

SPARKS

P.O. Box 342768 * Memphis, Tennessee 38134-2768 * Volume 22 * December 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 December 13, 2016, at Ellendale Church of Christ, 7365 Highway 70 Memphis, TN (1 ½ miles north of Highway 64 (Stage Road)).

Note: We will not have FCC testing or HQ 101 or a program at the December club meeting. Members are asked to bring a covered dish or dessert to share with ham friends. Delta will supply two hams (the kind you eat), coffee, soft drinks, plates, and utensils.

Congratulations to those who passed exams during Delta's November, 2016, test session: new Technician Blake Call, KM4YYA, new Generals Clifton Johnson, W1CLJ, and Ric Honey, KK4SZO, and new Extra Barry McDonald, KM4YFO.

November Club Elections

Submitted by Dan Lasley, NE7JN

In last month's meeting, the following members were elected to positions for 2017:

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

Please consider running for one of these positions for the calendar year 2018. There will be at least one opening (Director of Publications) and perhaps more.

President's Corner

Submitted by Ken Laseter, KI4AOH

Merry Christmas everyone!

Wow, seems like I just finished putting away Christmas decorations yesterday, and now it's time to dig them out again.

I'm looking forward to this month's annual pot-luck dinner meeting this coming Tuesday night. I can already see all that delicious food spread on the tables with lots and lots of desserts. Did I say LOTS of desserts! I can't wait. So, come join us and bring a covered dish for the pot-luck table. We always have fun and nobody leaves hungry.

I want to take this opportunity to thank Michael Knight, KK4IOH, (Vice-President) and Jim Cissell, KI4I, (Director of Programs) for their service on the board of directors this past year. It has been a pleasure working with them. They have both served tirelessly and have always been there when we needed that little extra to get the job done. I sincerely appreciate their willingness to take time away from their families and work schedules to serve the Delta Club and the advancement of ham radio.

I would like to welcome Scott Adams, KM4PMU, as our new Director of Meetings & Special Events and Kevin Zent, K4KLZ, as our new Director of Programs. I am looking forward to getting to know them both better and working with them on the board. So, Tuesday night, when you see them, please take time to welcome them to the board, thank them for volunteering, and offer your support and assistance in making their transition a pleasant one.

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 operators for taking time from family and busy schedules 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 November 30, 2016

Submitted by Linda Laseter KJ4CTX Treasurer

CHECKING ACCOUNT

BEGINNING BALANCE		
BEGINNING BALANCE	as of November 1, 2016	\$ 9,301.52

INCOME			
Date	Description	Amount	
11/15/2016	Griffin equipment sales	\$ 349.00	
11/15/2016	Rye equipment sale	\$ 115.00	
11/15/2016	Membership dues 2017	\$ 65.00	
11/17/2016	Membership dues 2016	\$ 20.00	
11/17/2016	Membership dues 2017	\$ 220.00	
11/22/2016	Griffin equipment sales	\$ 750.00	
11/22/2016	Rye equipment sale	\$ 300.00	
TOTAL INCOME		<u>\$ 1,819.00</u>	\$ 1,819.00

EXPENSES					
Date	Check #	To	Description	Amount	
11/2/2016	1392	Sandra Rye	Equipment sale	\$ (80.00)	
11/8/2016	1393	Linda Laseter	Door prizes - Nov/Dec	\$ (175.98)	
11/8/2016	1394	Linda Laseter	Door prizes - Nov/Dec	\$ (218.48)	
11/8/2016	1395	Bill Stevens	Totes for ham equip	\$ (65.44)	
11/15/2016	1396	US Postal Service	Box rental - 6 months	\$ (70.00)	
11/29/2016	1397	Sandra Rye	Equipment sale	\$ (332.00)	
11/29/2016	1398	Virginia Griffin	Equipment sale	\$ (879.20)	
TOTAL EXPENSES				<u>\$ (1,821.10)</u>	\$ (1,821.10)

ENDING BALANCE as of November 30, 2016 \$ 9,299.42

CERTIFICATES OF DEPOSIT			
	Maturity Date	Balance as of	
Certificate of Deposit #1	10/10/2018	10/13/2016	\$ 10,405.23
Certificate of Deposit #2	10/11/2016	10/27/2016	\$ 5,075.44

This Month's Board Meeting Minutes

December 6, 2016 -- Submitted by Dan Lasley, NE7JN

Attendees: Bill Stevens, WC9S, Steve Frazier, KK4VPT, Dan Lasley, NE7JN, Ken Laseter, KI4AOH, Linda Laseter, KJ4CTX, Joe Lowenthal, WA4OVO. Michael Knight, KK4IOH, and 2017 Board of Directors member Scott Adams, KM4PMU. Barri Munday, WB4SWP, Jim Cissell, KI4I, and Len Grice, W4MKS, were absent.

Ken called the meeting to order at 7pm.

The board continued a discussion of certificates of deposit. Bill made a motion to add sufficient money from the checking account to the recently matured C.D. and acquire a new C.D. with a value of \$10,000. The \$10K interest rate gives us a better return than the \$5K rate. The motion was seconded, voted upon, and passed.

