

SPARKS

P.O. Box 342768 * Memphis, Tennessee 38134-2768 * Volume 74 * March 2022



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 plan to meet this month **via "ZOOM" and in-person.**

This month's meeting begins at 7:00pm on March 8, 2022 at Ellendale Church of Christ, 7365 Highway 70 in Memphis, TN (1 ½ miles north of Highway 64 / Stage Road) and via ZOOM accessible with the link below.

Topic: Delta Amateur Radio Club Monthly Meeting - Mar. 8, 2022

Time: Mar 8, 2022 07:00 PM Central Time (US and Canada)

Please download and import the following iCalendar (.ics) files to your calendar system.

Monthly: <https://us02web.zoom.us/join/88354601388?pwd=VlNkQ292VGU3Q01IZGI1TFZlN0Y0dz09>

Join Zoom Meeting

<https://us02web.zoom.us/j/88354601388?pwd=VlNkQ292VGU3Q01IZGI1TFZlN0Y0dz09>

Meeting ID: 883 5460 1388

Passcode: 041257

One tap mobile

+13017158592,,88354601388#,,,*041257# US (Washington DC)

+13126266799,,88354601388#,,,*041257# US (Chicago)

Program: "DXCC - The Best Contact Sport in Ham Radio." By W4DTA, Steve Romagni.

There will be FCC Testing Tuesday night.

VE TESTING: Don't forget the monthly ARRL Volunteer Examiner testing session prior to in-person meetings. Registration begins at 5:30 PM and testing begins by 6:00 PM. Please remember to bring two (2) forms of identification, at least one a photo ID, and copies of any existing licenses or CSCE's you might have. Please be on time for registration, as you will not be allowed to enter the testing session after 6:00 PM. This is to allow our volunteer VE team to finish in time to attend the club meeting. Candidates MUST have a FCC FRN BEFORE coming to the testing session. For more VE testing, or FCC FRN, information, please contact:

Daniel Columbus, AA4HV, VE Liaison
Phone: 901-208-1535
Email: aa4hv@arri.net

Announcements

FOUR-FORTY NET

The Delta Club has a weekly net, the Four-Forty Net, which is on 443.700 with a +5 MHz offset and a PL tone of 107.2 Hz. The Four-Forty Net is every Friday at 8:30 pm after the Delta Club Information Net. Please join us to test out your 70 cm equipment and see how well we get into this W4BS repeater.

Begin planning for the Huntsville Hamfest on August 20, 2022.

President's Corner

Submitted by Mary Jean Hall, KY4FB

If you check in on the nightly Delta Club Information Net, you have already heard the news: we will meet in-person for the membership meeting this month! It feels like déjà vu since we went through this same process last summer. Hopefully, this time will be different and we can/will continue to meet in-person. The board will continue to assess the health situation each month, of course. We will still have a Zoom option for those who are unable to join us in-person. For whatever the reason, if you cannot make it to the meeting, I hope you can join us on Zoom or call in to listen to the meeting. If time is not on your side, we also publish the meeting recordings to our YouTube page – just search for “Delta Amateur Radio Club” and you’ll find many of our recent club meetings. That link also gets shared to our Facebook page.

We will not be requiring masks at the meeting. Snacks and refreshments will be available. While restrictions are relaxing, I encourage you to continue to be mindful of each other. If you aren't feeling well, please join us from home on Zoom. We are ready to dive back into a world that is closer to normal, but we also want to keep each other safe and healthy so we can continue to meet in-person.

Two years ago this month was the last time we met as a group before everything changed as we know it. It's crazy how it all changed so quickly, but we figured out a way to make things work and we continued to meet. We also figured out creative ways to offer in person activities where we could. Thank you all for your patience and dedication to staying involved despite the challenges we had over the past two years.

As we hopefully close that chapter and start a new one, we have a lot to look forward to this year! Next month on April 9, MARA is hosting the annual FreeFest in Bartlett. We are starting to plan for ARRL Field Day, the Huntsville Hamfest, and other activities, too. In-person FCC testing is back! (There have been some changes with FRN requirements so check the announcement in this SPARKS issue for more details.)

There are many options to stay in the loop as activities start up again: check-in on the Delta Club Info Net, attend club meetings, read SPARKS, visit AA4UK's www.hamcalendar.com... No matter which way(s) you get your information, I hope you take advantage of the upcoming opportunities to use your ham radio skills and spend time with our fellow hams. I look forward to seeing all of you soon!

Treasurer's Report
Submitted by Jim Martin, KD4FUU

Please renew your membership right away, so you won't forget about it! The membership application may be downloaded from our website (for both renewals *and* new members) at:

<https://deltaclub.org/membership>

Annual membership fee is \$20 per individual or \$25 per family. Completed applications and payment may be mailed to:

**Delta Amateur Radio Club
PO Box 342768
Memphis, TN 38134-2768**

If you prefer you can print and bring the completed form, along with the membership fee, to any in-person meeting. Please contact Jim Martin KD4FUU at kd4fuu@gmail.com with any questions or concerns regarding application submission and/or payment of annual dues.

LIFEGREEN CHECKING FOR BUSINESS

February 1, 2022 through February 28, 2022

SUMMARY

Beginning Balance	\$20,210.32	Minimum Daily Balance	\$20,210
Deposits & Credits	\$360.00 +	Average Monthly Statement Balance	\$20,261
Withdrawals	\$0.00 -		
Fees	\$0.00 -		
Automatic Transfers	\$0.00 +		
Checks	\$0.00 -		
Ending Balance	\$20,570.32		

DEPOSITS & CREDITS

02/25	Deposit - Thank You	360.00
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DAILY BALANCE SUMMARY

<u>Date</u>	<u>Balance</u>
02/25	20,570.32

SMALL BUSINESS CD *0028

Available Balance	<u>INTEREST RATE</u>	<u>YTD INTEREST</u>	<u>INTEREST EARNED NOT PAID</u>
\$10,827.41	1.590 %	\$0.00	\$34.01
View More Details			

Applications Received - Feb 2022

(0) New Membership(s) - Pro-Rated Dues	\$0.00
(0) New Membership(s) - Dues Waived	\$0.00
(8) Membership Renewal(s)	\$160.00
(1) Donations Received	\$200.00
Total Dues Received	\$360.00

