

SPARKS

P.O. Box 342768 * Memphis, Tennessee 38134-2768 * Volume 22 * November 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>

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W4BS

REPEATER SYSTEM

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

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

224.420^{-107.2}

November Meeting Notice!

Delta's meeting location, Ellendale Church of Christ, will serve as a polling location for the November 8th election and will not be available for our November meeting. On November 8th we will meet at Lord of Life Lutheran Church, 6865 Poplar Pike, Memphis, TN 38119. FCC testing sessions, HQ 101, and the club meeting will take place at the normal times.

Delta's Treasurer, Linda, KJ4CTX, has asked me to let everyone know we will have prizes for November's drawing.

In this month's program we welcome Hugh Wardlaw, WB4SLI. Hugh's family moved to Whitehaven in 1959 when his father, Evins (WB4SLJ), took the position of Chief of the Mechanical and Electrical Engineering section of the Corps of Engineers in Memphis. He attended Whitehaven High School and graduated from the University of Tennessee at Martin with a BS in Accounting. While at Milan Army Ammunition Plant he became a programmer. His 41 year career in Information Technology lead him to Taylor Forge on Fite road where the plant manufactured fittings for the Alaska pipeline and later he was a senior systems engineer with Datapoint and Wang Laboratories over an eleven year span which then took him to FedEx for the next 25 years. He retired in 2013 as Program Management Adviser with FedEx TechConnect. He and Linda, WB4SLJ, have been married for 43 years and have two sons, Evins and Eric, WB4SLK. Evins is in I.T. at St. Jude and Eric is a Data Analyst at FedEx Corporate Services. Hugh is a rabid tinkerer and likes to experiment with remote rig

control and voice over IP, digital modes, and application of the Raspberry Pi computer to free up his laptop.

Hugh will explain what the Raspberry Pi is and how he uses it for entertainment and ham radio operation. He will also show Winmor, Winlink, and remote SSB operation of his rigs.

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 email our VE Liaison, [Jeff Krause, AJ4GY](#), or call at 901-301-6776.

Congratulations to those who passed exams during Delta's October, 2016, test session: new Technicians Michael E. Tyler, KM4YJA, Jonathan W. Cross, KM4YJB, and Sherrye H. Cross, KM4YJC.

November Club Elections

Submitted by Dan Lasley, NE7JN

November is Delta's election month. During October's club meeting, President Ken Laseter, KI4AOH, placed the following names in nomination for election in November:

President	Kenneth Laseter, KI4AOH
Vice President	Steve Frazier, KK4VPT
Secretary	Barri Munday, WB4SWP
Treasurer	Linda Laseter, KJ4CTX
Director of Training	Joe Lowenthal, WA4OVO
Director of Publications	Dan Lasley, NE7JN
Director of Meetings & Special Events ...	Scott Adams, KM4PMU
Director of Programs	Kevin Zent, K4KLZ

(Note: Ken also placed Ric Honey, KK4SZO, in nomination, but Ric later withdrew due to prior commitments.) If you would like to be considered for a position, please let [Ken](#) know as soon as possible. If you wish to place your name in nomination, you must be a member of the Delta Amateur Radio Club in good standing, you must have an unexpired amateur radio license issued by the FCC, and you must have attended at least six of the twelve meetings prior to the November, 2016, meeting.

Here is a brief biography for Kevin; Scott's was not available.

Kevin Zent earned his Technician and General License on the same day in December, 2015, and joined the Delta Club immediately thereafter. He is currently studying for his Extra Class license. Kevin joined the U.S. Navy in November, 1975, as an Aircraft Structural Mechanic. He trained at NAS Millington, then San Diego, CA, before being sent to the USS Midway in Yokosuka, Japan. In 1984 while once again assigned to NAS Millington he changed ratings to Anti-Submarine Warfare Technician and later was stationed in San Diego, CA, at North Island and on the USS Constellation aircraft carrier. While in the Navy, Kevin designed a Sono Buoy test set to enable testing of aircraft antenna arrays on the S3 Viking while the aircraft was on the ground. The test set was later adopted by the Navy as the standard method used for testing aircraft antenna arrays. That work and having the "Best Organized" avionic work center on the west coast resulted in Kevin being awarded the Navy Achievement Medal in 1985. Kevin also had an article published in the Navy's "Mech" magazine. Since departing the Navy in 1989 Kevin has worked in computers and networking in Indiana, California, Wisconsin, and Tennessee. Kevin has a bachelor's degree in Business Management from Concordia University, Mequon, Wisconsin.

