

SPARKS

P.O. Box 342768 * Memphis, Tennessee 38134-2768 * Volume 22 * August 2016



Welcome to the Delta Amateur Radio Club

Visit our home on the web at: <http://www.deltaclub.org>

EMAIL: darc4you@gmail.com

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

Newsletters; <http://www.deltaclub.org/sparks.html>

W4BS

REPEATER SYSTEM

146.820^{-107.2} 147.360^{+107.2}

146.625^{-107.2} 443.200^{+107.2}

224.420^{-107.2}

This month's meeting begins at 7pm on August 9, 2016, at Ellendale Church of Christ, 7365 Highway 70 Memphis, TN (1 ½ miles north of Highway 64 (Stage Road)).

In this month's program we welcome Keith Barton, KT4EP. Licensed in 1992 at a Delta Club meeting, Keith now holds an Extra class license. Keith served in the US Navy as a Cryptologic Technician, working in communication centers in London, England; Homestead, FL; and the 6th Fleet Flagship in the Mediterranean. He was a police officer in Greenville, MS, for 6 years and retired as an FBI Special Agent after 20 years here in the Memphis FBI office. Keith recalls operating Collins R-390 radios and listening to the BBC on shortwave and tuning in RTTY signals before decryption which started his interest in amateur radio. After 15 years off-the-air due to work and family, Keith returned to amateur radio in 2010 and discovered the new digital modes, which he works nearly 100 per cent. Keith and his wife of 43 years, Kay, live in Bartlett and have a son, Ben, KD4TIS, living in Idaho and a daughter, Elaine, living in California. Keith plans to give a "Show Your Shack" presentation.

Delta Club FCC testing sessions are held monthly except December. Registration begins at 5:30 PM; testing begins by 6:00 PM. Please bring a photo ID and another form of identification, copies of existing licenses or CSCEs, and your FCC Registration Number (FRN) if one has been issued. Please be on time for registration to allow our Volunteer Examiner (VE) team to complete their work prior to the club meeting. The 2016 test fee is \$15 (cash or check). Individuals receiving their initial FCC license grant at a Delta Club test session or through a Delta Club training class will receive a complimentary individual club membership for the remainder of the current calendar year when they also show proof of ARRL membership. For more information, please contact our VE Liaison, Jeff Krause, AJ4GY, 901-301-6776 or AJ4GY@comcast.net.

Congratulations to those who passed exams during Delta's July, 2016, test session: new Technicians Parnell Sage Lewis, Jr., KM4VLZ, and Joel Belles, KM4VMA, and new General Gary Battles, KG4FCQ.

President's Corner

Submitted by Ken Laseter, KI4AOH

WOW! It sure is hot!

Hope everyone is staying inside under the air conditioner as much as possible. If not, when outside try to stay in the shade, dress in light colored clothes, eat light foods, and drink plenty of water (not alcohol). Personally, I'm looking forward to some cooler weather, not cold weather, because I have a few antenna ideas I want to try out in the back yard. I'm hoping you have some ham radio plans for this fall as well.

Don't forget that next month is the Multiple Sclerosis 150-mile bike ride from the Lander's Center to Tunica and back. This is a two-day event and is scheduled for September 10th and 11th. For additional information, see the **Upcoming Public Service Events** section, page 30.

I know that I'm repeating this from last month's President's Corner, but I don't want anyone to forget. The club has chartered a bus again this year to the Huntsville Hamfest. Riding the bus is a great opportunity for new hams to corner the more experienced hams (Elmers) to ask them those questions you just can't seem to find the answers for. I personally know this works, because it's what I did some years ago, and it worked GREAT for me. Furthermore, the Huntsville Hamfest is one of the best in the country, you can find almost anything you need for setting up your hamshack or that one special fitting you need, but not sure exactly what it's called. If you would like to go with us, contact Joe Lowenthal, WA4OVO, and buy your ticket. I promise you, we always have fun! See you on the bus!

As always, please don't forget to check into the Delta Club information net on the 146.820 repeater at 8:00 pm each evening, and when you check-in, make sure to thank the net control operator for taking time from their family and busy schedule to call the net for us. They are some of our most valuable assets!

If you have not renewed your club membership now is the time. I think we still have some members that are procrastinating or have forgotten. Linda, KJ4CTX, will be glad to accept your renewal application and cash, check or money order, either at a club meeting or via snail mail.

See you at the meeting Tuesday night!

73,
Kenneth Laseter
KI4AOH

Treasurer's Report
Submitted by Linda Laseter, KJ4CTX

DELTA AMATEUR RADIO CLUB

Monthly Treasurer's Report

For month ended July 31, 2016

Submitted by: Linda Laseter, KJ4CTX Treasurer

CHECKING ACCOUNT

BEGINNING BALANCE		
BEGINNING BALANCE	as of July 1, 2016	\$ 11,562.46

INCOME			
Date		Description	Amount
7/12/2016		Dues and Donation	\$ 60.00
7/15/2016		Huntsville bus trip	\$ 225.00
7/29/2016		Huntsville bus trip	<u>\$ 60.00</u>
TOTAL INCOME			\$ 345.00 \$ 345.00

EXPENSES				
Date	Check #	To	Description	Amount
7/5/2016	1374	Neshoba	Field Day	\$ (174.07)
7/5/2016	1375	Joe Lowenthal	3 band pass filters	\$ (393.00)
7/17/2016	1376	Joe Lowenthal	Tri-fold paper towels	<u>\$ (32.76)</u>
TOTAL EXPENSES				\$ (599.83) \$ (599.83)

ENDING BALANCE as of July 31, 2016 **\$ 11,307.63**

CERTIFICATES OF DEPOSIT			
	Maturity Date	Balance as of	
Certificate of Deposit #1	10/10/2018	7/13/2016	\$ 10,372.85
Certificate of Deposit #2	10/11/2016	10/9/2015	\$ 5,050.12

TOTAL DARC CASH ASSETS **\$ 26,730.60**

This Month's Board Meeting Minutes

August 2, 2016 -- Submitted by Linda Laseter, KJ4CTX

Attendees: Bill Stevens, WC9S, Michael Knight, KK4IOH, Steve Frazier, KK4VPT, Dan Lasley, NE7JN, Kenneth Laseter, KI4AOH, Linda Laseter, KJ4CTX, Len Grice, KM4MRY, Joe Lowenthal, WA4OVO, and Jim Cissell, KI4I. Barri Munday, WB4SWP, was absent.

The meeting was called to order at 7:00 p.m. by Ken.

Linda presented the Treasurer's report and then advised the Board that the \$10,000 CD was moved to Regions Bank with a 1.24% interest rate.

Bill reported that the 146.625 repeater had been out of adjustment, was being repaired and has no courtesy tone. He advised that we should probably hold another Swap Meet sometime in September at the Ellendale Church. He also said Germantown was very pleased with Field Day and invited us back next year. He reported Field Day is covered in detail in Sparks.