Bill told us the Tri-State Repeater Association will join Delta and Nashoba for next year's Field Day. We have not received word from MARA on their plans.

Joe expects 11 students in his General class plus walk-ins will test for their licenses. He plans to offer an Extra class beginning on January 7 and a Technician class on February 25.

Delta will supply two hams (the eatin' variety), coffee, soft drinks, plates and utensils for December's meeting.

Michael suggested we find a park, set up an HF antenna and rig, and offer members the chance to operate on the HF bands. Please let [Michael](#) know if you would like to learn how to operate on HF.

Bill suggested we gather materials such as wire antennas, supports, rope, and other supplies in four locations in the area for use in emergency situations. This will be a continuing discussion.

The meeting adjourned at 8:25 pm.

Minutes of Last Month's Club Meeting

November 8, 2016 – Submitted by Barri Munday, WB4SWP

Delta Club President Ken Laseter, KI4AOH, called the meeting to order at 7:05 pm and asked everyone to introduce themselves by name and call sign.

Jeff Krause, AJ4GY, moved to accept the prior meeting minutes as published in Sparks, seconded by Stacey Krause, KJ4MDA.

David Webb, KV4QI, moved to accept the Treasurer's report as published in Sparks, seconded by Joe Lowenthal, WA4OVO.

Jeff Krause announced as a result of testing tonight we have one new Technician, two new Generals, and one new Extra.

Dan Lasley, NE7JN, asked for donations of books and magazines for veterans.

Bill Stevens, WC9S, talked about the estate sales.

Bill Stevens made the motion to have Field Day in Germantown again, seconded by Richard Martin, K4DXF, and Linda Laseter, KJ4CTX; the motion passed. Bill also mentioned the Nashoba Club's special event on November 19th at the Germantown Depot.

Joe Lowenthal announced 11 have signed up for the General Class to be held at the Germantown Police Training Room on Farmington Boulevard in Germantown beginning on November 7th. An Extra class will begin on the second Saturday in January if at least six people sign up.

Ken Laseter announced the results of tonight's elections; see page one for details.

Hugh Wardlaw, WB4SLI, a ham for over 40 years, spoke about the Raspberry Pi and Ham Radio.

Amateur Hardware Update

Article and image submitted by James Butler, KB4LJV

Many times we want to record audio from our radios, scanners or other sources. Usually, we have hookup to the speaker output of the radio. Some radios have a line level output jack we can also use. On newer computers, especially laptops, the only input available is the microphone input jack. This is made for microphone level input. Hooking speakers or line level here would overload the input and could damage the microphone input port on the computer. What is needed is a way to attenuate the signal before we put it in the microphone input.

This can be done by building an attenuator circuit. There are lots of sites on the internet that show how to do it. The one I like is http://www.epanorama.net/circuits/line_to_mic.html. This site has lots of information as well as the wiring diagram I used to build mine. Since my computer has stereo microphone inputs on it, I built up two of the circuits, one for each channel. You can buy the standard RCA female connector to 3.5 MM microphone jack cables on EBAY. I bought one and cut the cable in half to mount the circuit parts. The circuit works well and allows me to get line level audio to the computer and not destroy my microphone inputs.



Amateur Packet Update

Submitted by James Butler, KB4LJV

Many times when running digital modes we want to use antenna designs that work the best for our communications needs. We always have a trade-off of style, size, cost and performance to look at. Loop antennas can be used for both receiving and transmitting on the ham bands. They generally have a tuning capacitor to peak them on the bands. You can buy factory-built loop antennas or you can build up your own. These antennas are directional and do not take up a lot of space. If you are an ARRL member, just go to the ARRL home page (www.arrl.org) and type "loop antenna" in the search box to see all the articles available for you.

Field Day Results

Submitted by Dan Lasley, NE7JN

Thanks to Tom Dichiara, AC5MR, for a heads-up on the ARRL Field Day Results as published in the December, 2016, issue of QST, page 81. Tom says the Delta, MARA, Tri-State and Nashoba Clubs finished in twenty-first place in category 5A.

I want to give a shout-out to Bill Fullerton, AF5HA, for requesting that our Field Day results be published in Sparks. See the [August, 2016](#), issue of Sparks, pp. 17-18.

HQ 101

Submitted by Dan Lasley, NE7JN

In last month's HQ 101, we discussed the history, design, and use of the Maidenhead Locator System, including how to find the grid square of your QTH using qrz.com.

As mentioned on page 1, we will not have an HQ 101 session at the December meeting. For the **January, 2017**, HQ 101 session, one of Delta's CW masters, Jim Cissell, KI4I, will tell us how we can learn to send and receive Morse code. This should be a very interesting session!

If you would like to request that we discuss a topic in HQ 101, contact [Linda Laseter](#), KJ4CTX, or [Dan Lasley](#), NE7JN.