Other Deposits

\$0.00	
Total Other Deposits	\$0.00

Total Deposits **\$360.00**

Debits/Payments

\$0.00	
Total Payments	\$0.00

Proposed Budget	2019	2020	2021	2022
Donations (cash)	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00
Consignment Donated Gear	\$ -	\$ -	\$ -	\$ -
Membership (Jan. thru Dec.	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00
Club Patches	\$ 10.00	\$ -	\$ -	\$ -
Estate Sale	\$ 750.00	\$ 800.00	\$ 1,000.00	\$ 1,500.00
Advertisement	\$ -	\$ -	\$ -	\$ -
Huntsville Trip	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00
Total:	\$ 5,310.00	\$ 5,350.00	\$ 5,550.00	\$ 6,050.00
Tn. Annual Report	\$ (40.00)	\$ (120.00)	\$ (120.00)	\$ (120.00)
Meeting Space Donation	\$ (300.00)	\$ (300.00)	\$ (300.00)	\$ (300.00)
Training	\$ (50.00)	\$ (50.00)	\$ (50.00)	\$ (50.00)
Media / ZOOM	\$ -	\$ -	\$ -	\$ (200.00)
Meeting Refreshments	\$ (500.00)	\$ (500.00)	\$ (500.00)	\$ (500.00)
Food (Dec. Meeting)	\$ (100.00)	\$ (100.00)	\$ (100.00)	\$ (100.00)
Door Prize	\$ (500.00)	\$ (500.00)	\$ (500.00)	\$ (500.00)
PO Box (Annual Rental)	\$ (185.00)	\$ (210.00)	\$ (240.00)	\$ (290.00)
Equipment Insurance	\$ (182.00)	\$ (220.00)	\$ (220.00)	\$ (220.00)
Repeater System Upgrades	\$ (1,000.00)	\$ (2,000.00)	\$ (1,000.00)	\$ (1,000.00)
SouthEastern Repeater Assn.	\$ (35.00)	\$ (35.00)	\$ (35.00)	\$ (35.00)
Field Day	\$ (250.00)	\$ (250.00)	\$ (250.00)	\$ (250.00)
DARC Board Discretionary Fund	\$ (2,000.00)	\$ (2,500.00)	\$ (1,000.00)	\$ (1,000.00)
Huntsville Trip	\$ (2,500.00)	\$ (2,500.00)	\$ (3,000.00)	\$ (3,000.00)
Free Fest Donations	\$ (200.00)	\$ (200.00)	\$ (200.00)	\$ (200.00)
Projected Total Expenses	\$ (7,842.00)	\$ (9,485.00)	\$ (7,515.00)	\$ (7,765.00)
Projected Net Operating Results (income-expenses)				
Checking Acct:	\$ 16,052.00	\$ 25,177.00	\$ 25,000.00	\$ 19,068.00
CD #0228	\$ 10,488.00	\$ 10,656.00	\$ 10,673.00	\$ 10,785.00
CD #8041	\$ 10,905.00	\$ -	\$ -	\$ -

DARC Board of Directors Meeting Minutes Submitted by Carolyn Horne, KX4QF

DARC Board of Directors Meeting Minutes for March 1,2022

Attendees: Mary Jean Hall KY4FB, John Reiners KN4BVH, Carolyn Horne KX4QF, Joe Lowenthal WA4OVO, Jim Martin KD4FUU, Mike Harrison KM4MRW, Steve Romagni W4DTA, Scott Adams KM4PMU, Barry McDonald W5CJ and Len Grice W4MKS.

Absent: None.

Guests: None.

The regular monthly meeting of the Delta Amateur Radio Club Board of Directors was held on Tuesday, March 1, 2022, at 6:30 PM on a Zoom video conference call, with the President serving as chair and the Secretary being present. President Mary Jean Hall called the meeting to order.

Mary Jean Hall discussed whether to have next week's Members Meeting only via Zoom or both in-person and via Zoom. The board determined that current conditions warrant having a hybrid meeting. The link to the meeting will be sent by email and may also be found in the SPARKS newsletter on the deltaclub.org website. There was a discussion about available audio-visual and streaming equipment. Steve Romagni said most of his guests for the program presentation need remote access. It was agreed to have a dry run to test the connections on Saturday afternoon before the general meeting.

Steve Romagni said the program will be 'DXCC, the Best Contact Sport,' which gives an introduction at a basic level to DXCC.

Scott Adams asked if we would be serving snacks at the general meeting. The board agreed to small snack service. Scott will do an audit at the church as he will be there for the dry run communications test on Saturday.

Carolyn Horne read a list of 8 renewed members. Steve Romagni made a motion to accept them all, Joe Lowenthal seconded the motion, and all were in favor, with none opposed. Membership cards for these members are to be sent out this week.

Carolyn Horne reported that all of the CW QRP radios were in working order from SK Karen Chancellor AG4CC's estate.

Jim Martin read the Treasurer's report. He said that Park Dodge made a \$200 donation to the club along with his membership dues. Thank you, Park!

Mary Jean Hall asked Jim to present the 2022 budget at the March Members Meeting.

Mike Harrison asked us to review old information on the website so he could make updates. He is changing the email on our website to our new Gmail address. Mary Jean Hall asked everyone to send feedback on the Delta Club's webpages to Mike Harrison. She sent the board members a report of old information about the board of directors on the Delta Club website and asked for additions and corrections. Mike received a request to post an announcement about the MCARS Hamfest in SPARKS and the board agreed to that.

Joe Lowenthal said seven out of eight students passed their Extra exam. Two tested early and five at the Ellendale Church of Christ. Tech Class started on Monday, February 28th and will run through April 4th. Fifteen students were in attendance and Joe expects two more to join next week. The exam will be on March 28 at the Ellendale Church of Christ, beginning with a review at 6:15 PM, and testing around 8:30 PM. Anyone who is interested in signing up for a Tech Class should send an email to wa4ovo@gmail.com with the subject line 'Tech Class,' and include their name, email, and cellphone. Joe gave a Tech review class at Christian Brothers University on February 23rd to twelve students, and nine got their Tech license. Joe recognized and thanked the instructors and VE's that help with the classes and testing. Mary Jean Hall confirmed with Dan Columbus AA4HV that there would be VE testing before the March Members meeting.

Mary Jean Hall asked Joe Lowenthal if he asked the church about meetings other than the monthly members meeting and he said he had only asked for the members meetings. He said there will be a new contact at Ellendale for the use of the building. It was noted that on May 3rd there will be an election so we will not have use of the building on that night for a board meeting or future election days.

Len Grice had nothing to report.

Barry McDonald gave an update on the 146.82 repeater and Channel 30 Brunswick Tower cable repairs. He said work has begun. He saw quite a few climbers there but noted there is still a lot of work to be done.

John Reiners gave an update on SKYWARN training and will get info for publication in SPARKS. On March 14 there will be Basic Training from 6:30 to 8:30 via GoTo virtual meeting. There will also be an ARES meeting this month, where he will continue the discussion on Winlink.

Mary Jean Hall brought to the floor the request from several members to have a digital payment option (PayPal) for membership dues. Ray Miller AA4UK did some research since the last members meeting, which he sent via email to Mary Jean Hall and Carolyn Horne. The board

determined that it merited an investigation and Mary Jean Hall assigned a committee to it comprised of Mike Harrison, Jim Martin, Carolyn Horne, and herself. The committee will meet on Tuesday March 15th via Zoom. She said she will send a Zoom link to all members of the board, who are welcome to participate.