Len brought in an example of the membership card he proposed to send to all paid members for next year. Members of the Board suggested adding repeater frequencies and web address on the right side of his example which will be the backside of the card.

Joe reported that we currently have 34 paid seats on the bus for the Huntsville Ham Fest. We need 42 to break even. There are 16 students in the current Tech class and several have expressed an interest in going for General. The next class will probably start the first week in November but he will have to decide if it is a Tech or General class.

Jim reported that Keith Barton, KT4EP, is the program for August but he has nothing scheduled beyond that. A few suggestions were made for Jim's consideration. Dan requested the program for September be sent to him as soon as Jim has something scheduled.

Ken requested we start looking for a nominating committee. Several names were mentioned and Michael agreed he would be on the committee. The last item on the agenda was the by-laws which the Board discussed and will be reviewing.

The meeting adjourned at 8:42 pm.

Minutes of Last Month's Club Meeting

July 12, 2016 – Submitted by Barri Munday, WB4SWP

Ken Laseter, KI4AOH, welcomed everyone and reminded people to sign in. Everyone introduced themselves by name and call sign.

Jeff Krause, AJ4GY, announced that as a result of tonight's exams, we have two new Technicians and one new General.

Ham Hilliard, W4GMM, moved to accept the previous meeting minutes as noted in Sparks; seconded by Jeff Krause. The motion was accepted by acclamation.

Ham Hilliard moved to accept the Treasurer's report as noted in Sparks; seconded by Stacy Krause, KJ4MDA. The motion was accepted by acclamation.

Linda Laseter, KJ4CTX, talked about the YL net and a luncheon to get women more involved in ham radio. She asked the YLs to sign up for both events.

Dennis Foster, KJ4BDU, announced an MARA sponsored get together at the clubhouse pool (the Bartlett site of Field Day in prior years) on Friday, August 12, at 6pm. All hams and their significant others are invited. Note: this is an adults only event. Please RSVP a head count to [Tony Brignole](#), WA4KHN.

Joe Lowenthal, WA4OVO, mentioned a Tech training class in progress; there are 12 in attendance with possibly more this week. The class is on Thursday at the Germantown Police Department's training room on Farmington Blvd. There is a possibility of a General class in November and an Extra class in January, 2017.

Joe also said 35 people have signed up for the bus trip to the Huntsville hamfest on August 20. The fee is \$75 per person.

Bill Stevens, WC9S, thanked everyone who participated in Field Day. Germantown officials were very pleased with our being there. Field Day included many exhibits from different emergency departments, including the TN Task Force, Red Cross, and CERT Teams from both Collierville and Germantown.

The club thanked Bill Stevens for all his work organizing Field Day and for making it a wonderful, successful event.

Pat Lane, W4OQG, thanked those who participated in the Tour de Peddler event and said he received an official observer notice that the 20 meter Field Day station at 10:04pm local had called CQ on 14.348 MHz; use of this frequency on USB causes part of the SSB signal to be heard outside of this ham band. Pat urged caution when using frequencies close to the edge of this and all other ham bands.

It was suggested that an email be sent to old members when they pay their dues and to new members. The email will contain an ID card they can print. Following a discussion, Randy Tyler, KC4CRT, moved to put this suggestion into action; Joe Lowenthal seconded. The motion was accepted by acclamation.

Jack Parnell, K4BSI, first licensed in 1953, presented a very entertaining and interesting program. Jack introduced us to long-time friend Johnnie Spotts, W6HTY, the first president of the Delta Club, by way of the recording of a phone conversation between Jack and Johnnie.

As noted in the [March, 2016, Sparks](#), Johnnie was Frank Sinatra's pilot for many years and Johnnie and Frank had an understanding: "He would not fly and I would not sing." Jack continued his presentation with slides and a promotional video for a 2004 hamfest.

The name of Bob Van Keuren, KM4SEB, was picked for the evening's prize, following which Ham Hilliard moved to adjourn; second not recorded.