Ham Volunteers Needed for Swamp Stompers Event

Submitted by Dan Lasley, NE7JN, contribution by Keith Barton, KT4EP

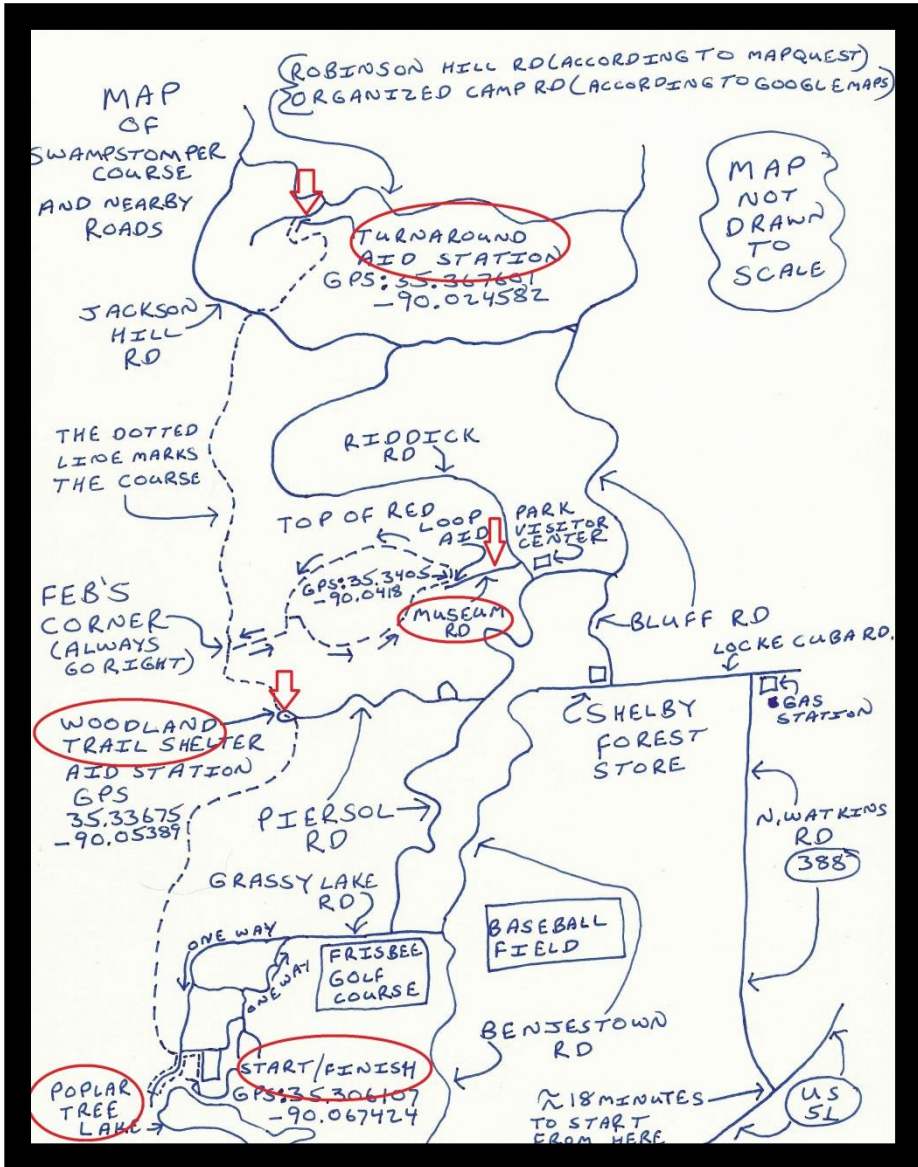
Keith Barton, KT4EP, has asked me to mention the [Swamp Stompers](#) event that is coming up on January 15, 2017. Keith has five volunteers lined up and needs a total of at least eight to ten volunteers.

In this event, we help coordinate a bunch of crazy people who run 25 or 50 kilometers through mud in rough terrain during perhaps the coldest part of winter! Unlike the runners, this is an easy event for us, and they feed us a great lunch.

Speaking of food, the volunteers meet for breakfast before the event at 6:30 am at the Shelby Forest General Store, 7729 Benjestown Road, Millington, TN 38053. If you volunteer, please join us for breakfast.

Here is a small-scale map of the event. I will publish a larger map in the January, 2017, Sparks.

If you are interested in helping, please contact [Keith](#).



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@arrl.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.

Current Classes

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

General Class 5-16 began on November 7th for six Monday nights to December 12th at the Germantown Police Department training room. There are 11 students in the class. The instructors are Joe Lowenthal, WA4OVO, Keith Barton, KT4EP, and Pat Lane, W4OQG. The Delta Club VE team led by Jeff Krause, AJ4GY, will provide the opportunity to take the General Class license exam on December 12th at 7pm. This ARRL exam session is open to the public, but you will need to call Joe, WA4OVO, at 628-4318 to get instructions on how to get to the exam site.

Planned Classes

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

Extra Class 1-17 will be held on six Saturdays from 9am to 1pm at EMHC ambulance company training room, 6872 Appling Farms Parkway from January 7th to February 18th except on January 28th. As of this printing there are seven students; the more the better. If

interested send an email to [Joe](#) with Subject line "Extra Class" and include name, callsign, email address and cellphone number in the text.