President's Corner

Submitted by Ken Laseter, KI4AOH

Hope everyone survived Halloween unscathed again this year. This month, November, looks busy from where I'm sitting. We have our election of officers at our meeting next Tuesday evening. It's not too late to get your name, or a friend's name, on the ballot. Just give me a call at 901-853-0400 or email [me](#). Also, since we will not have our usual raffle, Linda has purchased several nice prizes that will be given away this year. So, bring your lucky whatever and join us for some fun.

Veteran's Day is coming up on the 11th. A day we show our appreciation to those who have served in the military, taken time away from their families, fought in conflicts and wars, and many paying the ultimate sacrifice with their lives, so that we can enjoy the freedoms we have. Join with me on Veteran's Day and take a few moments to remember them and what they have done for us.

Also, don't forget that Thanksgiving is Thursday, the 24th. I wish each and every one of you, and your loved ones, a happy and safe Thanksgiving.

We still need more volunteers for the St. Jude Marathon! Please check your calendar and if at all possible, volunteer for this worthwhile event. Contact [Roger Schlichter](#), WR4R, and let him know you want to help. This is probably the largest event we support each year. So, do it now, send Roger an email and hop aboard, we always have fun working this event. I'll see you there!

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 for 2017, now is the time. 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 October 31, 2016
Submitted by Linda Laseter KJ4CTX Treasurer

CHECKING ACCOUNT

BEGINNING BALANCE		
BEGINNING BALANCE	as of October 1, 2016	\$ 8,483.52

INCOME			
Date	Description	Amount	
10/5/2016	Sale of Icom 756	\$ 750.00	
10/5/2016	Membership dues 2016	\$ 5.00	
10/5/2016	Membership dues 2017	\$ 20.00	
10/14/2016	Membership dues 2016	\$ 5.00	
10/14/2016	Membership dues 2017	\$ 40.00	
10/17/2016	Rye consignment sale	\$ 100.00	
10/27/2016	Membership dues 2017	\$ 20.00	
TOTAL INCOME		\$ 940.00	\$ 940.00

EXPENSES				
Date	Check #	To	Description	Amount
10/5/2016	Cash	Bill Stevens	Tower repair	\$ (100.00)
10/8/2016	1391	Bill Stevens	2 APC network backups	\$ (22.00)
TOTAL EXPENSES				\$ (122.00) \$ (122.00)

ENDING BALANCE as of October 31, 2016 **\$ 9,301.52**

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	10/27/2016	\$ 5,075.44

TOTAL DARC CASH ASSETS **\$ 24,749.81**

This Month's Board Meeting Minutes

November 1, 2016 -- Submitted by Barri Munday, WB4SWP

Attendees: Bill Stevens, WC9S, Steve Frazier, KK4VPT, Dan Lasley, NE7JN, Ken Laseter, KI4AOH, Linda Laseter, KJ4CTX, Barri Munday, WB4SWP, Jim Cissell, KI4I, and Joe Lowenthal, WA4OVO. Michael Knight, KK4IOH, and Len Grice, W4MKS, were absent.

Linda discussed issues regarding a certificate of deposit; a decision will be made later after additional rate checking.

Bill will acquire several Rubbermaid totes for ease of carrying club radios and equipment.

On the next Field Day, Pat Lane, W4OQG, will handle the placement of antennas in order to minimize band conflicts. The board is unanimous in Delta's support of Field Day again in Germantown. The board discussed having a YL station at next year's Field Day.

Bill told us the Nashoba club will operate a special event station on November 19th for the 175th anniversary of the Town of Germantown.

Dan asked Ken to recognize all veterans at the November meeting.

Due to medical issues, Danny Banks, KJ4FXZ, is unable to head up communications for the Swamp Stompers event this year, so Ken volunteered to take his place on January 15, 2017. Keith Barton, KT4EP, had already been in touch with Danny about the event and had volunteered to lead the group, so the day after the BOD meeting, Ken deferred to Keith. Thanks, Keith, for stepping forward.

Joe has signed up six people for a General class but may be expecting several more. The class will be held at the Germantown Police Training Room on November 7-December 15. Joe may hold an Extra class in early January, 2017, if there is sufficient interest. He also wants to hold a Tech class beginning in February, 2017, with the exam given at Freefest. Joe mentioned activities for the Boy Scout Merit Badge on November 12th at Germantown United Methodist Church, 9am - 2pm.

Jim reminded us that Hugh Wardlaw, WB4SLI, will be doing November's program on ham operations with the Raspberry Pi.

Ken discussed recognizing net control operators with a certificate of appreciation.

Minutes of Last Month's Club Meeting

October 11, 2016 – Submitted by Barri Munday, WB4SWP

Delta Club President Ken Laseter, KI4AOH, called the meeting to order at 7:00pm.