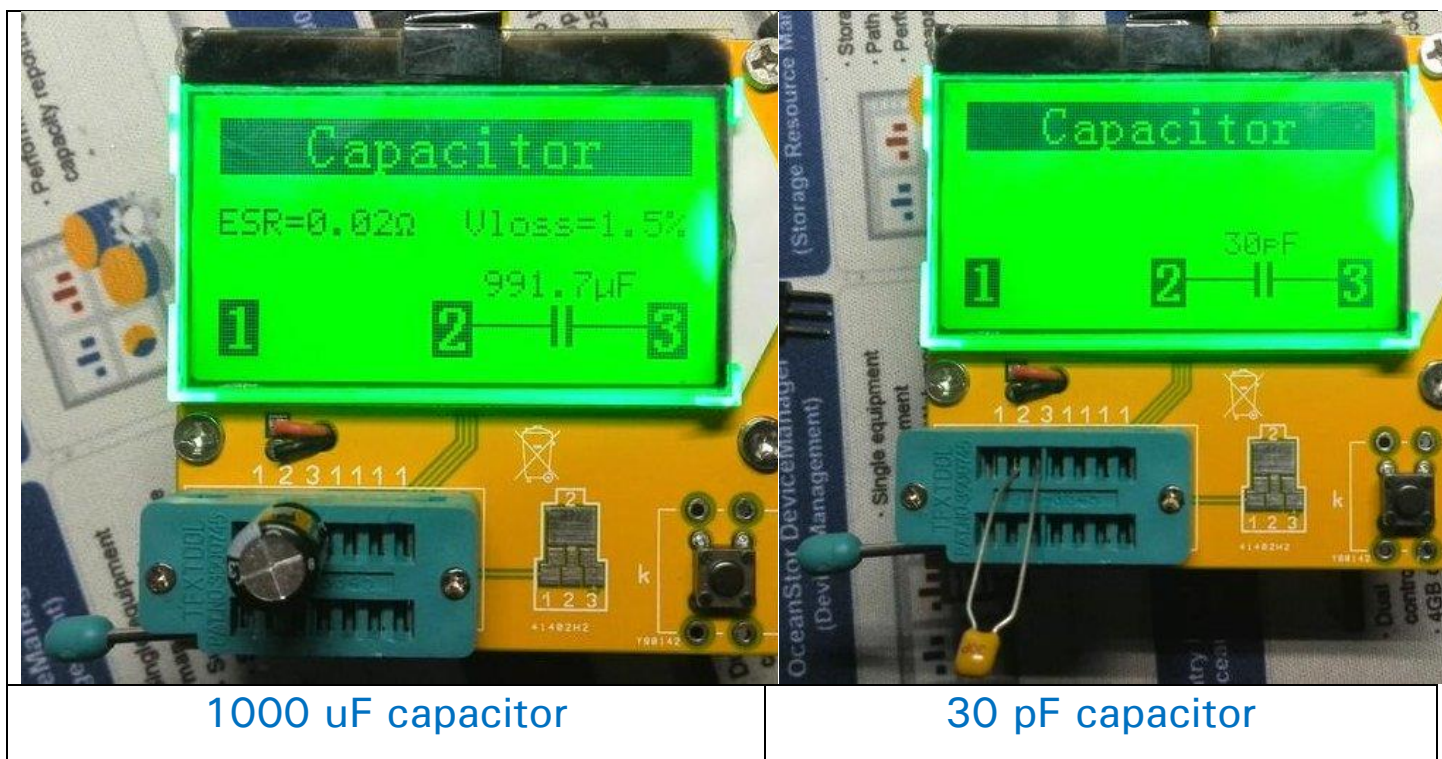
Amateur Hardware Update

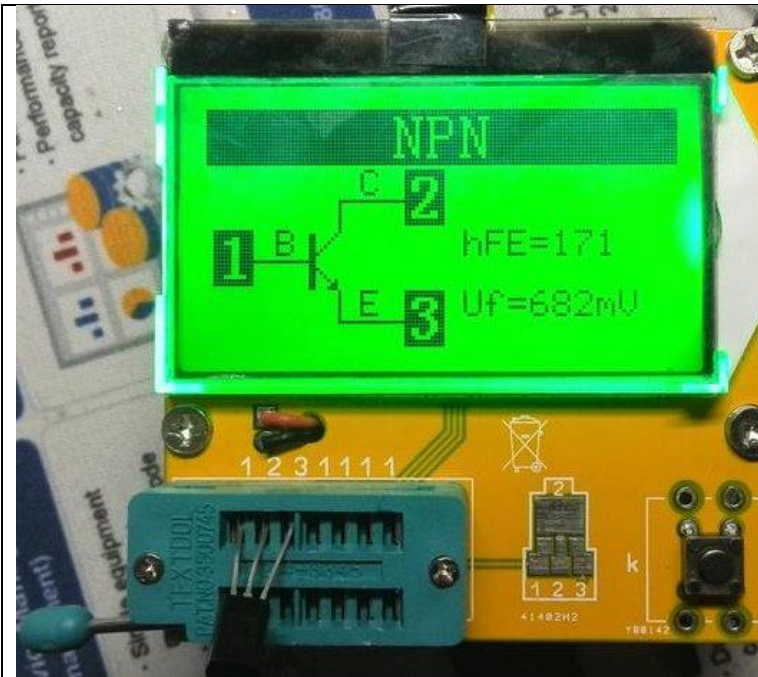
Article and image submitted by James Butler, KB4LJV

Many times we want to build our own equipment or troubleshoot factory radios. One new product to come from China is a compact component tester. It runs on a 9-volt battery. It has an LCD display to show component information. Plug in a resistor, capacitor, inductor, etc., and press a button and the unit will test and display component values. You can buy the tester as a kit or fully assembled for \$10 to \$20. The tester works great and is a pleasure to use. Do an Ebay search for "component tester" to order your own unit. Thanks to Dan Lasley, NE7JN, for finding these testers for sale

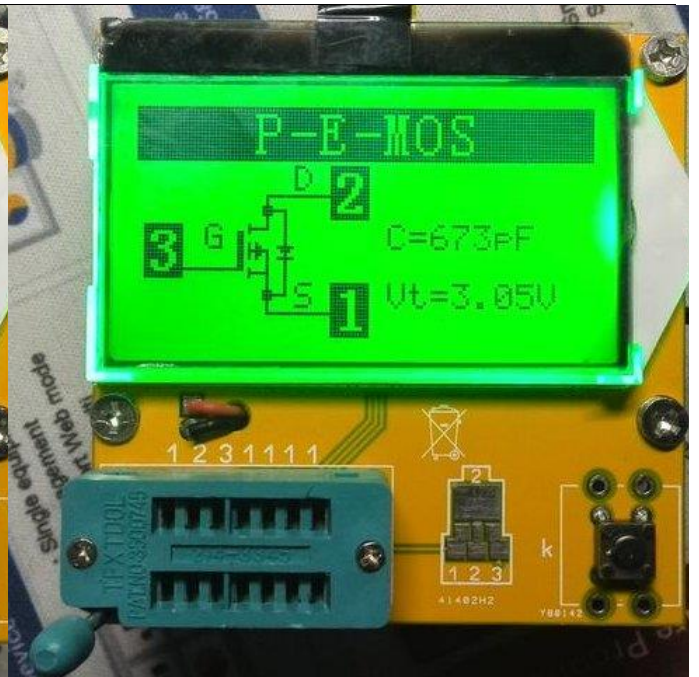
Plug a part to be tested into pins 1, 2, and 3 on the zero insertion force socket and press the button for a reading. Three-leaded parts go into any of the three pins. The unit figures it out and displays proper graphics. Two-lead devices use any two of the three pins. It automatically figures those out also.

Here are some sample parts being tested:





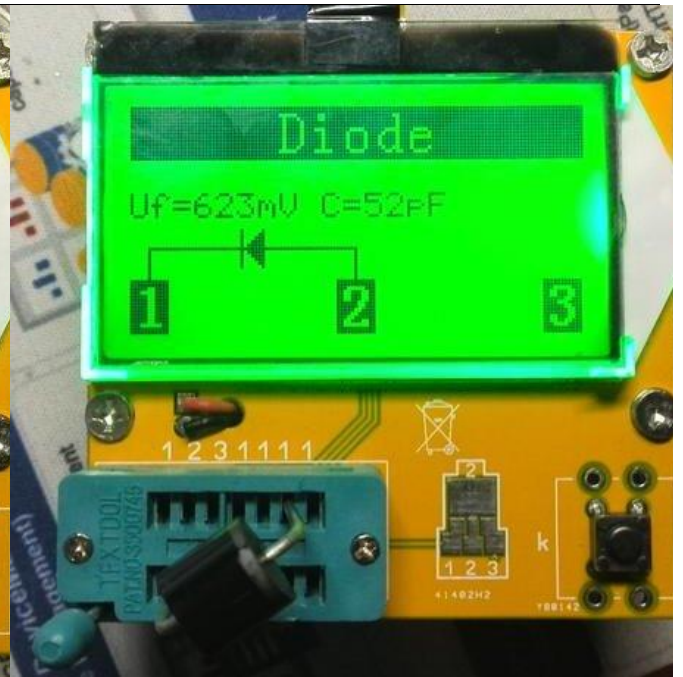
2N2222 bipolar transistor



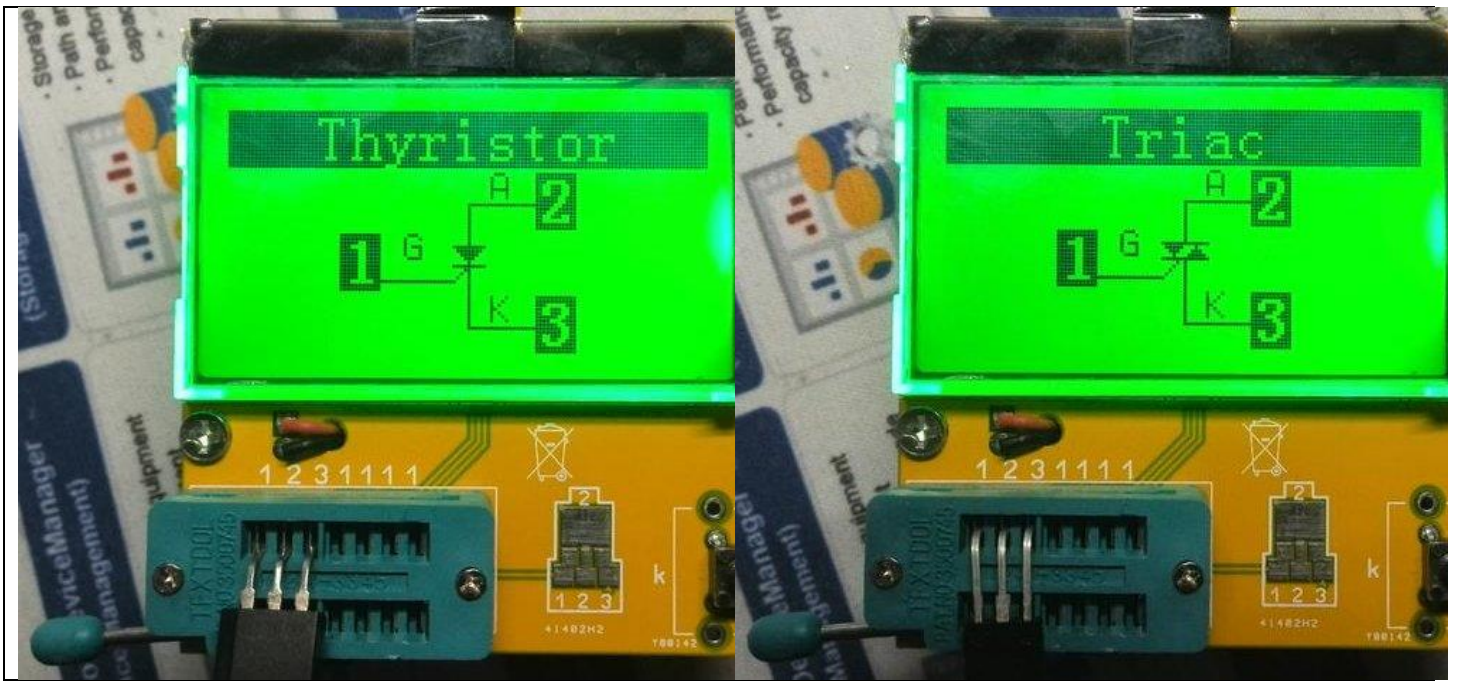
MOSFET



10K ohm resistor



diode



SCR

triac

Amateur Packet Update

Submitted by James Butler, KB4LJV

Many companies use the internet to sell Amateur radio products. One company is Advanced Specialties Electronics. They have a nice online catalog with Amateur equipment for sale. They have Uniden and Bearcat scanners. They also have Yaesu Amateur equipment for sale. ASE has accessories and power supplies also. They have a large selection of antennas and mounts. If you get a chance you can check out their catalog. Their web address is <http://www.advancedspecialties.net/>

Ham Questions 101

Submitted by Linda Laseter, KJ4CTX

July was another successful HQ 101 month! We covered "Resources." Several questions were asked and answered, such as where to buy locally those electronic parts you desperately need! Needless to say Bluff City Electronics has a wide variety of electronic parts available. Radio Shack has a shop in Millington and one at East Gate and of course JMR, run by our own Steve, W5VAA, Rosalinda, WN2V, and Ham, W4GMM, can also assist you with some of your electronic needs.

In addition to those looking for specific answers to questions, a few very knowledgeable visitors stopped by. These visitors joined right in and answered questions along with our regular Elmers.

Interest was also expressed in J pole antennas and a J pole antenna class. We are working with Ham to see if there is enough interest for him to put on a you-build-it antenna class. If you would be interested in making a J pole transmission line antenna and joining the J pole class, please send [me](#) an email.

Each month we offer a new topic for discussion and we are available to answer your questions. **Continuing with our Resource theme this month our topic for discussion will be "URLs (uniform resource locators)".** For those who are not familiar with URLs they point to one particular page at a website. Dan, NE7JN, has produced a list of very informative sites covering everything from setting up your own qrz.com page to how to obtain an official FCC license copy and several other very interesting sites for the ham enthusiast.

We hope you will join us. This is a small, informal group setting. We are here to help you, so bring those questions and join in.

We meet upstairs in the church annex building at 6:00 p.m. just prior to the regularly scheduled monthly Delta Club meeting. If you are not able to attend the forum, then please send us your questions via email.

For information, contact [Linda Laseter](#), KJ4CTX, or [Dan Lasley](#), NE7JN.

Delta Ham License Training 2016
Submitted by Joe Lowenthal, WA4OVO

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.

Licenses Earned in 2016 from Delta Classes

7 Technician
5 General
5 Extra

If you are interested in attending a training class, send an email to Joe Lowenthal at wa4ovo@gmail.com with the desired class name in the subject line, along with your name, email address and (cell) phone number in the text.

The new [Technician question pool](#) is effective July 1, 2014, through June 30, 2018. You will need the [ARRL Ham Radio License Manual 3rd Edition](#) to study for the Technician exam.

The new [General question pool](#) is effective July 1, 2015, through June 30, 2019. You will need the [ARRL General Class License Manual 8th Edition](#) to study for the General exam.

The new [Extra question pool](#) is effective July 1, 2016, through June 30, 2020. You will need the [ARRL Extra Class License Manual 11th Edition](#) to study for the Extra exam.

Classes in Progress

Technician Class 4-16: July 7 -- August 18, 2016.

This class is being held on six Thursday nights from July 7th until August 18th from 6:15 pm to 9:30pm at the Germantown Police training room. There will be no class on July 21st. Twelve students attended the first night of class; sixteen students are currently registered. There are two teenagers in the class.



Tech Class 4-16 on the third night of class. Photo by Joe Lowenthal, WA4OVO.

The instructors are Bob Vawter, KW4RJ, Len Grice, KM4MRY, Pat Lane, W4OQG, and Joe Lowenthal, WA4OVO. Class Elmers are Adrian Moseley, N4EMO, and Henry Leggett, WD4Q.

The equipment demonstrators on the last night of class will be Joe on FM repeaters, Pat on HF and Winlink, Michael Knight, KK4IOH, on digital for Echolink, D-STAR, Fusion and Allstar, and Rick Tillman, WA4NVM, and Rick Pellicciotti, KJ4NWQ, on APRS.