Mary Jean asked for input on future events: 1) FreeFest. Mary Jean has volunteered in the kitchen, and Joe has reserved two tables. 2) Junk in the Trunk. Joe said to wait until May 3) Huntsville Hamfest. Joe said he can check on bus fees and get started on organizing the trip. It will be the 3rd Saturday of August which is the 20th. 4) Field Day. Planning will start in mid-March 5) ARRL Kid's Day. This event is on June 18th from 6:30-8:30 PM. Board members will investigate this for next month's meeting.

Mary Jean Hall adjourned the meeting at 7:55 PM. The next regular Board of Directors meeting is scheduled for Tuesday, April 5, 2022, at 6:30 PM on Zoom.

Respectfully submitted by Carolyn Horne KX4QF, Secretary

Minutes of Last Month's Club Meeting
Submitted by Carolyn Horne, KX4QF

DARC Meeting Minutes for February 8, 2022

Call to Order and Opening Remarks

The regular monthly meeting of the Delta Amateur Radio Club was held on Tuesday, February 8, 2022, at 7:00 PM on a Zoom video conference call, with the President serving as chair and the Secretary being present. Club President Mary Jean Hall KY4FB called the meeting to order and then welcomed everyone to the meeting. At least 41 members and guests were present for the meeting.

Minutes and Treasurer's Report

Ned Savage KA4BLL moved to "approve the Treasurer's Report and Minutes as published in Sparks." Steve Romagni W4DTA seconded the motion. The motion was adopted by the club without objection.

Announcements

Mary Jean Hall KY4FB explained the process of downloading and submitting your membership form and dues. She said they are processed immediately after the monthly Board of Directors meeting. Richard Martin K4DXF asked which zip code is correct, the one on the form or on the web because they are different. Joe Lowenthal WA4OVO said both are correct, one is for the P.O. box and the other for the Post Office location Zip Code.

Joe Lowenthal WA4OVO gave an update on training. He said the 1-22 Extra Class held their last class the previous night. Eight students were there, two had already passed their exam and five others were planning to take it with a high confidence of passing. One other is taking the exam in Hernando. He said he expects to have the best percentage of students passing of any of his Extra classes. A Tech Class will start on February 28th and run through April 4th. Eleven students have registered. There will be 6 sessions, the first 4 on Zoom, the 5th session in person testing, and the 6th equipment demos, just in time for the students to decide what to purchase at the MARA FreeFest on April 9th. If anyone is interested in the Tech Class, they should send an email with the subject 'Tech Class,' with their name, email, and cell to wa4ovo@gmail.com.

John Reiners KN4BVH gave an ARES update. He remarked on how the recent ice storm put our skills into practical use and gave a nod to Mary Jean Hall KY4FB for making this the focus of this month's President's Corner. He said ARES will have a meeting in two weeks on Zoom. He gave ARES members a homework assignment on sending email messages via Winlink and hopes to go a little deeper into Winlink at the next meeting.

Rick Tillman WA4NVM asked anyone who wants a table at the MARA FreeFest to contact him. Mary Jean Hall KY4FB gave a summary of what FreeFest is all about and outlined the Delta Club's participation in the event.

Discussion / Program

Director of Programs, Steve Romagni W4DTA, introduced this month's guest speaker Christian Bravo W4ALF. Christian gave us a brief bio about his success in getting DXCC awards from his small lot QTH while presenting this month's program, "How to DXCC From a Small Lot. He held Q&A following the presentation.

Mary Jean Hall KY4FB thanked Christian for visiting and providing us with this valuable information. Joe Lowenthal WA4OVO asked him about selling Karen Chancellor AG4CC's estate QRP and CW equipment and Christian advised him to list it with NAQCC (the North American QRP CW Club). He said they have a monthly email newsletter that includes a Swap & Shop for QRP/CW.

Closing Remarks

Mary Jean Hall KY4FB put a link in the Zoom chat to the Delta Club membership page and reiterated that it does take a little bit of time to process.

Ray Miller AA4UK asked about digital payment options for the membership dues. He said he thought 3 clubs in the area were already doing that. Mary Jean Hall KY4FB said she will email him to get more information.

Delta Club President Mary Jean Hall KY4FB adjourned the meeting at 8:37 PM.

The next Delta Amateur Radio Club meeting will be Tuesday, March 8, 2022, at 7:00 PM in-person and /or 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 venue instructions or the Zoom link for the meeting.

Respectfully submitted by Carolyn Horne KX4QF, Secretary (2022)

Delta Ham License Training, 2022

Submitted 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. The FCC will implement a \$35 application fee sometime after April 1, 2022 after 90 days notice in the Federal Register.

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 2022 from Delta Classes

9 Technician

0 General

7 Extra

Note:

Coming soon will be a \$35 FCC application fee for new hams, renewals, upgrades, Vanity callsigns, etc except for address or email changes.

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

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 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 or seven sessions; one per week on a week night 6:15pm-9:30pm or Saturday day 9am-1pm.

The next General license class will probably start in early November 2022
The next Extra Class license class will probably start in early January 2023

PROPOSED CLASS

The next Technician license class will probably start in late June or early July.
If interested, send an email to wa4ovo@gmail.com with Subject line: Tech Class and name, email address and cellphone number in text.

CURRENT CLASS

Tech Class 2-22 – February 28 – April 4, 2022

A Technician license class began on February 28th for six Monday nights from 6:15-9:30pm. The first four classes will be via Zoom. The fifth class will be in-person with a review of the 421 questions and answers in the question pool as well as an opportunity to take the FCC exam. The Equipment Demonstration sixth class is scheduled to be in person.

The class dates are February 28, March 7,14,21,28, and April 4th. There were 15 students in the first session with two more to join on March 7th.

The instructors are Joe WA4OVO, Paul KA9VAU, Perry N4GJ, David KY4FH, John KN4BVH, and Pat W4OQG. The Equipment Demonstrators are Rick WA4NVM, Rick KJ4NWQ, John KN4BVH and Joe WA4OVO.

The Laurel VEC Team will provide the opportunity for FCC testing on March 28th.

COMPLETED CLASSES

CBU Tech Review Class 3-22 – February 23, 2022

A Technician license review session was held in Dr. Eric Welch (WD5FTA)'s junior level Introduction to Unmanned Aerial Vehicle class for 13 Christian Brother University students on February 23rd. Congratulations to Juan KO4YBR, Juan KO4YBS, Hector KO4YBT, Jake KO4YBU, Dan KO4YBV, Joshua KO4YBW, Aldrin KO4YBX, Carlos KO4YCN, and James KE8UAR earned their Technician licenses.