Jeff Krause, AJ4GY, began the introductions by name and call sign.

Ham Hilliard, W4GMM, moved to accept the Secretary's report as printed in Sparks, seconded by Len Grice, W4MKS. The motion was accepted by acclamation.

Stacy Krause, KJ4MDA, reported three people passed the Tech exam; see page 2 for details.

Bill Stevens, WC9S, announced that a tower crew found and repaired connector issues on the 146.82 repeater's antenna.

Ham Hilliard moved to accept the Treasurer's report as printed in Sparks, seconded by Richard Martin, K4DXF. The motion was accepted by acclamation.

Volunteers were solicited for the St. Jude Marathon on December 3rd. Roger Schlichter, WR4R, needs 60 ham volunteers. If you can help, please contact [Roger](#).

Elections will be held at the November meeting. Please note the November meeting location has been moved because the usual meeting site is not available. See page 1 for details.

James Butler, KB4LJV, presented a very entertaining program on Heathkit radios and other equipment. See the write-up in this issue.

Thoughts For Our Fellow Hams

Submitted by Dan Lasley, NE7JN

October brought medical problems for three of our ham friends, Danny Banks, KJ4FXZ, Steve Smith, W5VAA, and Bob Gruner, W4UFT. I am proud and respectful in calling each of these three gentlemen a friend and I wish them a quick recovery. Please keep them in your thoughts and prayers.

Remembering Veteran's Day

Submitted by Dan Lasley, NE7JN

Where would we be without our veterans? I can't answer with any certainty, but I can say we wouldn't be living in the United States of America.

Without our veterans, I can't even tell you what language we would be speaking. It might be the King's English. Or German. Or Japanese. Or Russian or Chinese or any of the other major threats to democracy we've faced.

The next time or the next ten times or the next one hundred times you meet a veteran, thank him or her for their service to our country. I never met a vet who didn't appreciate it.

If you ever speak to any of our alleged representatives in the Federal government, ask them why hundreds, perhaps thousands, of our veterans have died while awaiting care at the Veterans Administration (but don't expect a straight answer or the truth).

Elected representatives are a dime a dozen. Our veterans are relatively few in number but are irreplaceable as the defenders of our precious freedoms.

On November 11th please say a heart-felt **thank you** to our veterans. They've earned it.

Amateur Hardware Update

Article and image submitted by James Butler, KB4LJV

Many times we want to try out circuits before we solder up a permanent version. In 1971 a plastic plug in style breadboard was designed to allow temporary circuits to be wired up and tested. This system has worked well and the boards are still available.

You can get different sizes and the boards can be connected together to make even bigger areas for prototyping. I once viewed boards connected together and mounted on a 4 foot by 4 foot piece of plywood. You had room to build anything you wanted and just move to a new area for another circuit to put your circuits on.

They have breadboards in cases with built in power supplies to power your circuits. Heathkit made circuit trainers to teach electronics by plugging in circuits in their course. You can buy just one small board to try out your circuits or buy more to expand. These go for under \$3.00 on eBay. Go to eBay and search for "solderless breadboard."



Amateur Packet Update

Submitted by James Butler, KB4LJV

Many new modes we use involve the use of a computer to display information we send and receive. O-CAM is a freeware program that allows you to make a snapshot picture or a full video recording of anything on your computer screen. The program is small and easy to download and run. A good use would be to make video of a contact using digital mode software. You can make a screen snapshot, record video only, record video and audio, or just record audio only. The program runs in the background and does a great job. Do a Google search for O-CAM to get more information and download the program.

Recent Licensing Statistics

Submitted by Dan Lasley, NE7JN

From the ARRL's Fall, 2016, Radio Waves Newsletter:

NEW and UPGRADED FCC LICENSES ISSUED PER YEAR BY QUARTER

FCC License Activity	2011 3rd quarter	2012 3rd quarter	2013 3rd quarter	2014 3rd quarter	2015 3rd quarter	2016 3rd quarter
Technician	15,974	18,132	19,195	22,781	20,526	22,170
General	7,742	7,994	7,372	8,401	8,572	8,105
Extra	2,827	2,564	2,326	2,913	2,914	3,474
Total Issued	26,543	28,690	28,893	34,095	32,012	33,749

"The following report of FCC licenses issued is supplied by Maria Somma, AB1FM, ARRL VEC Manager. Somma notes that 2016 licenses issued through the third quarter are up 5% from 2015's totals and are approaching 2014's record-setting pace. If this trend continues, we should see 32,000 new Amateurs and 11,000 upgrades by the end of this year!"