We offer our thanks to EMHC ambulance company and to the Germantown Police for generously providing their training rooms for the many ham radio classes given there.

Planned Classes

The next Technician license class will not start until probably November.

Huntsville Hamfest Bus Trip -- August 20, 2016

Submitted by Joe Lowenthal, WA4OVO

DARC is sponsoring a 50-passenger bus trip to go to the Huntsville Hamfest on August 20, 2016. The fare is \$75. There are no refunds if you cannot go. However, you can sell your reservation to someone else. The fare includes the \$8 hamfest entry ticket. There will be two biscuit sandwiches, water, sodas, chips, and fruit on the bus going to Huntsville and whatever is left after the hamfest for the trip back.

Cash or checks will be accepted for payment. Make checks payable to Delta Amateur Radio Club. You can pay at the August meeting or send your check to Joe Lowenthal WA4OVO, 6675 Ashbridge Cove, Memphis, TN 38120. Please include your name, call sign, cell phone number, and email address.

Reservations will be on a first come first paid basis.

The bus will leave Ellendale Church of Christ, 7365 Highway 70, Bartlett, TN, at 6:00am on August 20th. A second pickup point will be at Germantown Baptist Church, 9450 Poplar Avenue at Johnson Road, Germantown, TN, at approximately 6:20am. The bus will leave Huntsville immediately after the 4pm door prize drawing and return to Germantown Baptist Church at approximately 7:30pm and to Ellendale Church of Christ at approximately 8:15pm.

Ellendale Church of Christ has asked us to park in the larger parking lot on the west side of the building to leave the east side open for church activity parking. The pickup point at Germantown Baptist Church will be behind the church on the northeast side (toward Collierville).

Ham Breakfasts

Submitted by Joe Lowenthal, WA4OVO

For more than 10 years hams have been meeting for breakfast on the second and fourth Fridays at 8:00am. Holidays and some Saturdays were added for those who have to work. We meet at Denver's restaurant at 7970 US 64 (Stage Road), west of Germantown Road and across from Target in Bartlett. Come join in on the conversations. No telling what we will discuss besides ham radio. You can find the breakfast dates on a very nicely done calendar by Ray Miller, AA4UK, at www.hamcalendar.com. If you want an email notice of the Denver's events, email [Rick Tillman, WA4NVM](mailto:Rick.Tillman@WA4NVM). Rick, thanks for your continued notices over the years.

Last Month's Program

Submitted by Dan Lasley, NE7JN, with contributions by Jack Parnell, K4BSI

Jack Parnell, K4BSI, was Delta Amateur Radio Club President in 1964. He joined us for last month's program, which was a triple-decker!



Jack is shown setting up to play an audio interview of a conversation with his good friend and Delta's first President, Johnnie Spotts, W6HTY, who recently reestablished his Delta membership.

The very interesting discussion ended with Johnnie saying, "73 -- and there's no 's'!"

Photo by Dan Lasley, NE7JN



Jack next showed a number of slides, some from early Delta Club outings and some from his own ham activities.

Here's a photo of Jack jumping off a tower and onto a roof immediately below!

Photo courtesy of Jack Parnell, K4BSI



Jack ended his program by showing a promotional video he created for the February, 2004, Dixiefest ham fest. The reader should note that Jack, at the tender young age of 78, is continuing to create commercials and other promotional materials in his home studio.

Photo courtesy of Jack Parnell, K4BSI

Thanks, Jack, for a very interesting evening!

Field Day 2016, Part Two

Submitted by Dan Lasley, NE7JN, contribution by Danny Banks, KJ4FXZ

In last month's coverage of Field Day, I missed a couple of items, so with apologies to the folks below, here's what I missed.

At Field Day I heard an interesting story about Delta Club member Danny Banks, KJ4FXZ, making a "house call." Here's the story in Danny's words:

"I listen to the Delta Club net every night. One night I heard a station check in with the suffix "SEC" but didn't hear net control acknowledge the call. After the net my curiosity got the best of me. I looked up what I thought the call would be and noticed he lived less than a mile from me. So I drove to his house that night and rang the doorbell. The gentleman came to the door. I introduced myself and told him I had heard him on the radio. David got really excited and said he had been told that hams would help him in any way, but didn't realize they made house calls. We set his radio with the proper offset and the rest is history."

I mention this story not to embarrass David Jackson, KM4SEC (he was gracious to agree to its being in Sparks), but rather to point out that we in the ham community help out our brothers and sisters. It's who we are and how we operate.

Can I see a show of hands of those of us who have never made a mistake on the air? (Not surprisingly, I don't see any raised hands!)

Kudos to Danny for his house call and thanks to David for a teachable moment.

The second item I missed in last month's Field Day coverage was to mention that Jim Thannum, KK4CSX, is missing a pair of sunglasses. Jim said someone found the glasses before the end of the first day, but they haven't made it back to him yet. If you found a pair of sunglasses, please get them back to Jim.

Field Day 2016, Part Three

Submitted by Dan Lasley, NE7JN, contribution by Bill Stevens, WC9S

At a recent ham breakfast, Bill Fullerton, AF5HA, said the ham club newsletter at his former QTH in Louisiana published statistics on their Field Day activities and asked if we could do the same. Bill, thank you, sir, for your excellent suggestion! Here are the 2016 Field Day statistics, courtesy of Bill Stevens, WC9S.

- Participants: 170
- Club/Group Name: Delta/MARA/Nashoba/Tri-State
- Power Source(s): Battery; Power Multiplier: 2X
- Bonus Points

Category	Points
100% Emergency power	500
Media Publicity	100
Public Location	100
Public Information Table	100
Satellite QSO completed	100
Site Visit by invited elected official	100
Site Visit by invited served agency official	100
GOTA Bonus	120
Submitted via the Web	50
Educational activity	100
Social media	100
Safety officer	100
Total Bonus Points	1570

- QSO Score Summary

	CW	Digital	Phone	Total
Total QSOs	312	43	546	901
Multiplier	2	2	1	---
Total Points	624	86	546	1256

$$\text{Claimed Score} = 1256 \times 2 = 2512$$

- Band/Mode QSO Breakdown

	CW	CW	Digital	Digital	Phone	Phone
Band	QSOs	Power (W)	QSOs	Power (W)	QSOs	Power (W)
160m						
80m	39	100			169	100
40m	141	100	25	30	193	100
20m	42	100	12	30	51	100
15m			6	30	28	100
10m						
6m					5	100
2m					1	50
1.25m						
Satellite					17	10
GOTA					82	100
Total	312	---	43	---	546	---

- GOTA Bonus

Name and Call Sign	QSOs	Bonus Points
Linda Laseter, KJ4CTX	7	0
Amanda Nash, KM4MSC	6	0
Dan Ralph, W4DQG	22	40
Kurt Warhurst, KM4MRT	47	80

Ham Social Pool Cookout

Submitted by Dan Lasley, NE7JN

Dennis Foster, KJ4BDU, Delta Club member and President of the [Mid-South Amateur Radio Association](#), asked me to let everyone know that MARA is sponsoring a ham social pool cookout on Friday, August 12. The event goes from 6pm to 10pm.