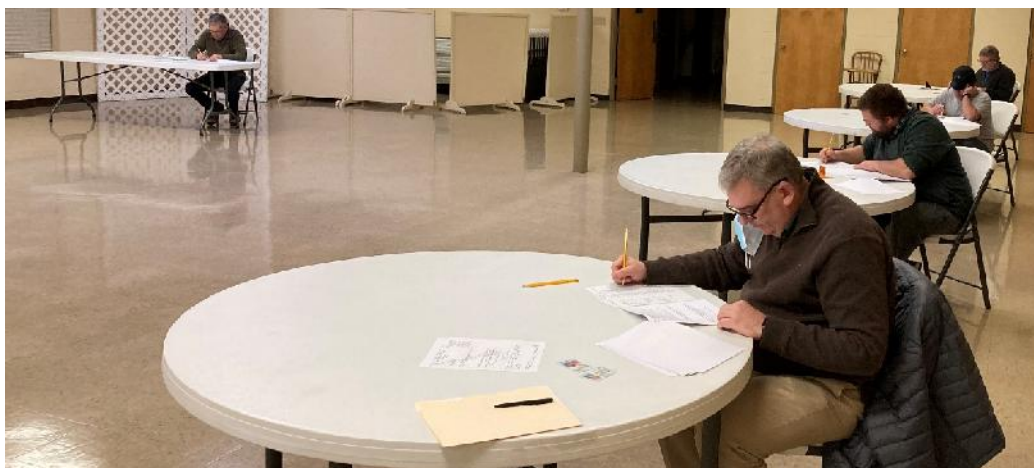
Thanks to the Laurel VEC Team of Barry W5CJ, Jelly N4HLT, David KY4FH, David AJ4KF, Eric WD5FTA and Joe WA4OVO for providing the Laurel FCC test session.

Extra Class 1-22 – January 3 – February 14, 2022

Extra Class 1-22 license class is being held via Zoom and started on Monday night, January 3, 2022 from 6:15-9:30pm. The class is for seven Monday nights until February 14th.

There are eight students in the class: Paul Broom KN4WGX, Kevin Buddle KO4UTX, Charles Byars KI5HWA, Randall Haynes KO4KKA, Kevin Kelley KO4OAO, Dylan Martin KC4DTM, Scott McDermott KO4OWE, and Jan Slezak KC1QBB. Since last report one student dropped out and one joined.

Congratulations to Kevin Buddle KY4MI, formerly KO4UTX, for testing early with a W5YI on-line testing group and upgrading on January 25th.



Extra Class 1-22 Test Session Photo by Joe Lowenthal WA4OVO

The instructors were Joe Lowenthal WA4OVO, John Reiners KN4BVH, Dave Church AD4Q, Dean Honadle N2LAZ, Pat Lane W4OQG, Paul Roberts KA9VAU, and David Wilson KY4FH.

General Class 6-21 – November 1 – November 29, 2021

A General license class was held on five Monday nights between November 1st and November 29th from 6:15-9:30pm. The Zoom classes were on November 1,8,15,22 with in-class FCC testing on November 29th. There were 14 students in the first class; two from California and another from North Carolina. The class ended with 11 students, excluding the California students.

The test session location was at Ellendale Church of Christ, 7365 Hwy 70 (Summer Ave). Congratulations to Web Webster KC4WEB who tested early online for upgrading to General. Congratulations to Charles Byars KI5HWA, Dan Currey KO4NGZ, John Duty KK4LST, Jeff Foster KI5SEK Randall Haynes KO4KKA, and Dylan Martin KC4DTM for upgrading to General.

Thanks to the Laurel VE team of Joe WA4OVO, Perry N4GJ, Barry W5CJ, Bob AI4GI, and David KY4FH for providing the test session.

Tech Class 5-21 – September 20 – October 25, 2021

A Technician license class was held on six Monday nights between September 20th and October 25th from 6:15-9:30pm. There were 16 students in the first class. The classes were held on September 20, 27, October 4,11 via Zoom.

The FCC exam was offered on October 18th after a review of the question pool questions and answers. Congratulations to Randy Clements KO4UDH, Ben Fonville KO4UDI, Kristine Howell KO4UDJ, Dylan Martin KO4UDK, Gordon Stark KO4UDL, Dan Taylor KO4UDM, Jeff Blackwell KO4UDN and Jeffrey Foster KI5SEK. Extra congratulations to Kristine KO4UDJ and Ben Fonville KO4UDI for also upgrading to General. The FCC test session was

at Ellendale Church of Christ, 7365 Hwy 70 (Summer Ave). Thanks to the Laurel VE team of Perry Hayes N4GJ, Steve Romagni W4DTA, Jelly Thompson N4HLT, Rick Tillman WA4NVM and Joe Lowenthal WA4NVM for providing the exam opportunity.

On October 25th there was an in-class equipment demonstration. Joe WA4OVO explained how to program radios for repeater operation, Rick WA4NVM showed Orbitron for satellite operations. He and Richard Martin K4DXF set up the satellite operations for an SO-50 pass. Rick Pellicciotti KJ4NWQ presented APRS and John Reiners KN4BVH informed the new hams about Shelby County ARES with an invite.



Class 5-21 Kristine KO4UDJ (seated) waiting to make SO-50 contact with the help of Rick WA4NVM and Richard K4DXF. Photo by Joe Lowenthal WA4OVO



Class 5-21 new hams learning about APRS from Rick KJ4NWQ Photo by Joe Lowenthal WA4OVO

Tech Class 4-21 – June 24 – August 12, 2021

A Technician license class was held on six Thursday nights between June 24th and August 12th from 6:15-9:30pm. The original seven students have dwindled to five in the class and one auditing. It became a Zoom class due to the increase of Covid with the FCC test session the only in-person class. The classes were held on June 24, July 1, 8, 22, 29 and August 12th. The FCC exam was offered on July 29th at Ellendale Church of Christ, 7365 Hwy 70 (Summer Ave). Two students took the exam(s). Congratulations to Chris Hadley KO4SHG and Dennis Lee KO4SHH for earning their Technician licenses. Additional congratulations to Chris KO4SHG for also upgrading to General. Bill Walter N4ELF also tested and upgraded from General to Extra. Congratulations to Ross Butler KI5REG for earning his Technician license at the August 17th Delta Club test session.

The Delta Club VE Team of Jeff Krause AJ4GY, Perry Hayes N4GJ, Barry McDonald W5CJ, Bobby Stroud KD5BS and Tom Ungren KK4ZZZ were the VEs.

The instructors were Joe Lowenthal WA4OVO, Paul Roberts KA9VAU, Perry Hayes N4GJ, David Wilson KY4FH, John Reiners KN4BVH, and Pat Lane W4OQG. The equipment demonstrators were John Reiners KN4BVH, Rick Pellicciotti KJ4NWQ, Rick Tillman WA4NVM, and Joe Lowenthal WA4OVO.

Tech Class 2-21 – February 22 – April 5, 2021

A Technician license class was held one night a week via Zoom from February 22nd thru April 5th on Monday or Thursday nights. Twenty-two students started on the 22nd with 19 finishing the training. An in-person class was held on March 29th for review and opportunity for FCC exam at Ellendale Church of Christ, 7365 Hwy 70 (Summer Ave) in Bartlett.

Sixteen students tested and all passed.