Delta's Swap-n-Shop

Submitted by Dan Lasley, NE7JN, photos by Len Grice, W4MKS@arrl.net

Delta held a well-attended swap-n-shop on Saturday, October 8th. We offered free admission, free tables, free donuts, and free coffee, what a deal! Our friends and Delta members Rosalinda Melena, WN2V, Steve Smith, W5VAA, and Ham Hilliard, W4GMM, representing Mid-South Amateur Radio Supply (MSARS), were there to help you with all the necessities of ham radio. Here are some of the attendees:



(L-R) half of Curtis Payne, KM4TOW, Travis Gordon, KJ4PCC, Eric Davis, KK4RXU, Art Barnett, WA4PSS, Charles Phillips, Ken Laseter, KI4AOH, Ervin Ables, KU4K, and Roger Schlichter, WR4R.



(seated, L-R) Tom Dichiara, AC5MR, Sean Hailey, KM4CFN, Keith Barton, KT4EP, (background, L-R) Bill Hancock, WA4MJM, Roger Schlichter, WR4R, Ham and Steve (MSARS), Rick Tillman, WA4NVM, Ken Laseter,

KI4AOH, and Tony Brignole, WA4KHN.



(L-R) Jelly Thompson, N4HLT, Bill Stevens, WC9S, Suzy Balsamo, KM4FHS, and Denise Walls, KM4IRR, who recently passed her Extra exam.

Congratulations, Denise!

Jelly, Suzy, and Denise are members of the Nashoba Amateur Radio Club. Thanks for joining us.



Paul Rosenblatt, KK4DMD, Tony Brignole, WA4KHN, and Ervin Ables, KU4K, examine some of the rigs available at the swap-n-shop.

I didn't find any hardware that was just screaming for me to take it home, but thanks to Pat Lane, W4OQG, I kept a couple of years of old QSTs from ending up in a landfill. Thanks, Pat!

Ham Questions 101

Submitted by Linda Laseter, KJ4CTX

How do you prevent moisture in barrel connectors? That was the question that caused our Elmers some consternation in October's HQ 101. Our Elmers agreed that you can use tape and mastic or weather proof seal but moisture still tends to be a problem. So if anyone has solved this problem, please let us know.

We also discussed how to program a Baofeng radio. Everyone agreed it is not easy to do. Three or four of our attendees have tried several approaches but Amanda, KM4MSC, said she had a workable solution and would send the instructions to those in attendance. We will follow up with the attendees to see if their programming efforts were successful.

Dan, NE7JN, presented "Power Loss in Coaxial Cables" as our topic for October. He will also be covering our November topic which is "**The Maidenhead Locator System.**"

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.

PLEASE NOTE: Delta Club's regular November meeting will be held at the Lord of Life Lutheran Church, 6865 Poplar Pike, Germantown, TN, due to the Ellendale Church being used as a polling site November 8, 2016. We will meet at 6:00 p.m. just prior to the regularly scheduled monthly Delta Club meeting which will also be held at the Lord of Life Lutheran Church.

There will not be a Ham Questions 101 session in December due to Delta Club's annual Christmas dinner meeting.

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

17 Technician

7 General

5 Extra

If you are interested in attending a training class, send an email to [Joe Lowenthal](mailto:Joe.Lowenthal@delta-ham.org) 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.

Scheduled Classes

General Class 5-16: November 7, 2016, to December 12, 2016

The next General class is scheduled for six Monday nights from November 7th to December 12th at Germantown Police Department training room. As of this writing, there are eight students.

Planned Classes

Extra Class 1-17: January 7, 2017, to February 18, 2017

The next Extra Class license class will be held if there are six students. If interested send an email to [Joe](mailto:Joe.Lowenthal@delta-ham.org) with Subject line "Extra Class" and include name, callsign, email address and cellphone number in the text.

The next Technician license class will not start until late February. If interested send an email to [Joe](mailto:Joe.Lowenthal@delta-ham.org) with Subject line "Technician Class" and include name, email address and cellphone number in the text.

Last Month's Program

Submitted by Dan Lasley, NE7JN, contributions by James Butler, KB4LJV



James Butler, KB4LJV, presented a brief history of Heathkit and the kits they offered over the years. His slideshow included pictures of Heathkit's ham radio, test equipment, and educational kits.

James and Delta Club Director of Programs, Jim Cissell, KI4I, brought several of their Heathkits, including

Photo by Dan Lasley, NE7JN.