Dennis says all hams and significant others are invited. You **do not** have to be a member of MARA or any other group or club.

The event will offer hot dogs, hamburgers, chips, cokes, tea, wine, and beer. Please note: since adult beverages will be available, this is an **adults only** event.

Dennis asks everyone to RSVP with the number of attendees to [Tony Brignole](#), WA4KHN.

The event will be held at 2417 Lacosta Drive (this has been the location for Field Day for a number of years prior to this year). You can park behind the clubhouse and walk to the pool. Parking is also available on Lacosta, Elmore, or Fairway Oaks.

This promises to be a fun event, so RSVP to Tony and join us on August 12!

A Call for Women Writers!

Submitted by Dan Lasley, NE7JN

In 2017 I want to publish an article on women and radio in each month's issue of the Delta Amateur Radio Club's Sparks newsletter. I would prefer that the author of each article be a YL, but I'm willing to publish articles written by women who are not hams. The women subjects don't have to be hams, but I want a tie-in between the women subjects and some aspect of the art and science of radio (but not necessarily ham radio).

I've received three completed articles and I have a commitment for a fourth article.

I'm looking for women who can write about some aspect of the following ideas:

- Women who participated in cryptographic activities in World War II, including code breakers and translators who worked at Bletchley Park, Arlington Hall, and other crypto locations and women who copied and transcribed the encrypted CW traffic of enemy nations.
- A "Rosie the Riveter" who built radio, radar, etc., equipment during World War II.
- The first female ham. See http://p1k.arrl.org/pubs_archive/65042.
- The first female DXCC recipient.
- Lee Fish, K5FF, wife of Fred Fish, W5FF (first holder of the FFMA); she "was the first YL to work WAS on 2 meters - also has WAS on 220." See w9fz.com/csvhfs/FFFJ.doc.
- Women's contributions to the Delta Amateur Radio Club.
- YLs who have made significant contributions to ARES, RACES, the ARRL; women who work as net controllers, as Public Information Officers, in AuxComm positions, or in related fields.
- YLs as organizers.

- Women who made discoveries in radio or who worked in research and development (e.g., Bell Labs, MIT's Radiation Laboratory, etc.).
- YL contesters.
- Women's ham organizations: ylrl.org, ylsystem.org (on 14.332 MHz and other frequencies); women podcasters, etc.
- Women who are both astronauts and hams. [Three Radio Amateurs on the ISS Head Home on June 18](#) says, "NASA astronaut Kate Rubins, KG5FYJ ... scheduled to launch on July 6 from Baikonur, Kazakhstan." Who will interview Kate and write about her? See also <http://www.nasa.gov/feature/five-things-to-know-about-nasa-astronaut-kate-rubins>.
- Women CW operators. See http://p1k.arrl.org/pubs_archive/58551.
- Women involved with the mysterious [numbers stations](#).
- Marie de Forest, widow of Dr. Lee de Forest (father of the vacuum tube), held the call WB6ZJR. See http://p1k.arrl.org/pubs_archive/65042.
- Limor "Ladyada" Fried, AC2SN, honored as one of 10 "Champions of Change for Making." See <http://www.arrl.org/news/white-house-honors-limor-fried-ac2sn-among-champions-of-change-for-making> and <https://www.adafruit.com/about>.
- Kay Craigie, N3KN. Kay recently retired from the position of ARRL President.

If you have an idea for an article, [contact me](#). I'm open to suggestions, but keep in mind that I need a tie-in between the women subjects and some aspect of the art and science of radio.

If you need resources for an article, consider the Internet, the ARRL archive, a list of women DARC officers, etc.

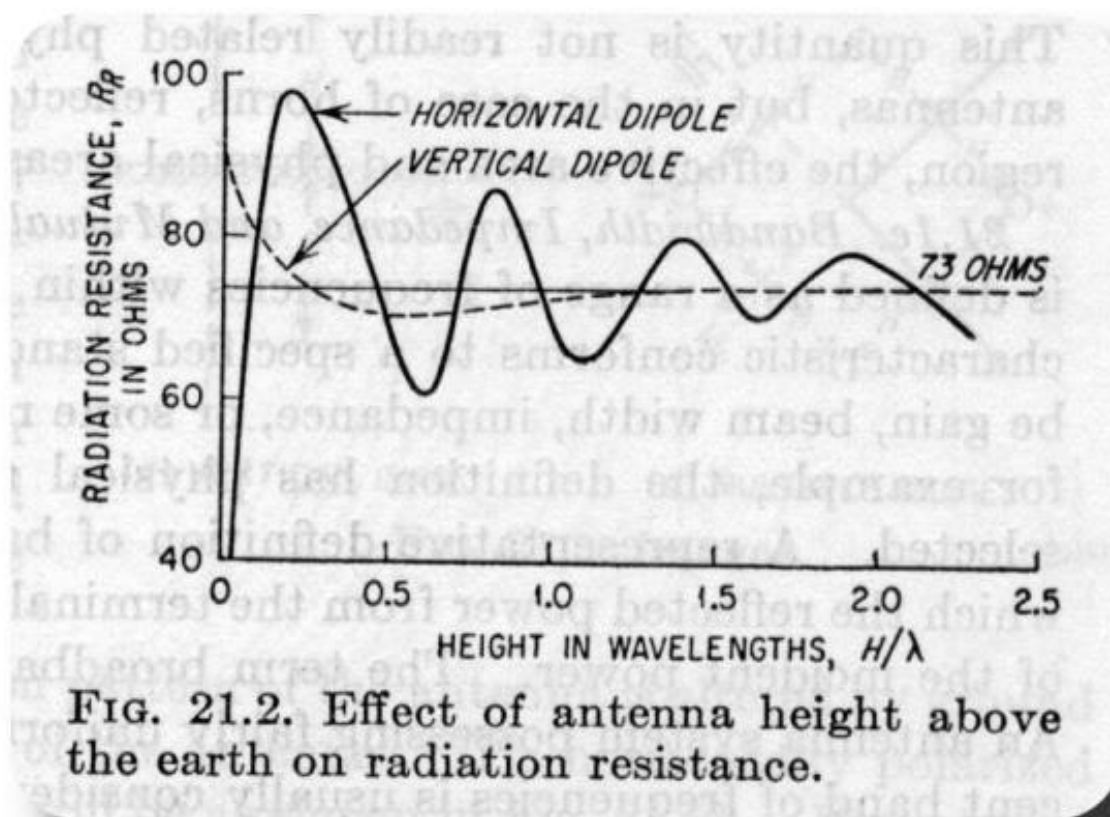
Come on, YLs, step up to the plate and hit one out of the park!