Congratulations to Wallace Bell KO4OWD, Park Dodge AI5CY, Michael Engelken KI5PDQ, Arie McClanahan KI5PDR, Scott McDermott KO4OWE, Terrell Naylor KO4OWF, Craig Owen KO4OWG, Adam Shirley KO4OWH, Don Swindoll KO4OWI, Diane Thomas KO4OWJ, Anthony Tribo KO4OQK, and Bruce Swindoll KO4OWN. Additional congratulations to Michael KI5PDQ and Scott KO4OWE for upgrading to General. An extra congratulaton to Park AI5CY for running the table to Extra Class. Congratulations also to Ina Wiehl KY4GA for running the table to Extra Class at the Atoka TARS test session on March 15th. Congratulations to Mike Murell KO4QBT for earning his Technician and General licenses at the Olive Branch ARRL test session on April 20th.



Tech Class 2-21 test session left side Photo by Joe Lowenthal WA4OVO



Tech Class 2-21 test session right side Photo by Joe Lowenthal WA4OVO

Also, two CBU students tested. Congratulations to Jose Bonafasi KO4OWL and Will Clayton KF0EYO.

Additionally, nine year old Jacob White KO4OWN earned his Technician license.



Photo back left to right: 9 year old Jacob KO4OWN and proud grandpa Bob AI4GI; front left to right: VEs Perry N4GJ, Bobby KD5BS, Jeff KJ4GY

Thanks to the Laurel VEC team of Joe WA4OVO, Perry N4GJ, Jeff AJ4GY, Barry W5CJ, Bobby KD5BS, Rick WA4NVM, and Eric WD5FTA for administering the FCC test session.

The instructors were Paul KA9VAU, Perry N4GJ, Len W4MKS, John KN4BVH, Barry W5CJ, Pat W4OQG, and Joe WA4OVO. The equipment demonstrators were Rick WA4NVM and Richard K4DXF on Satellite, Rick KJ4QNWQ on APRS, John KN4BVH on Digital, and Joe WA4OVO on Repeater Basics.

CBU Tech Review Class 3-21 – February 24, 2021

A Technician license review session was held in Dr. Eric Welch (WD5FTA)'s junior level Introduction to Unmanned Aerial Vehicle class for nine Christian Brother University students on February 24th. Congratulations to Cesar Mireles KO4NFT, Allison Sorette KO4NFU, Brennan Griffin KO4NFV, Michael Longo KO4NFW, Jose Villa Hidalgo KO4NFX, Novy KO4NFY and Sean Williams KI5OEI, who earned their Technician licenses.

Thanks to the Laurel VEC Team of Barry W5CJ, Perry N4GJ, Jelly N4HLT, Rick WA4NVM, Eric WD5FTA and Joe WA4OVO for providing the FCC test session.

EXTRA Class 1-21 – January 4 – February 25, 2021

An Extra Class license class was held one night a week via Zoom from January 4th thru February 25th on Monday or Thursday nights from 6:15-9:30pm. The Zoom classes met on January 4, 14, 21, 25, February 1, 11 and tested a week late on the 25th due to snow on the 18th. The students were Carla KO4FVX, Ransom KO4FVZ, Russell KO4ASW, Jason KO4DOH, Mary Jean KN4FBL and David KN4BXI.

Congratulations to Mary Jean Hall KY4FB (formerly KN4FBL) and David Wilson KY4FH (formerly KN4BXI) who passed their Extra exam on the 25th.

The instructors were Joe WA4OVO, John KN4BVH, Dean N2LAZ, Barry W5CJ, Dave AD4Q, Paul KA9VAU and Pat W4OQG.

Thanks to the Delta Club ARRL VE Team of Jeff Krause AJ4GY, Stacy KJ4MDA, Warren KC7ND, Tom KK4ZZZ, Barry W5CJ and Joe WA4OVO for providing the FCC test session.

In addition to the Extra Class students testing, congratulations to Brian Kelly KO4KAO for upgrading to General. Also, the following earned their Technician licenses: Dan Currey KO4NGZ, Rob Currey KO4NHA, Wilson Langford KO4NHB, Ebben Raves KO4NHC, David Wolford KO4NHD, Garrett Robinson KO4NHE, and Steven Porter KO4NHF.

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 and Print your License.

INDIVIDUAL EMAIL ADDRESS IN QRZ
Submitted by Joe Lowenthal, WA4OVO

Consider going to QRZ.COM and log in. Then enter your email address on their QRZ page so other hams can contact you vial email rather snail mail. Anyone looking for email addresses has to log in to QRZ to be able to see the ham’s email address.

Find Registered Amateur Radio Operators Submitted by Bob Vawter, KW4RJ

To view licensed hams in your vicinity, go to <https://haminfo.tetranz.com/map>

Dayton Hamvention is a 'Go' Submitted by Bob Vawter, KW4RJ

Dayton Hamvention 2022 is not just going to be a premier hamfest but a reunion, as organizers prepare for the first gathering at the Xenia Fairground and Expo Center in Ohio after two years of cancellations.

Hamvention's general chairman Rick Allnut WS8G said in a phone interview that committees have been meeting and volunteers are committed to making up for the time lost to pandemic cancellations.

Hamvention will be happening on Friday May 20th through Sunday May 22nd with an international reception scheduled on Thursday May 19th. Rick said the registration site is already taking bookings from vendors and inside exhibitors and individual visitors can already buy their tickets. All details are available on the hamvention.org website.

Rick said: "Tickets are all printed and ready to go."

<https://hamvention.org/>

Introducing the ID-52E D-STAR Digital Handheld Transceiver! Submitted by Bob Vawter, KW4RJ

The ID-52E, VHF/UHF dual-band digital transceiver, the latest in a long line of D-STAR handportables from Icom will be available from authorized Icom dealers at the beginning of December.

The ID-52E succeeds the popular ID-51E PLUS2 and is the latest Icom model to work on the D-STAR (Digital Smart Technologies for Amateur Radio) network.

What immediately strikes you about this model is its large transfective colour display that makes it easy to see outdoors, even in bright sunlight. The size of the display has also been increased to 2.3 inches from 1.7 inches on the ID-51A/E.

The ID-52E supports Bluetooth communication as standard. You can wirelessly connect to Android devices with the ST-4001A/ST-4001I Picture Utility Software, and RS-MS1A Remote Control Software installed. The optional VS-3 Bluetooth® headset is also available, for hands-free operation.

ID-52E D-STAR Digital Handheld Transceiver Features:

- Simultaneous reception in V/V, U/U, V/U as well as DV/DV.
- Waterfall Scope Function
- Airband reception is expanded from VHF to UHF (225 to 374.995 MHz).
- Can be charged via a micro USB connector.
- Audio output has been increased from 400 mW to 750 mW.
- The latest D-STAR functions allow you to send, receive and view saved photos on an installed microSD card using only the ID-52E.
- Accessories for the ID-51E, including battery packs and microphones, can be used.