Tech Class 2-17: February 25 -- April 15, 2017

Tech Class 2-17 will be held on six Saturdays from 9am to 1pm at EMHC ambulance training room, 6872 Appling Farms Parkway, from February 25th to April 15th except for March 11th and April 8th. April 8th is FreeFest. If interested send an email to [Joe](#) with Subject line "Technician Class" and include name, email address and cellphone number in the text.

Future Classes

You may want to do some pre-study by going to www.ke0og.com. On the right side he has links to Technician, General and Extra Class YouTube video training.



General Class 5-16.
Photo by Joe, WA4OVO



Keith Barton KT4EP giving instruction to General Class 5-16. Photo by Joe, WA4OVO.

Radio Merit Badge Training for Troop 84 and 87

Submitted by Joe Lowenthal, WA4OVO

Nine Boy Scouts from Troops 84 and 87 earned their Radio Merit Badge on Saturday, November 12th at Germantown United Methodist Church. Bill Johnsen, KM4VXW, coordinated the class. Thanks to Hugh Wardlaw, WB4SLI, and Joe Lowenthal, WA4OVO, for the instruction. Perry Hayes, N4PSH, Steve Frazier, KK4VPT, and Jelly Thompson, N4HLT, helped with the required ten-minute QSOs made by each Scout.



Hugh, WB4SLI, demonstrating an HF rig for Boy Scout Merit Badge class. Photo by Joe Lowenthal, WA4OVO

Last Month's Program

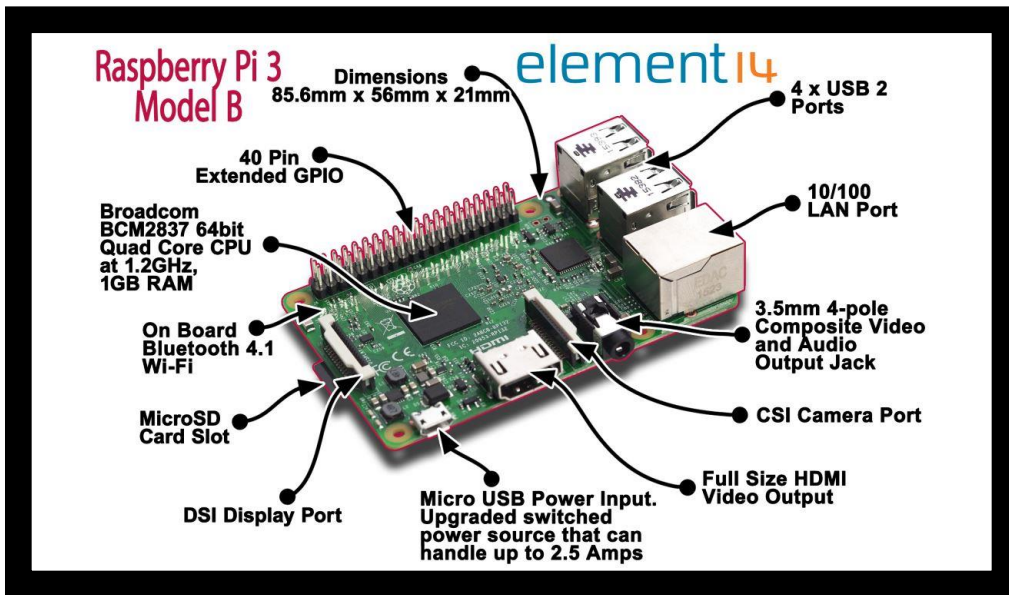
Submitted by Dan Lasley, NE7JN, contributions by Hugh Wardlaw, WB4SLI

Hugh Wardlaw, WB4SLI, presented last month's program. He explained what the Raspberry Pi is and how he uses it for entertainment and for ham radio operations.