Heathkit's HW101 (the "Hot Water" 101) is a well-know SSB transceiver still in demand at hamfests and on eBay. The HW101 is tube-based with a solid state VFO. The transmitter final runs on a pair of 6146s. The [specifications](#) indicate 100 watts output on 80 through 15 meters and 80 watts output on 10 meters.



The SB220 linear amplifier is a brute that puts out 2,000 watts PEP on SSB or 1,000 watts on CW using a couple of 3-500Z tubes in the final. You don't want to get across the plate voltage (3,000 volts) even once. Go [here](#) for an SB220 review that discusses mods and the parasitic oscillation problem.



James showed us the HW7, HW8, and (above) HW9 QRP rigs along with the QRP tuner.



In addition to receivers, transmitters, and transceivers, James teased us with lots of other Heathkit goodies, including the HD1410 paddle key (shown here), code practice oscillators, SWR meters, noise bridges, RLC meters, oscilloscopes, audio generators, multimeters, electronic trainers, weather stations, hi-fi gear, and Heathkit's Hero 1 and Hero Junior robots!

Thanks, James, for a fascinating look back in history and thanks for sharing parts of your presentation for Sparks' readers.

YL News

Submitted by Linda Laseter, KJ4CTX

YL NET - Several new (as in new to the net) YLs joined us on the net this month. Welcome Suzy, KM4FHS, Aubrey, KM4FHU, Ann, WB4FAA, and Gale, KI4VDI. Both Ann and Gale have been relayed-in in past months, but this month they made it on the air. Glad you have joined us and hope to hear more from you.

We had some interesting YL stories Saturday night, October 22nd when during our discussion segment the YLs were asked why they became a ham. We want to mention no names to protect the innocent, but one YL wanted to take a trip by herself and becoming a ham was the requirement, one young lady was dating a ham and became interested in ham radio, one YL was volunteering through her job and Joe, WA4OVO, encouraged her to get her license, another was newly wed in 1978 and surprised her husband when she passed her test and code as well, another YL wanted to communicate with a friend in California and also wanted to be able to communicate in case of an emergency, one YL was working at the police department and involved in the Emergency Operations Center, and one became involved because of her participation in CERT and her husband encouraging her to become a ham. Thank you, YLs, I enjoyed each of your stories.

If you have a question or topic you would like ask during the general discussion segment of the YL Net, please send [me](#) an email. We would love to hear from you.

YL LUNCHEON – The YLs enjoyed our lunch at Fat Larry's Bar-B-Q this past Saturday, October 22nd. The food was good and the portions were generous. The sampler platter will serve two people easily or you could take home enough food for one or two more meals.

We had hoped to have our next luncheon at the Butcher Shop, but regrettably they are not open for lunch on Saturday. Therefore our next luncheon will be as follows:

11:30 a.m.
November 12, 2016
Rafferty's
505 N. Germantown Pkwy.
Cordova, TN 38018
901 755-4799

We hope you will join us.



Photo by Angela Freeman

YL Luncheon (L-R): Linda, KJ4CTX, Kate, KJ4KUL, Amanda, KM4MSC, Janice, KM4HZY, Ann, KB4FAA, Gale, KI4VDI, and Betsy, KM4KOM.

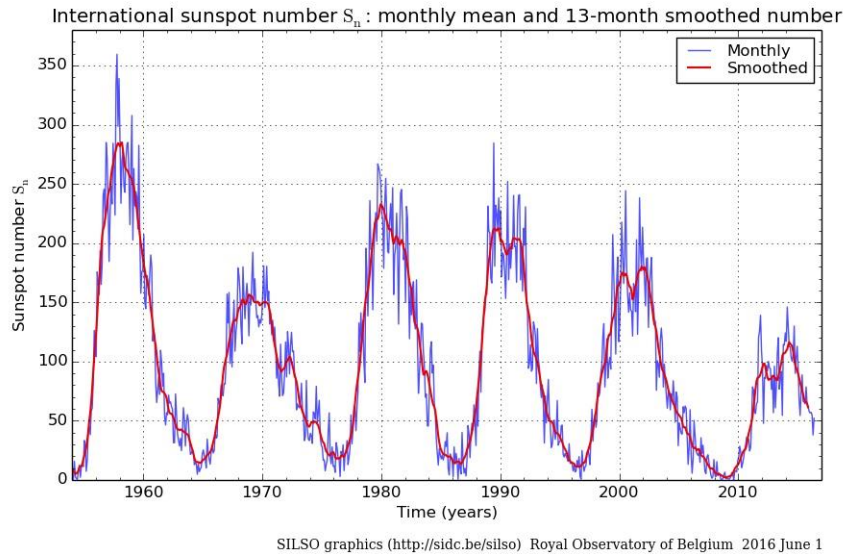
Thank you for checking in and making the 2016 YL Net a success.