The Lancaster/Marston Corner

Submitted by Dan Lasley, NE7JN

Much has been happening in the ham world this month; this calls for an abbreviated column.

I was recently looking through the index of *Electronic Designer's Handbook* by Landee, Davis, and Albrecht, and found an entry under *Radiation from antennas* in chapter 21. This chapter has an interesting graph:



Quoting from the book: "If an antenna radiates energy vertically downward, the energy will be reflected and a current will be induced in the antenna because of the reflected energy. The manner in which this induced current affects the total antenna current depends upon its magnitude and phase with respect to the original current, which in turn depends upon the attenuation at reflection and the height of the antenna above the earth. The resultant variation in total antenna current for a constant input power as a function of height of the antenna above the earth can be regarded as a change in radiation resistance. This effect is illustrated in Fig. 21.2 for a simple dipole antenna."

I knew horizontal dipoles changed their radiation resistance as the height above ground changed, but I'd never seen a diagram similar to this one. In addition, I had never read how a vertical dipole's radiation resistance changed with height above ground and was surprised to see such a difference between the polarizations.

I did notice that one minor thing in the diagram seems incorrect. Here is the description for the graph's x-axis: HEIGHT IN WAVELENGTHS, H/λ

H/λ gives a dimensionless number, not a height in wavelengths. In this case, as fate would have it, this makes no difference in the diagram!

YL News

Submitted by Linda Laseter, KJ4CTX

YL NET – I am excited about the YL Net and the participation so far! We are off to a good start with eight check-ins and four relays the first week and eight check-ins and one relay the second week in support of the YL net. A couple of YLs were out of town and just not a good time for a few others which we certainly understand given all we YLs have to do. With the current interest and support for the YL net we will definitely be forming our own YL Net!!!! With just a few more details to take care of the YL Net will soon be on the air. I will send an email announcement of the official starting date, time, etc., but start-up will probably be the middle of August or the first Saturday in September.

1. Want to be a YL Net Control Operator one Saturday night a month? That is just twelve times a year. Join the fun and volunteer by emailing [me](#).
2. You still have time to vote for your preference for the YL Net time. Saturday night:
6:30 pm 7:00 pm 8:45 pm or 9:00 pm
3. We also need a name for our YL Net. It is your net, so please send [me](#) your suggestions for the name of the net.

Thanks so much to everyone for your check-ins, emails, votes, and suggestions. It takes all of us to make this a successful net and I know we can do it! Please continue to check-in on the regular 8:00 pm Saturday night information net on 146.820 until the YL Net start-up.

YL LUNCHEON – The votes are in and **O’Charley’s, 1040 N. Germantown Parkway, Cordova,** is the restaurant of choice for August. Please mark your calendars and join us on **Saturday, August 27, 2016, at 11:30 a.m.** for our first YL luncheon.

Please RSVP to [Linda Laseter](#) so that I may reserve space for us.

Thank you so much and I look forward to seeing everyone at the luncheon.

33,
Linda Laseter, KJ4CTX

DX News

Submitted by Dan Lasley, NE7JN

The Nordic Radio Amateur Union's Activity Contest "on 10m takes place on the 1st Thursday of the month." See the [web link](#) for times, frequencies, and modes. Even if you don't hear Norway with the current HF conditions, you may hear someone else; 10M isn't completely dead.

FRANCE, F. TM160NT celebrates the 160th birthday of Nikola Tesla on all weekends until August 21. QSL via F6KRK, eQSL.

JAPAN, JA. The special event station 8J7START will be active between July 16 and August 31, drawing attention to disaster management and the reconstruction after the earthquake. Operators are members of the Sendai Tuning DX Club (JH7YES). QSL via bureau. The Mitsubishi Electric Amateur Radio Club celebrates its 50th anniversary on the air with the call 8J3ME between July 16 and December 24. QSL via bureau.

FEDERAL REPUBLIC OF GERMANY, DA. Members of the European DX Foundation are QRV with special event call sign DL30EUDXF until December 31 to celebrate their 30th anniversary. QSL via DJ6SI.

VANUATU, YJ. Rod, YJ8RN will be QRV as YJ8RN/p from Loh Island, IOTA OC-110, from July 25 to August 20. Activity will be on the HF bands using SSB. QSL via NZ4DX.

TUVALU, T2. Thomas, KCOW is QRV as T2COW until August 18. QSL direct to home call.

Have you ever heard of [Bear Island](#)? Neither had I until I happened across a signal on 17M from Svein Rabbevaag, JW9JKA, in March, 2015. Svein was on temporary duty there and I worked him on 17M and again on 15M before he returned to Norway in May, 2015. He returned my QSL card for both contacts, so if I were to go completely insane and attempt five-band DXCC, I'm part way there for Bear Island!

The same Wikipedia article notes an interesting bit of history regarding Bear Island in World War II: "A small group of German soldiers was abandoned on Bear Island. They were supposed to establish and man a weather station there, but after losing radio contact in May 1945, they were isolated, and surrendered to some Norwegian seal hunters on 4 September. These were some of the last German soldiers to surrender in WW2." Other accounts say these soldiers were not some of, but rather the very last German soldiers to surrender in WWII.

Odds-n-Ends

Submitted by Dan Lasley, NE7JN

The ARRL Contest Update for June 15, 2016, has a [link](#) to a two minute video of a climber on a 1,500 foot TV tower in South Dakota. At 1:28 the climber leans back from the top of the tower for a selfie! Don't watch if heights bother you!

If you need to determine the difference between true north and magnetic north (perhaps for the tower you're erecting), [NOAA](#) has the app you need. If the location isn't near your QTH, you'll also need the [USPS zip code finder](#).

If you've ever wondered where the long path and the short path converge from your QTH, now you can find the answer quickly. Go to [Antipodes Map](#), type your location in the Location box, and press the Enter key.

["When everything else fails, amateur radio will still be there -- and thriving."](#)

From The ARRL Contest Update for July 13, 2016: "Larry, N6NC, suggests a method for using an antenna analyzer to determine the resonant frequency of an antenna trap. As a parallel L-C circuit, he found inductive coupling to be necessary: 'Wind 8 turns of #14 AWG wire at one wire diameter spacing around a 3/8" to 1/2" diameter tube or dowel. Solder the coil to a PL-259 or BNC connector, and cover it with heat shrink tubing. When plugged into an analyzer, and inserted into the trap, the analyzer will act as a grid dip meter using the analyzer's SWR meter.' Dave, KGOZZ, has a [video](#) illustrating how to perform this measurement."

Page 16 of Ohmite's circa 1962 [Manual of Engineering Information](#) shows the allowable current for copper wire as a function of the AWG value. One column gives values for asbestos-infused insulation! Such wiring likely wasn't used outside of high temperature environments, but nevertheless avoid this wiring like the plague!