Photos by Dan Lasley, NE7JN

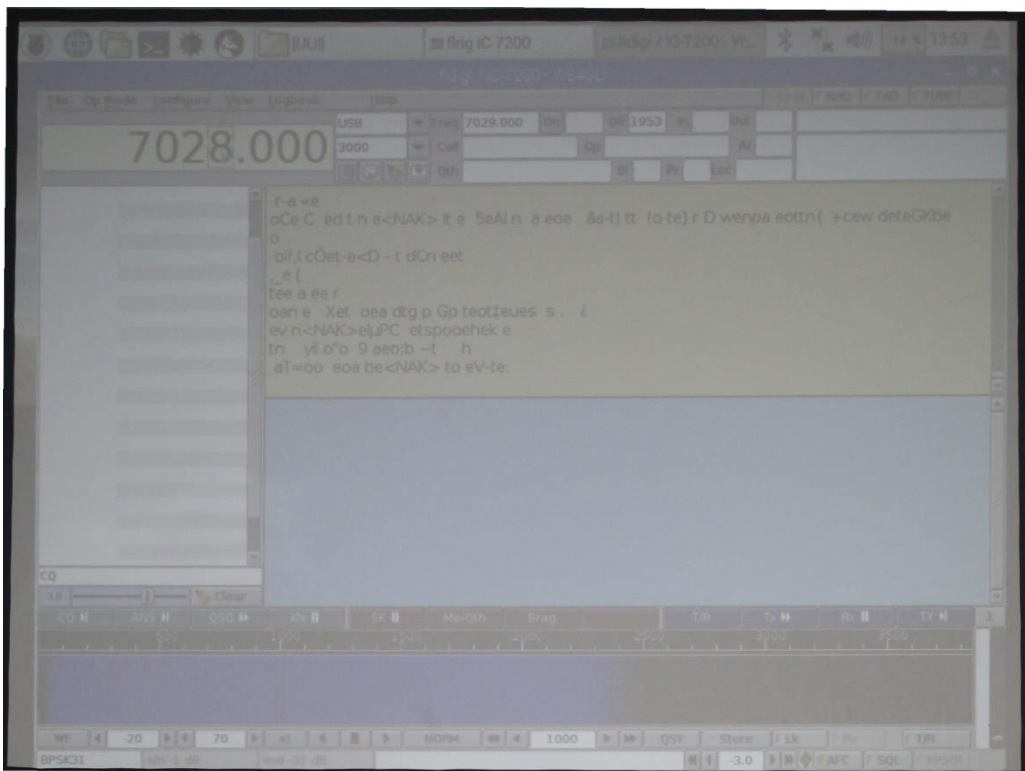
Check out Hugh's big grin! He was clearly enjoying telling us about the Pi!



This slide from Hugh's [presentation](#) gives you an idea of the amazing resources available on a printed circuit board that easily fits in the palm of your hand.

Hugh uses the Open Source Media Center software for music and videos. He also uses several ham applications, including flrig, fldigi, and flmsg (for various digital

modes) and freedv (for "digital voice" over SSB).



Hugh gave us an on-air demo of fldigi (sorry for my poor quality photo).

Hugh's next Raspberry Pi foray will be packet experiments, followed by a Winlink gateway.

A member of the audience asked about installing Pidgin on Raspbian. Hugh replied, "There are several of us who use Pidgin, which is an XMPP (Extensible Messaging and Presence Protocol)

chat. The installation procedure is to open a command line or terminal and enter "apt-get install pidgin" (no quote marks)." Hugh says he will be glad to help anyone who could use an assist.

Thanks to Hugh for an interesting presentation and for making his [presentation](#) available to club members.

November Prize Winners

Submitted by Dan Lasley, NE7JN

Delta Amateur Radio Club furnished some nice prizes in the prize drawing during the November meeting.



Photo by Dan Lasley, NE7JN

The winners are (L-R, front row) (unidentified), Amanda Nash, KM4MSC, Ray Cole, N5RLC, David Campbell, KD4NOQ (examining the grand prize), Grand Prize winner Bob Van Keuren, KM4SEB, (L-R, back row) (unidentified), Nathan Turner, KJ4GZB, Geoff Wilson, KV4LE, Larry May, K4QZF, Steve Frazier, KK4VPT, guest Lauren Martin, Rick Tillman, WA4NVM, and Richard Martin, K4DXF.

Congratulations to all!



Photo by Dan Lasley, NE7JN

If you look carefully at the caption on the prior page, you'll discover we have two winners named Martin. I asked Richard Martin, K4DXF (left), if he happened to be related to guest Lauren Martin (center). They compared notes and family photos, but no relationship was evident. Lauren is holding the mag mount antenna she won. Lauren, would you like to earn a ham radio license to go along with your new antenna? If so, you've come to the right ham radio club!

You may remember Justin Wright, KW4SX (right), from the [April, 2016](#), Sparks. Justin passed the Technician, General, and Extra exams in one test session! Nicely done, Justin.

Salute to our Veterans!

Article and photos by Dan Lasley, NE7JN

During the November Delta Club meeting, President Ken Laseter, KI4AOH, asked all the veterans in the audience to stand and be recognized in respect for Veterans Day. Without our veterans, we would not have our constitutionally guaranteed freedoms. A heart-felt thanks goes out to all vets everywhere!



(L-R) Ned Savage, KA4BLL, Geoff Wilson, KV4LE, Jim Sheats, KK4VGL, David Webb, KV4QI, Joe Lowenthal, WA4OVO, Ray Cole, N5RLC, (seated) Larry May, K4QZF.

I took a series of photos and didn't realize Larry had taken a seat while I was still shooting. Sorry about that, Larry.



(L-R) Andrew Dandridge, KC0BDX, Pat Lane, W4OQG, Jim Cissell, KI4I, Bill Stevens, WC9S, Rick Tillman, WA4NVM, Mike Hefner, KI4YOR, Richard Martin, K4DXF, Adrian Moseley, N4EMO, Jim Barnes, N4VOK, Bob Van Keuren, KM4SEB.