33,
[Linda Laseter](#), KJ4CTX

HF Propagation, Part 2

Submitted by Dan Lasley, NE7JN

In last month's [newsletter](#) I mentioned sunspots, solar minima, solar maxima, and other solar effects. Why do hams care about any of this stuff?



Repeating last month's chart of sunspot numbers from 1954 to about mid-2016 may help you connect the dots.

If you were a ham making HF contacts in the summer of 1957 with the sunspot count above 350, you would have been in hog heaven (no pun intended)!

Credit: <http://www.sidc.be/images/wolfmms.png>

An article in QST said under conditions of very high sunspot numbers, a ham using a hand-held 10 meter transceiver worked all states from his back yard using only the built-in antenna! One of my ham friends told me that under conditions of high sunspot numbers he has experienced 10 meters being open all night. Both of these two examples indicate excellent HF propagation!

Let's look at a solar minimum. Spaceweather.com reports that 2009 had 260 days with no sunspots. You can see the dip in the chart above. If you were a ham making HF contacts in 2009, you weren't likely working much DX, especially at 15 meters and higher HF frequencies.

The current sunspot cycle is predicted to bottom out in 2020, so we are probably facing at least four years of poor HF propagation before conditions improve.

As I mentioned last month, a [presentation](#) by Carl Luetzelschwab, K9LA, said "... the lower bands -- 160, 80, and 40 meters -- should be good going forward, and 20 and 17 meters will be the mainstays of daylight HF propagation."

In this very brief mention of sunspots, I didn't tell you why sunspots contribute to good DX. It isn't as if amateurs bounce signals off the surface of the sun to work DX, so how does a high sunspot number contribute to good HF propagation? Tune in next month for the answer. Hint: you studied this before your first amateur radio exam.

Estate Sales

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

Delta recently acquired equipment from the estate of KC5E (shown below and on the next page). This is in addition to equipment still available from the estate of KG4TKY (next page). Bill Stevens, WC9S, asked me to remind everyone that 20% of all sales go to the club and that he will have the listed equipment available at the November Delta Club meeting. If you have questions about any of the equipment, please give Bill a call at 901-603-3448.

Thanks to Richard Martin, K4DXF, Rick Tillman, WA4NVM, and especially to Bill for all their work on the estate equipment.

Griffen KC5E Estate	Price	Comments
Ameritron 811 H Amplifier	\$700.00	Still in production
Ameritron ARB - 704	\$50.00	Still in production
Ameritron ATP - 102 Tuning Pluser	\$65.00	Still in production
Astatic Speaker	\$10.00	
Astron RS-35A Power Supply	\$120.00	Still in production
Astron RS-35M Power Supply	\$140.00	Still in production
Bencher iambic Key	\$135.00	Still in production
Bencher Straight Key	\$130.00	Still in production
Heil FS-3 Foot Switch	\$30.00	Still in production
Heil HC 4 Headset	\$20.00	
Heil Mlc. Boom	\$20.00	
Icom IC - V8 HT with Charger	\$60.00	
Icom IC 7410 with Hand Mic	\$800.00	
Kenwood 281	\$125.00	
Kenwood G 707 with Hand Mic	\$110.00	
Kenwood HS-5 Headset	\$60.00	Still in production
Kenwood Remote VFO-555	?	
Kenwood SP-230 Speaker	\$20.00	
Kenwood SP-31 Speaker	\$40.00	
Key Straight	\$20.00	
Key Straight	\$20.00	
LDG YT - 1200 Auto Tuner	\$210.00	Still in production
MFJ 1118 DC Outlet	\$70.00	Still in production

MFJ 113 Clock	\$15.00	Still in production
MFJ 1700B Antenna Switch 6 in and 6 out	\$30.00	
MFJ 862 Watt Meter	\$55.00	Still in production
MFJ 862 Watt Meter	\$55.00	Still in production
MFJ 949D Versa Tuner II 300 watt	\$50.00	
MFJ 989C Versa Tuner V 3kw	\$160.00	
MFJ 989D Versa Tuner V	\$330.00	Still in production
Misc. Wires		
Radio Shack Speakers	\$10.00	
Radio Shack Speakers	\$10.00	
SEC 1235M Power Supply 30 amp	\$100.00	Still in production
Vectronics DL - 650M Dummy Loads 1.5 K	\$65.00	Still in production
Yaesu DX - 1200	\$1,000.00	Still in production
Yaesu FT - 1000MP with hand mic	\$800.00	
Yaesu FT - 2900 75 watt	\$104.00	Still in production
Yaesu FT 450 with Hand Mic all mode	\$600.00	
Yaesu FT 920 with hand mic	\$640.00	
Yaesu MD - 100 Table Mic	\$110.00	Still in production
Rye KG4TKY Estate REDUCED PRICES !		
Tentec Orion II HF transceiver #566	\$1,600.00	
Tentec Antenna Tuner #238b	\$280.00	
Tentec External Speaker #307	\$60.00	
Tentec Power Supply #963	\$65.00	
TenTec Encoder/Keypad #302	\$60.00	
TenTec Desk Mic. By Heil	\$80.00	
Tentec receiver kit #1254 (parts are loose)	\$80.00	
Tentec 2 meter FM transceiver kit (parts are loose)	\$80.00	