In addition to the above, the ID-52E has a variety of other features including DR function with easy set-up, built-in GPS receiver, micro SD card slot, IPX7 waterproof construction (1-metre depth of water for 30 minutes), and Terminal/Access Point modes.

Having many great features, the ID-52E will appeal to not only beginners but for those experienced operators who want to get even more out of the D-STAR network.

The ID-52E will be available from Icom Amateur radio dealers from December with a suggested retail price of £519.99 (inc.VAT).

For further information about this new model, visit the 'ID-52E D-STAR Digital Handheld Product Page'.

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.

Packet Update
By: James Butler KB4LJV

We have seen Chinese HT radios at good prices over the years. The Chinese companies are now making mobile Amateur radios for the 2 meter and 440 bands. These radios have lots of features with multicolor displays and hundreds of memories. Some of these radios are very small and allow it to easily be mounted anywhere. They are also producing tri band and quad band units at very good prices. Radios are built by Anytone, QYT, and TYT among others. If you're looking to install a VHF or UHF mobile radio check these out on Ebay. Do a search for "mobile anyone radio". You can also search for the other Chinese brands.

LYU LAM & TYT



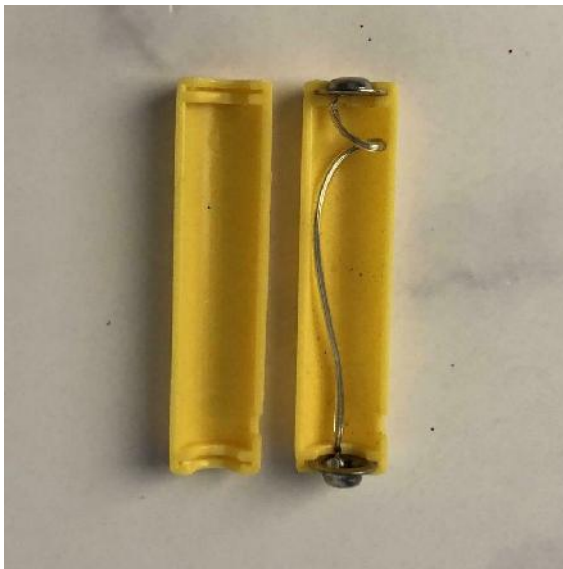
Ship from US



Amateur Hardware Update

By: James Butler KB4LJV

One type of battery that can be used with our portable radios is the “fake battery”. These are AA or AAA size batteries that do not produce a voltage. They are just a hollow plastic shell of AAA or AA size with metal tabs on the ends. A wire inside the battery shell connects the two ends. One way to use the fake battery is to substitute for a real battery in place of one in your battery pack. This will allow your equipment to operate at about 1.2 volts lower than normal allowing cooler operation and slightly lower power. Another way to use the fake battery is to open the case and cut the wire; you can now hook up an external dc power supply to the plus and minus battery connection. Put the modified battery in your multi battery radio cavity along with fake batteries to allow you to run on you external power supply without having to solder wiring to you radio. Make sure you power supply is set to a safe voltage your radio uses and the proper polarity. These are on Ebay for about 50 cents for a AAA or AA fake battery. You can do a search for “fake AA battery”.



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

If you are interested in joining Shelby County ARES, complete an application at <https://www.tnares.com>. Click (do not pull down) on INFORMATION on the top right of the page. Next, go to TN ARES Membership and Appointment Application Forms and then click on ARES Membership Application: FSD-98. Complete the form and click SUBMIT at the bottom of the page. You should get an acknowledgment soon after submitting.

**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.

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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Upcoming Events

- MTARS 2022 Hamfest Event - Tullahoma Tennessee - March 12, 2022 go to <http://www.mtars-ham.org> for more information.
- A SKYWARN webinar will be held for Shelby County, TN on March 14th from 6:30pm to 8:30pm. Details are available on The National Weather Service website.
- The 3980 Tennessee net will host an EMERGENCY PREPAREDNESS net for the state of Tennessee on March 21st at 5:30pm and March 22nd at 6:30am.
- **Free Fest April 9th, 2022**

For more information go to <http://hamcalendar.com/>

Memphis Area VHF/UHF Nets

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
Four-Forty Net	443.700	+(107.2)	8:30p	Fri
Mid-South Bullfrog Net	146.535	[simplex]	7:30p	Daily
Elmer Net	444.175	+ (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

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	7.180		As needed

(Center for United States Earthquake Consortium)

3980 kHz – Tennessee Phone Net

Mon-Fri - 5:40 AM, 6:45 AM & **5:30 PM** (5:30 pm beginning Nov. 9 evening)

Saturday - 8:00 AM & 5:30 PM

Sunday - 8:00 AM only

Holidays - 8:00 AM only

DELTA CLUB ADVERTISEMENTS

DELTA AMATEUR RADIO CLUB

P.O. Box 342768
Memphis, TN 38134-2768

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



W4BS REPEATER SYSTEM
146.82- 147.36+ (107.2Hz tone)
224.42- 443.20+ (107.2Hz tone)



Joe Miller
Owner

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Memphis, TN 38119
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Joe.Miller@cfafranchisee.com
chick-fil-a.com

EQUIPMENT FOR SALE

Items #23-71 will be available for purchase at the membership meeting on Tuesday, March 8, 2022. Items #72-205 are available for sale by arrangement. If you are interested in one of these items, email Joe Lowenthal WA4OVO at WA4OVO@gmail.com.

No.	Sell Price	Description	Manufacturer	Model	Comments
23	150	Antenna, HF	Cameleon	CHA-Hybrid-Mini	
24	60	Antenna, HF Mag Loop	Antenna4 Less	HF-319	company not in business
25	30	Coax RG-8X, 75ft			PL259-BNC
26	10	Coax, RG- 58A/U, 18ft			PL-259-PL- 259
27	15	Coax, RG-8X, 25ft	Southwire		991020 BNC-PL259
28	20	Coax, RG-8X, 50ft	Southwire		991020 BNC-BNC
29	30	Coax, RG-8X, 75ft	Southwire		991020 PLBNC- BNC259- PL259
30	40	Code Practice Oscillator	MFJ	MFJ-557	
31	70	CW, Pocket Morse Tutor	MFJ	MFJ-418	
32	30	Dummy Load		DC-3GHz	250W
33	50	Filter, audio	Autek Research	QF-1A	SSB/CW/AM w/manual
34	50	Filter, audio	Autek Research	QF-1A	SSB/CW/AM w/manual
35	300	Filter, DSP	TimeWave	DSP-59+	Works perfectly/ good condition
36	20	Handbook, ARRL 2019	ARRL		
37	15	Headphone	Sennheiser	HSD202	w/ mini phone plug
38	40	Headphones	Kenwood	HS-5	
39	100	Key, CW	Kent	TP-1B	Uses Whiterock Switch, keyer paddle
40	55	Key, CW	MFJ	MFJ-564	lambic key paddle