The Greatest Generation's Hams and December 7, 1941

Submitted by Dan Lasley, NE7JN

U. S. S. RANGER
NAVAL DISPATCH

Heading: N98 NR 977 Z 0F2 1830 0F3 0F4 0 BT

AIR RAID ON PEARL HARBOR X THIS IS NOT DRILL

EXECUTIVE

From: CINC PAC Date: 7 DEC 41 ED

To: CINCLA NT COMAF OPNAV SUPP CVAL

Info: No. 33

Act. Sec. ODO Nay. Ad. Int. L. Gen. Eng. Com. Med. Rep. Dist. Chap. Mat. Aero. Ath. COP EOT QOH Orac. VP4 YD4 YB41 V842

ACTION

INFO

[Naval dispatch](#) from the Commander in Chief Pacific (CINCPAC) [announcing](#) the Japanese attack on Pearl Harbor, 7 December 1941.

With this message began America's official involvement in World War II.

James Cain, K1TN, wrote "Pearl Harbor Remembered" in the December, 1991, issue of QST to reflect on the 50th anniversary of the Pearl Harbor attack. His article provided recollections of that day by a number of Greatest Generation hams.

December 7, 2016, marks the 75th anniversary of the debacle at Pearl Harbor. I want to provide a few quotes from Cain's article as my way of thanking those who helped maintain our freedoms by virtue of their actions in WWII. I can include only a small sample of events, so please read Cain's entire article. You can easily find it at the [ARRL Periodicals Archive](#).

Don Drenner, WOLOS, "had gone to Canada in July of 1941 and joined the RAF through a noncombatant unit called the Civilian Technical Corps. All of us were in RAF uniforms, drilled, and were armed, but we were called 'technicians.' After completing the RAF Wireless School at Yatesbury, Wilts, I was posted to RAF Polding, one of the more famous [radar chain stations](#). We operated a 1-megawatt transmitter on 26 MHz and a series of receiver blocks."

"Captain Bill Graham, WDNBO, a newspaperman of 25 years, was a combat intelligence officer in the Army. He was killed in the Pacific in an airplane crash on March 20, 1944. In a letter he sent to ARRL Headquarters the day before his death ... he closed with these lines: 'In nearly every one of my missions there has been a ham at the bomber's radio -- a mighty important fellow on the crew of a bomber. No, after this is over, the amateur will have no excuses to offer for his part in this three-dimensional war. He has functioned to the everlasting glory of us all.'"

Loren Disper, K6DD, was "a radio operator aboard the American merchant ship the S/S Admiral Y. S. Williams. He was 21 years old and a civilian in the Merchant Marine. The Williams had run aground in the Philippines and was in dry dock for repairs at Kowloon, China. On Monday morning, December 8 (December 7 in the US), the Japanese bombed our area. On December 11, we abandoned our ship, which was too damaged to sail, and tried to escape the advancing Japanese ground forces by getting to Hong Kong -- it was like going from the frying pan to the fire. Law and order had vanished in Kowloon, and to get across the harbor to Hong Kong we had to make our way, unarmed, through gangs of rioting and looting Chinese. After two weeks of shelling and bombing, we were captured and marched off to the Shum Shui Po POW Camp, in Kowloon. In March of 1942, we peered through the barbed wire and watched the Japanese sail our now-repaired ship out of the harbor. The rest of the story is one of misery in a concentration camp, which would serve no useful purpose in telling."

John Glauber, W40B, "watched the news on television. I had a home-brew TV in the basement, using a 9-inch cathode ray tube. The National Broadcasting station and antenna was atop the Empire State Building, about six miles southeast of our home in Teaneck, New Jersey. I believe its call letters were 2NBT. The TV camera was focused on a teletype machine, and my wife and I watched the news print-out. Later, what we heard on a radio news program was a reading of the reports we had already seen on TV."

Fred Schmidt, W4NYF, "was aboard the USS Medusa at Pearl and due for leave back to the states but that was not to be. I overslept that morning and was wondering if I could make it to the liberty boat in time when I heard tremendous explosions, followed by the Officer of the Deck bellowing into the PA systems: 'All hands, general quarters on the double, this is war!' He was an old China Station hand and not fooled for a second."

Cain's article mentions 57 call signs of the WWII period. I looked up all 57 at qrz.com and I thought you might be interested in seeing the results.

status unknown to qrz.com	48
still active	6
silent key	3

It's possible some of the 48 call signs changed before qrz.com was established, but most of the 48 (and possibly all) are likely silent keys. Thanks to all you gentlemen for my freedoms. I do not take them lightly.

YL News

Submitted by Linda Laseter, KJ4CTX

YL LUNCHEON – We enjoyed the food and companionship so much at Rafferty’s in November that we decided to have our January luncheon there as well. My favorite is the chicken salad and fruit plate. I don’t think you would be disappointed with anything you order because all of their food (according to the YLs attending the luncheon) was really delicious.

We have a door prize each month and Amanda, KM4MSC, won the November drawing which was a lovely set of measuring bowls and spoons.

We have fun just talking and of course sharing ham information when there is interest.

There will not be a YL luncheon in December due to the numerous events and dinners scheduled in December.

We hope you will join us in January.



Photo by Trenia Preus.