Fall Auxcom Exercise

Submitted by Dan Lasley, NE7JN

The Fall Auxcom Exercise originally scheduled for Saturday, October 22, has been postponed and will be rescheduled at a later date.

Morse Code is Alive and Well

Submitted by Dan Lasley, NE7JN, contribution by Rick Tillman, WA4NVM

Rick Tillman, WA4NVM, sent a couple of interesting URLs on Morse Code. In the first [article](#), researchers at the Georgia Institute of Technology applied "... Google Glass to teach people Morse code within four hours using a series of vibrations felt near the ear."

Amazingly, after four hours subjects were able to key a sentence containing each letter of the alphabet with an accuracy of 94%. The subjects' ability in writing code for each letter was higher, with an accuracy of 98%.

The article concludes with a quote from one of the professors, Thad Starner: "This research also shows that other common devices with an actuator could be used for passive [haptic learning](#)."

In the second [article](#), Adam Cohen, special agent in charge of the Buffalo FBI office, talks about various ways modern modes of telecommunications could fail catastrophically. Cohen says, "I believe at the end of the day the old-fashioned type of communication for at least some period of time may be the only way to communicate."

Tony Buscaglia, K2NV, says, "... Morse code could be ideal during a dire situation. We would be able to set up a fairly low power station using battery power. You don't require a computer hookup. All those things seem to get complicated, especially when you're in a hurry to get it up and running."

Mark Adams, a safety engineer at the University at Buffalo, adds, "With the amount of [power] you use to light up your bathroom, or your hallway at night, we're communicating all over the world typically using Morse code. In a time of crisis, obviously Morse Code is going to work because hams that are trained in it are going to be very proficient."

Thanks to Rick, WA4NVM, for a couple of interesting articles.

Odds-n-Ends

Submitted by Dan Lasley, NE7JN

From The ARRL Contest Update for October 5, 2016: "Want to check on the air activity for any call sign? DJ1YFK has compiled all the CW and RTTY spots for everyone ever spotted by the Reverse Beacon Network (RBN), going all the way back to January, 2015. The activity is displayed in a calendar-style "heat map" that displays, day-by-day, when each station called CQ, and other statistics such as total hours on each band, and activity by time of day. Just go to <https://foc.dj1yfk.de/activity/w1aw> for example. You can substitute any call sign for "w1aw" at the end of the URL, or type any call sign in the search box at the bottom of the page. (Information from Bob, N6TV.)"

From the same source: "If you need some [inexpensive Yagis](#), WA5JVB's designs for cheap antennas may help you out. (Steve, VE3SMA, via VHFContesting reflector)."

The [ARRL](#) tells us "A New York City man faces a fine of \$23,000 for operating on Amateur Radio frequencies without a license and for transmitting a false officer-in-distress call on a New York City Police Department (NYPD) radio channel." This person "could have faced a penalty of more than \$140,000, under the provisions of the Communications Act. The FCC fine may not be at the top of [his] list of worries, however" as he "now is serving prison time resulting from the false police call and his guilty pleas to other charges."

From the ARRL Contest Update for October 19, 2016: "Any time Heathkit gets mentioned, ears of hams of a certain age perk up. Electronic Design argues that manufacturer and [aftermarket development kits](#) have taken the place that Heathkit once occupied as the supplier of educational electronics platforms. (Ward, NOAX)"

From the same source: "Molybdenum disulfide was used recently by researchers to create a [transistor](#) with a gate size of one nanometer. The gate was formed out of a single carbon nanotube, and another unconventional material, zirconium dioxide, was used for the channel material. The size reduction reflects a 5 to 1 advantage over what is presumed to be a five nanometer lower limit for silicon transistors, but to be commercially successful, manufacturing process optimization will have to occur, according to an [article](#) in EE Times." If you've worked in industrial plants, you are probably familiar with molybdenum disulfide. It is a lubricant that drips onto your clothes and will never wash out!