No.	Sell Price	Description	Manufacturer	Model	Comments
41	150	Key, CW	Vibroplex	Original	
42	50	Key, CW	Wm M Nye	SSK-001	Super Squeeze Key
43	75	Key, CW	Te-Ne-Ke	w/black base	for KX2,KX3,QCX,or 817
44	20	Keyer, CW & RTTY	Mortty	V4	USB connector
45	45	Memory Keyer, CW	Unified Microsystems	XT-4	
46	50	Network Analyzer	NanoVNA-H4		in box
47	60	Oscillator, CW	Morserino-32		no wifi/ €85
48	75	Oscillator, CW	Morserino-32		Kit, new
49	25	Sound card, external	StarTech.com	ICUSBAUDIO2D	new in box
50	12	Speaker, 3.5x3.5x2	DX Engineering	DXE-281	Like new, no box
51	15	Speaker, portable	Anker	SoundCore mini	w/phono&charging cords
52	75	SWR/Power Meter	Diamond	SX-200	1.8-200 MHz, 200 watts
53	450	Transceiver HF,QRP	Elecraft	K2	No SSB card
54	450	Transceiver HF,QRP	Elecraft	K2	No SSB card
55	350	Transceiver HF,QRP,CW	Mountain Topper	MTR-48 v2	500ft spool (about 350ft)
56	700	Transceiver HF/VHF/UHF	Yaesu	FT-891	w/ MFJ-939Y
57	600	Transceiver HF/VHF/UHF	Yaesu	FT-817	w/ Z-817 tuner
58	60	Transceiver Tri-Band 220	Btech	UV-5X3	144/220/440 1500mAh and 3800mAh battery
59	25	Transceiver Tri-Band 220	Btech	UV-5X3	144/220/440 1500mAh battery/ only 220 antenna, no charger

60	170	Transceiver VHF 144	Kenwood	TM-281A	works
No.	Sell Price	Description	Manufacturer	Model	Comments
61	65	Transceiver VHF/UHF	Yaesu	VX-5	w/ 19" whip/ no charger
62	25	Transceiver VHF/UHF	Baofeng	UV82L	w/charger, no manual, in box
63	25	Transceiver VHF/UHF	Baofeng	UV82L	w/ charger, no manual
64	125	Transceiver, HF,QRP,CW		SW-3B	40m installed/ mint condition
65	150	Transceiver, HF,QRP,CW	MFJ	MFJ-9200	3 band w/manual
66	150	Transceiver, HF,QRP,CW	YouKits	HB-1A	3 bands
67	225	Transceiver, HF,QRP,CW	YouKits	HB-1B	w/wall power supply/4 bands
68	150	Transceiver, HF,QRP,CW	Wilderness Radio	NorCal 40A	w/printed manual
69	65	Tuner, portable, QRP	LDG	Z-817	w/ FT-817, do din cord
70	90	Tuner, portable, QRP	LDG	Z-817	New in box/ 20 watts max
71	10	Wire, #10, insulated			33 feet, green
72	25	Battery 12V	MightyMax	ML22-12	22 amp SLA
73	1	Adapter, audio, phono male-mini female			
74	1	Adapter, audio, phono male-mini female			
75	1	Adapter, audio, phono male-mini female			
76	3	Adapter, stereo sound	Sabrent		w/USB Type A
77	25	Antenna	Cameleon		Telescopic
78	25	Antenna 20m mobile	MFJ	MFJ-1620T	3/8x24 threads
79	25	Antenna Spike Mount	Cameleon	CHA Spike Mount	
80	15	Antenna Tac Hat Loop	Cameleon	CHA TacHat-L	used, missing 2 set screws

No.	Sell Price	Description	Manufacturer	Model	Comments
81	35	Antenna Tac Hat Loop	Cameleon	CHA TacHat-L	new in tube
82	15	Antenna Throw Bag	Weaver		12oz w/ string
83	5	Antenna Throw Bag	Weaver		8oz, no string
84	20	Antenna Tripod	Mega Pod	MP2018-Bull	New
85	5	Antenna Tripod	Mega Pod	MP2018-Bull	Missing parts
86	15	Antenna, 17 & 30 meters	Pacific Antenna		Trap Dipole kit
87	15	Antenna, 20 & 40 meters	Pacific Antenna		Trap Dipole kit
88	1	Antenna, 4ft whip			3/8x24 threads
89	20	Antenna, 6m mobile	MFJ	MFJ-1606T	3/8x24 threads
90	20	Antenna, 6m mobile	MFJ	MFJ-1606T	3/8x24 threads
91	15	Antenna, halfwave	QRPGuys		80-10m 9bands BNC
92	80	Antenna, HF Loop, QRP	W2Li-Loop	RF-01	s/n 1824, used
93	50	Antenna, HF Sloper	Cable Help	75/80 meters	
94	50	Antenna, HF Sloper	Cable Help	75/80 meters	
95	90	Antenna, HF, long wire	HyEndFed	Multiband 200 watt	40-20-15-10M w/ 63 ft 6" antenna wire with choke (6 wraps on 1 1/2PVC) at 6ft 6" from unun
96	20	Antenna, J-pole, 2/440 on 300 ohm line	no mfg		RG-174 coax/SMA for Baofeng
97	300	Antenna, Loop	Cameleon	CHA-F Loop	

No.	Sell Price	Description	Manufacturer	Model	Comments
98	20	Antenna, QRP long wire		unun	62ft 2"unknown make coax w/ground wire 33ft 19 ga AWG TR- 4
99	15	Antenna, QRP long wire		unun	30ft 9" 19 ga AWG TR-4 coax
100	15	Antenna, QRP long wire			w/BNC balun in bag
101	15	Antenna, QRP, dipole			w/BNC balun+10ft coax+ BNC ferrite in bag
102	1	Anti-static mat wrist strap cords	HPFIX YESCOO	S-180	Straps and cords only
103	1	Audio Cable			3 wire,RCA,5ft w/ RCA- Stereo jack
104	40	Audio Converter	Monoprice		w/ power supply
105	0	Battery 12V	MightyMax	ML35-12	35 amp SLA
106	50	Battery Bank, 12v in box			4 3.3volt LA cells in series/reads 13.35 volts
107		Battery Box w/solar charge controller		Model 220	12/24v 20A + USB
108	5	Battery Checker	Tenergy	5-in-1 Cell Meter	no cable
109	35	Battery Protection	Victron Energy	BP12/24 100	100 amp protection
110	25	Battery, 12V LiFePO4	Miady	LFP16ah	204.8 Wh, charges fully
111	15	Battery, Li, 5v	TalentCell	YB1203000 USB	3 amp max w/wallwart charger
112	35	Bracket for FT-817	Windcamp	CH-817S	