(L-R) Linda, KJ4CTX, Amanda, KM4MSC, Lee, W8ZQX, Kate, KJ4KUL, Janice, KM4HZY, Barri, WB4SWP, Gale, KI4VDI, and Betsy, KD4KOM.

YL NET - Welcome to the YL Net Rosemary, KK4VQD. Glad you joined us and I hope you will continue to check-in with us on Saturday nights at 8:45 p.m. on the 146.820 repeater.

We continue to have a good group of YLs checking in but would love for more of you to join in. It makes the Net so much more fun when several of us check-in.

We will be listening for you.

33,

[Linda Laseter](#), KJ4CTX

The St. Jude Marathon

Submitted by Dan Lasley, NE7JN, contributions by Brad Grissom, KG5KSW,
and Roger Schlichter, WR4R



Runners and helpers at Hydration Station 19. Photo by Brad Grissom, KG5KSW.

Once again area hams contributed their time and expertise in helping St. Jude with their marathon. Martin Hand, Chief Donor Officer, ALSAC (St. Jude's fund raising organization), said, "Thanks to you, the 2016 St. Jude Memphis Marathon Weekend was a success! Your tireless efforts and hard work with HAM Radio Operators helped us raise \$2 million more than last year. That is \$10 million for the kids of St. Jude -- but we couldn't have done it without you."

The St. Jude web site tells us "The race may be over, but you can still [donate](#) to help kids with cancer and other life-threatening diseases."

If you had friends or family in the race, you can check on the [results and awards](#).

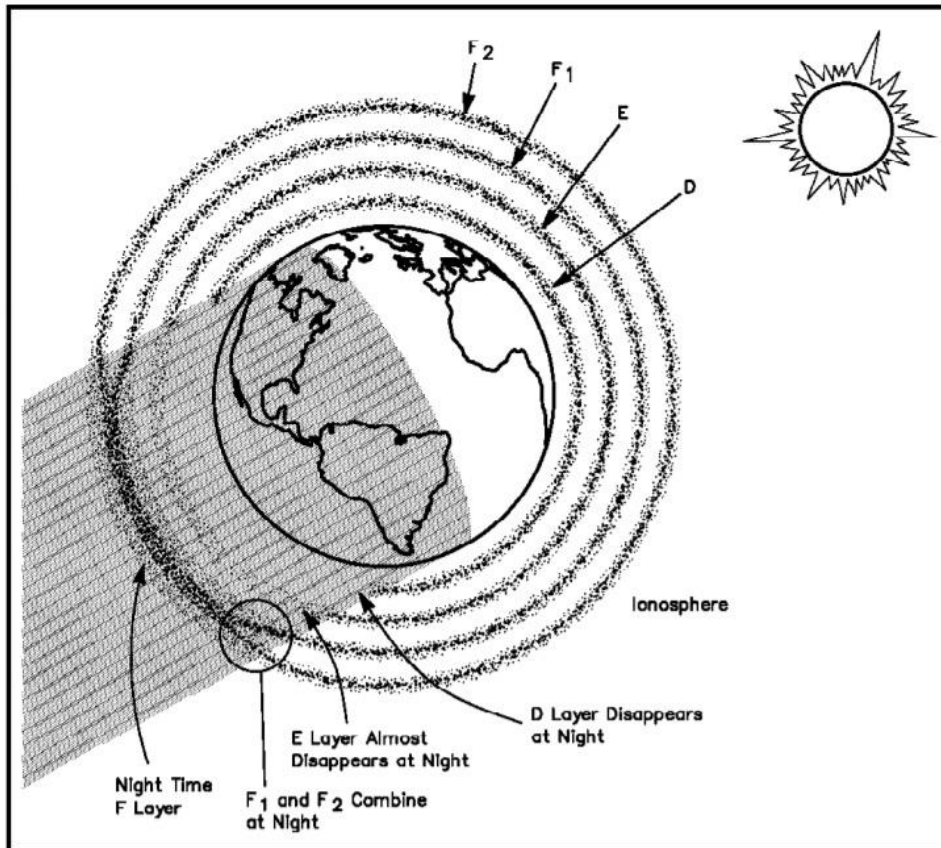
Roger Schlichter, WR4R, ham coordinator for the event, said, "... we had 65 radio operators working the event in various positions, a really good turn out to support the kids at St. Jude."

Thanks to everyone who helped and thanks to Roger, who did another great job of organizing the ham community for the event.

HF Propagation, Part 3

Submitted by Dan Lasley, NE7JN

In last month's [newsletter](#) I asked how a high sunspot number contributes to good HF propagation. Let's start by reviewing regions in the ionosphere that affect HF propagation and by noting that I will summarize and simplify as much as possible for brevity.



In "[The Sun, the Earth, the Ionosphere: What the Numbers Mean, and Propagation Predictions](#)—a brief introduction to propagation and the major factors affecting it," Carl Luetzelschwab, K9LA, does a masterful job of introducing the complex topic of how various emissions from the sun affect HF propagation.

We can reduce parts of Carl's article and a [NOAA](#) article to a table which describes how the sun affects each region of the ionosphere:

From "Radio Waves and the Ionosphere," Ian Poole, G3YWX, November, 1999, QST.