The December, 2015, issue of QST has an article on "Getting Started in Public Service -- Part 1" by Rick Palm, K1CE. This article has an excellent description of the thought processes a new ham could use to pick out his or her first radio.

Also in the December, 2015, QST, page 101, is a link to "[Heathkit: A Guide to the Amateur Radio Products](#)" by Chuck Penson, WA7ZZE. After you visit this link, you may wish to click on "View Options" at the bottom of the screen then click on "Title (ascending)". At the time of this writing, WA7ZZE had provided 225 notes, including information on the [SB-200](#), [SB-220](#), [HW-101](#), and many other popular kit products from Heathkit.

Tools

Submitted by Dan Lasley, NE7JN

I was wandering around Harbor Freight several months ago and found a shelf full of digital calipers. I looked carefully at each of the models on display but decided not to purchase one. I made my decision not on the price (about \$16), but rather on whether I would use it more than once or twice a year.

Now let's fast forward a month. At this point I was about to start on a ham project (to be featured in an upcoming issue of Sparks) and I definitely had a use for a digital caliper. I bought the six-inch caliper shown below.



The unit comes in a handy storage box, it has instructions that seem to be written in authentic English, and it provides an installed battery plus a spare.

While I was working on the ham project, I used the caliper about ten times! My only complaint is that the mechanical action could be a bit smoother.

One test for a digital caliper is to close the action to zero, press the *Zero* button, open the action near the maximum opening, then close the action. If the digital readout returns to 0.00, it passed. My unit does indeed go back to 0.00 for nearly all tests.

Photo by Dan Lasley, NE7JN

For those tests that don't go back to 0.00, the readout reports a consistent -0.05 inches. The caliper should, of course, consistently report the same result in a series of measurement tests; I have seen no inconsistencies to date.

I recently helped take down a tower owned by a ham who is now an SK (Silent Key). He had a Diamond 2 meter ground plane at the top of his tower. The antenna is in good condition except for a missing radiating element at the top.



In this photo, I used the caliper to determine the outside diameter of the part that connects to the missing radiating element.

As you can see, the outside diameter is 7/16". Someone told me Diamond antennas were manufactured in Japan, so this reading (which the caliper reported as 11.12 mm) surprised me. I had expected to see an integer metric unit (i.e., not a fraction of a millimeter).

Photo by Dan Lasley, NE7JN

If you are interested in purchasing this caliper, the August Harbor Freight catalog has a coupon for \$9.99 at the bottom left corner of page 6. I'll bring my coupon to the August meeting if anyone would like to use it.

SPARKS Newsletter & 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

An alternative email address to offer the Board your suggestions, ask questions, and voice complaints is darc4you@gmail.com.

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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Board members beginning their positions in 2016 are listed in red.

Upcoming Public Service Events

If you are a coordinator for any of these events, please review the listed information. Email corrections to sparks@carbheat.net.

<u>Event Date</u>	<u>Event</u>	<u>Contact Information</u>
Sept. 10-11, 2016	<u>Bike MS: Rock-N-Roll 2016</u> Landers Center in Southaven to Gold Strike Casino in Tunica and back on 2 nd day; Multiple Sclerosis fundraising event	Darrell Sheffield, KK4D darrell.sheffield@memphistn.gov (901) 277-8122
October 1, 2016	<u>Bluff City Blues 100 Ride</u> Start from downtown Memphis	Danny Banks, KJ4FXZ dbanksd@bellsouth.net 901-517-7661
Dec. 3, 2016	<u>St. Jude Marathon</u> 26.2 mile fund raiser in downtown Memphis	Roger Schlichter, WR4R wr4r@bellsouth.net

Tennessee Ham Radio License Plate Submitted by Joe Lowenthal, WA4OVO

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

<http://www.tn.gov/revenue/article/emergency-safety>

The application can be found at this link:

<http://www.tn.gov/assets/entities/revenue/attachments/f1312601Fill-in.pdf>

Other Notes of Possible Interest

Submitted by David Webb, KV4QI

It's Time to Renew Your 2016 Annual Memberships! Download the latest Delta Club [Membership Application Form](#). Thanks for Your Active Support of Delta Amateur Radio Club!

Memphis Area VHF/UHF Nets

Updated Nov, 2015

Name of Net	Freq. MHz	Tone	Local Time	Day of Week
Delta Club Information Net	146.820	- (107.2)	8:00p	Daily
Mid-South Barefooted Bullfrog Net	146.535		7:30p	Daily
Secret Service Net	224.780		8:30p	Mon
Elmer Net	145.210	- (107.2)	9:00p	Mon
The Short Winded Net	146.850	- (107.2)	8:30p	Tue
MedMERS Net	146.820	- (107.2)	12:00p	Wed
CERTPlus Net	443.200	+ (107.2)	8:30p	Wed
ARES Training Net	146.880	- (107.2)	9:00p	Thu
Super Sunday Niner Net	927.6125	- (146.2)	8:30p	Sun

Delta Club sponsored Nets are shown in red.

TENNESSEE HF NETS

As of December, 2015

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 (Center for United States Earthquake Consortium)	3.810		As needed
CUSEC (Center for United States Earthquake Consortium)	7.180		As needed

3980 kHz – TN 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

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See Advertisement Order Form for Instructions.



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Wire	Swivel Ball	RCA	Rotor Cable

LDG Electronics	Accessories	Miscellaneous
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Baluns	SWR/Power Meters	Remote Tuner Boxes
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Mid-South Amateur Radio Supply, (MSARS.COM) is owned and operated by local hams who are dedicated to promoting the hobby and providing help to anyone interested in ham radio. We actively support the local amateur radio clubs and are ARRL members.

MSARS offers free antenna building classes each year and help many new hams with guidance on their first radio, setting up a ham shack, programming a radio and much more. We are proud to be a part of the ham radio community and are *here to help you*.

Please thank our sponsors by using their services and mentioning that you saw their ad in the Delta Club SPARKS Newsletter!

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See Advertisement Order Form for Instructions.

DELTA AMATEUR RADIO CLUB

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DARC Meeting: Second
Tuesday of every month
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We offer our continued thanks to EMHC ambulance company for generously providing their training room for the many ham radio classes given there.

**Delta Amateur Radio Club
Sparks Advertising Order Form**

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1. Mark the box below indicating the ad size you are purchasing and the months you want your ad to appear in Sparks.
2. Submit this completed order form and your camera ready ad, via email at sparks@carbheat.net
Make check payable to Delta Amateur Radio Club (DARC) at monthly Delta Club meeting, or send US Mail to club mailing address at P.O. Box 432768, Memphis, TN 38134-2768. Camera ready means that ad copy is exactly as you wish it to appear, scaled to fit within the dimensions specified below. Ads may be submitted in .gif or .jpg format, or submitted as a hard copy (we will scan and place your ad for you).
3. Your ad order and payment must be received on or before the first Tuesday of the **month before** you want it to appear in Sparks.

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