Google helped me find [Ham Radio Maidenhead Grid Square Locator Map](#), a nicely done mapping site.

DX News

Submitted by Dan Lasley, NE7JN

Most of this information is courtesy of the ARRL's DX news emails.

SABLE ISLAND, CY0. Aaron, VA1AXC is QRV as CY0/VA1AXC until early November, mostly on 20 meters during his spare time using SSB only. QSL via JE1LET.

MARQUESAS ISLANDS, FO. Patrick, FO5QS will be moving to Hiva Oa Island, IOTA OC-027, and plans to be there for many years. Activity will be on all HF bands using CW, SSB and various digital modes. QSL to home call.

NORFOLK ISLAND, VK9N. Peter, GOPWH has moved to Anson Bay, IOTA OC-005, and is QRV as VK9PH. Activity is currently on 20, 15 and 10 meters using SSB. QSL via operator's instructions.

HUNGARY, HA. Special event station HG30EUDXF is QRV until the end of 2016 to celebrate the 30th anniversary of the European DX Foundation. QSL via HAOHW.

PANAMA, HP. Robby, VY2SS is QRV with his new call sign HP3SS. He is active on 80 to 6 meters using CW and RTTY. He will also be participating in various contests. QSL via AC2OV. *[Feedback: I worked Robby during October's 2016 [CQ World-Wide DX Contest](#) for an All Time New One! Thanks, Robby!]*

CENTRAL KIRIBATI, T31. Members of the Rebel DX Group are QRV as T31T from Kanton Island, IOTA OC-043, and are active until about mid-November. Activity is on 160 to 10 meters using CW, SSB and some digital modes. QSL via 3Z9DX.

GREECE, SV. Operators Yannis, SV8FCU, Isidoros, SV8GXQ, Christos, SV8GXT and Fotis, SV8GXW will be QRV as SX8HOMER from October 15 to December 15. Activity will be on 40 to 10 meters using SSB and PSK. QSL direct to SV8GXQ.

BURKINA FASO, XT. Harald, DF2WO is QRV as XT2AW until November 20. Activity is on the HF bands using CW and various digital modes. In addition, Hermann, DL2NUD is QRV as XT2AFT and is active on 2 meters, 70cm, 23cm and 13cm using EME. QSL via operators' instructions.

ARRL November Sweepstakes (Phone), November 19-21. For details, see <http://www.arrl.org/sweepstakes>, especially section 4, Contest Exchange. See also <http://www.arrl.org/files/file/Contest%20-%20General/ARRL-Sections-List-2012.pdf> for a list of abbreviations used in ARRL Contests.

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 *italics*.

Upcoming Public Service Events

If you are a coordinator for any of these events, please review the listed information. Please [email](#) corrections or additions.

2016 Date	Event	Contact Information
June 4	Diabetes Tour de Cure	Pat Lane, W4OQG
Sep. 10-11	2016 Bike MS: FedEx Rock-N-Roll	Darrell Sheffield, KK4D
Oct. 1	Bluff City Blues 100 Ride	Danny Banks, KJ4FXZ
Dec. 3	St. Jude Marathon	Roger Schlichter, WR4R
2017 Date	Event	Contact Information
Jan. 15	Swamp Stompers 50K/25K Run	Keith Barton, KT4EP
May 6	March of Dimes March for Babies	Linda Laseter, KJ4CTX

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 2017 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 September, 2016

Name of Net	Freq. MHz	Tone	Local Time	Day of Week
Delta Club Information Net	146.820	- (107.2)	8:00p	Daily
YL Net	146.820	- (107.2)	8:45p	Sat
Mid-South Barefooted Bullfrog Net	146.535	[simplex]	7:30p	Daily
Secret Service Net	224.780	[no tone]	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 Niners 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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HF	Window Mount	BNC	450 & 300 Ohm
Wire	Swivel Ball	RCA	Rotor Cable

LDG Electronics	Accessories	Miscellaneous
Automatic Antenna Tuners	RF Chokes	Gordon West Books
Remote Tuners	Power Poles	Coax Seal
Brand Specific Antenna Tuners	Antenna Switches	Fuse Holders
Baluns	SWR/Power Meters	Remote Tuner Boxes
Ununs	Mic Holders	Dog Bone Insulators

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Rosalinda
WN2V

Ham
W4GMM

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

P.O. Box 342768
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DARC Meeting: Second
Tuesday of every month
at Ellendale Church of Christ
7365 Hwy 70, Bartlett TN



W4BS REPEATER SYSTEM
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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
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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).
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