No.	Sell Price	Description	Manufacturer	Model	Comments
113	25	Bracket, antenna for ham stick dipole			3/8x24 threads
114	15	Cable set, power, 8 ga	Power Bright		1Red/1Black, 6 ft each
115	15	Cable Set, program	Mirkit	FTDI Chip Model 5	
116	1	Cable, audio RCA		shielded	Gold plated, 36" long
117	1	Cable, audio, phono			24" long, male each end
118	1	Cable, audio,RCA set of 3			Red,yellow,white-39" long
119	5	Cable,RF, PL-259-phono		'	10" long
120	40	Camera, Digital Wireless	LeeKooLuu	for vehicle backup	W/7" monitor, new
121	10	Camera, webcam	Logitech	V-U0018	P/N 860-000441
122	10	Case, aluminum	QRP Labs		clock
123	5	Case, fabric w/zipper	Lowepro		Black 4x7x3
124	35	Charger for LiFePO4 12V	Talentcell	LF4100	
125	60	Charger for LiFePO4 12V	Grid Vision	LFP-41260	
126	10	Charger/Maintainer, 12V	Stanley	FatMax	8 amp
127	10	Cigarette plug w/ banana plug	Philmore	48-521	Anderson Powerpoles also
128	Delta	Computer, RaspberryPi			
129	5	Connector, BNC Male-Dual Banana		BNC-BP	Binding posts
130	5	Connector, BNC Male-Dual Banana		BNC-BP	Binding posts

No.	Sell Price	Description	Manufacturer	Model	Comments
131	20	Cord, polyester, 3/16"	Quality Nylon Rope	6-1378	500ft spool (about 350ft)
132	75	Data Interface	MiniProSC		USB & 6-pin Din
133	40	Data Interface	xggcomms	Digimode-1 Yaesu	FT-CABLE-7
134	15	Earbuds, wireless	Beben	X8	Bluetooth 5.0
135	30	Flagpole Holder	MaxHaul		
136	10	Ground Adapter to Banana	StaticTek	X001G5VJAJ	Pack of 2, 4mm banana
137	25	Ground Rod, 4ft, copper clad			New
138	15	Ground Rod, 4ft, copper clad			Used
139		Headphone Amplifier HiFi			16-300
140	1	Insulator, ceramic			
141	20	Inverter, car 12V		LESHP	300 watt solar 12V
142	90	Inverter, car 12V	Inteli-Power	9100 PD9130L	30 amp
143	30	Isolator, RF, Line	MFJ	MFJ-915	New
144	45	Isolator, RF, Line	MFJ	MFJ-915	Used
145	55	Key, CW, QRP backpacker	Radio Adventure Gear		2 red paddles in plastic case w/stereo jack 58euro +19%
146	120	Keyer Paddle, electronic	MFJ	MFJ-422-X	
147	15	Keyer Paddle, electronic	MFJ	MFJ-422-X	Parts only
148	20	KX2 Cable	Elecraft	KXUSB-A	mini phone to USB w/ 43 ferrite

149	0	Magnifier Loop	Jarlink		30x22mm 60x12mm no illumination
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No.	Sell Price	Description	Manufacturer	Model	Comments
150	15	Mast pole/fishing			Extends to 30 ft
151	50	Mast, portable	Sotabeams	Tactical 7000hds	
152	80	Mast, portable	PackTenna		10 meters (32ft)
153	20	Mast, portable	Shakespear	Wonderpole	20ft
154	20	Mast, portable	JacEite		30ft
155	1	Meter	QRPoMeter		wire loose inside
156	50	Microphone, hand	Elecraft	MH3	For KX-2
157	15	Microphone, mini			Mini plug, no switch, in plastic box
158	10	Portable Power	Portable Generator		200 WH
159	25	Power Panel	Vetomile		Volt meter, USB, Cigarette,5 switches
160	20	Power Supply		F128-200	12V 8 amp
161	20	PowerPole block	Chunzelhui	F-1011	45A 6 ports, no fuse
162	25	PowerPole block	Electro Resales	Out-Rigger	Fused 30/20/15/10/5a
163	20	Receiver, SDR	RTL-SDR	RTL 283U	
164	20	Solar Panel	Sunapex		10 watt, flexible
165	35	Strut, 1-5/8" Channel, Aluminum	McMaster Carr	3230T26	New, 2pcs, 4ft long,
166	25	Switch, antenna		2P0239	2 position
167	25	Switch, coax	Diaiwa	CS-201	2 position
168	15	Switch, keyer paddle	Whiterock	MK43	Used with Kent key

169	45	SWR/Power Meter	Surecom	SW-102	up to 125 watts
170	30	SWR/Power Meter	Surecom	SW-33	up to 100 watts

No.	Sell Price	Description	Manufacturer	Model	Comments
171	5	Transceiver, 40m kit	Pixie Kit	B17-12-03	0.01093
172	75	Transceiver, 40m w/RaduinoUBITX			Kit, new
173	25	Transceiver, QCX-mini CW	QRP Labs		New
174	25	Transceiver, QCX-mini CW	QRP Labs		New
175	35	Tripod	Pyle		W/10-24 threads & SO-239 for antenna
176	100	Tuner	MFJ	MFJ-939Y	w/ FT-891
177	15	Unun 1:49	HF Kits	kit	For end-fed antennas 16.5€ (includes VAT)
178					
179					
180		TOOLS			
181	5	Clamp, cable, wire			Zinc, 3of 1, 1 of 1
182	15	Crimping Tool	Qibaok		AWG20-10 0.5-6.0mm/ missing 3of4 die sets
183	1	Drill bit, 5/64"			
184	1	Drill bit, 5/64"			
185	1	Drill bit, 5/64"			
186	1	Drill, taper, 1/4-1/2			¼, 5/16, 3/8, 7/16, 1/2
187	1	File, burnishing	Jonard	OB-1/3	Pack of 3
188	1	Liquid Tape, 4oz	Gardner Bender	LTB-400	opened
189	1	Magnet, 7/8x1-7/8x3/8			
190		Pad, set of 3, black 4-3/4"x16" 4-3/4"x16"			Could be for static mat

191	5	Screwdriver,Ratchet			Phillips, removable
192	1	Solder			Tube
193	1	Solder			Tube
194	2	Solder Wick	NTE	SW02-10	.098" wide, prox 9ft
No.	Sell Price	Description	Manufacturer	Model	Comments
195	1	Solder, lead free	Bernzomatic	SRC050	Tube, .040" (1mm) dia
196	1	Spacer, hex,aluminum (4ea)			3/4"long with screws
199		PARTS			
200	5	Bolt, 1/4x20x1, socket head	Socket Source		Zinc, 16 each
201	5	Cable Clips	Xi-inno		40pcs, plastic in box
202	15	Mahattan Scratch Building	QrpME	Special #2 Pack	solder pads
203	10	PowerPole, Anderson, kit	leuyo	X002RUJGE3	15A,30A,45A
204	10	PowerPole, Anderson, kit	leuyo	X001QP9UIH	Red/Black housings+ 6 black boots
205	1	Resistor, 50 250 watt	Florida RF	32A2056F	