE FALL	
June 27-28	Field Day @ Ellendale Church of Christ	
Sep 12-13	MS-150 Bike Ride CANCELLED	
Oct 10	Bluff City Blues Bike Ride CANCELLED	

Hamfests in the Southeast Area

2020

January 24-25	Capitol City Hamfest in Jackson, MS
February 7-9	HamCation 2019 in Orlando, FL
February 16	LCARC's 2020 Winterfest in Hoxie, AR
March 6 - 7	BirmingHamfest 2019 in Birmingham, AL
March 14	MTARS Hamfest Tullahoma, TN
March 28	Ides of March Hamfest in Union City, TN - CANCELLED
March 28 - 29	April Fool Hamfest in Corinth, MS-- CANCELLED
April 11	Memphis FreeFest in Bartlett, TN - CANCELLED
May 15 - 17	Hamvention in Xenia, OH - CANCELLED
July 25	Greater Nashville & Middle TN HamQuest – CANCELLED
August 22 - 23	Huntsville Hamfest in Huntsville, AL – CANCELLED
October 16 - 17	Hamfest Chattanooga in Chattanooga, TN

Tennessee Amateur Radio License Plate
Submitted by Joe Lowenthal, WA4OVO

• 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:

<https://www.tn.gov/revenue/title-and-registration/license-plates/available-license-plates/emergency-safety.html>

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 <https://www.tn.gov/revenue/title-and-registration/license-plates/available-license-plates/emergency-safety.html> has the Amateur Radio auto tag information.

Memphis Area VHF/UHF Nets

Updated January, 2018

Name of Net	Freq. MHz	Offset/Tone	Local Time	Day of Week
Delta Club Information Net	146.820	- (107.2)	8:00p	Daily
YL Net	146.820	- (107.2)	8:45p	Sat
Mid-South Bullfrog Net	146.535	[simplex]	7:30p	Daily
Elmer Net	145.210	- (107.2)	9:00p	Sun
MedMERS Net	146.820	- (107.2)	12:00p	Wed
ARES Training Net	146.850	- (107.2)	9:00p	Thu
Sunday Super Niner Net	927.6125	- (146.2)	8:30p	Sun
TN Statewide DMR Net	Digital – DMR		8:00 p	Friday

TENNESSEE HF NETS

As of January 2019
All times are Central Time

Net Name	Freq. MHz	Local Time	Day of Week
Tennessee CW Net	3.563	7:00p	Daily
Tennessee Slow CW Net	3.682	7:30p	Tue-Sun
Tennessee Alternate Phone Net	7.238		As needed
CUSEC	3.810		As needed
CUSEC (Center for United States Earthquake Consortium)	7.180		As needed

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

Used equipment for sale

Please ONLY contact the person offering the equipment.

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 l Nicholson@gmail.com or call me @ 901-413-6096 Lel Nicholson

If you have new members just starting out as Ham operators and could use some sections of Rohn Tower, I have some that I am willing to part with. They have been out of use for many years and at 79 years of age, I have no revival plans for them. Currently stored at ground level. Not too pretty but I do have the top cap.

Respond to Earl Barker, 5940 Bishop Dale Dr, Memphis, Tn 38141-6954

Contact via USPS only until further info is exchanged.

DELTA CLUB ADVERTISEMENTS

DELTA AMATEUR RADIO CLUB

P.O. Box 342768

Memphis, TN 38134-2768

DARC Meeting: Second
Tuesday of every month
at Elerdale Church of Christ
7365 Hwy 70, Bartlett TN



WIDE REPEATER SYSTEM
146.82- 147.36+ (137.2Hz tone)
224.42- 443.20+ (137.2Hz tone)



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Owner

Chick-fil-A restaurant
6282 Poplar Avenue
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Memphis, TN 38119
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C - 901.230.3043
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