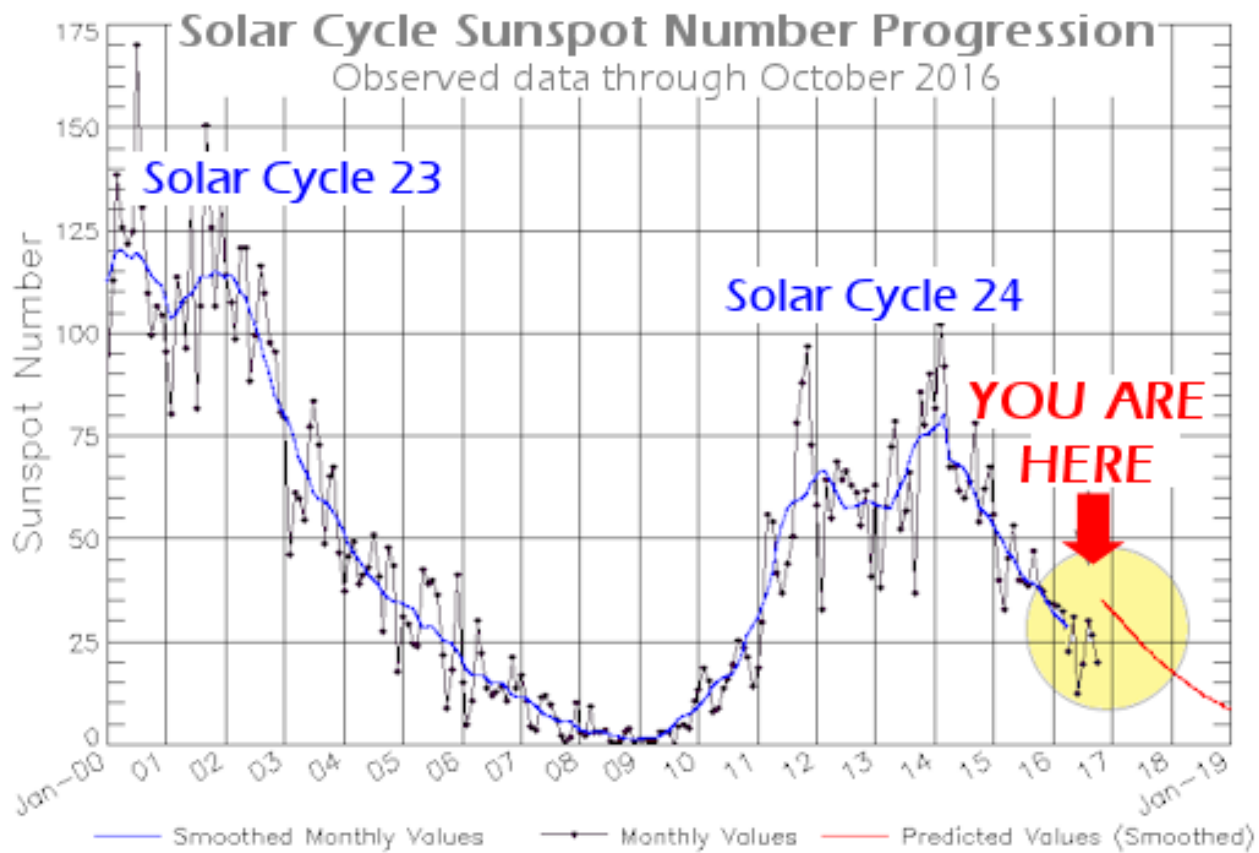
D region: hard X-rays, electromagnetic radiation from class X flares, cosmic rays

E region: soft X-rays

F region: extreme ultraviolet

In reminding us that "Sunspots are areas on the sun associated with extreme ultraviolet radiation" and "thus they are tied to ionization of the F region," Carl has answered the question of the month: a higher number of sunspots generates higher levels of extreme ultraviolet radiation which, in turn, more completely ionizes the F regions. Of the three major ionospheric regions, the F regions are the primary contributors to HF DX, so denser F regions refract more HF radio waves from your transmitter to the remote receiver and promote more DX in the HF bands.

That's the good news. Spaceweather.com supplies the headline for the bad news: "SUNSPOT CYCLE AT LOWEST LEVEL IN 5 YEARS."



http://spaceweather.com/images2016/16nov16/solarcycle_strip2.png

Spaceweather.com [reports](#), "The solar cycle is like a pendulum, swinging back and forth between periods of high and low sunspot number every 11 years. These data from NOAA show that the pendulum is swinging toward low sunspot numbers even faster than expected. (The red line is the forecast; black dots are actual measurements.). Given the current progression, forecasters expect the cycle to bottom out with a deep Solar Minimum in 2019-2020."

Next month we'll look at solar conditions during this year's [CQ World Wide DX Contest](#), October 29-30, 2016. I'll have more questions than answers, so perhaps some of you can supply the answers. Stay tuned.

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 January 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
ASA Low Pass Filter	\$20.00	
Astatic Speaker	\$10.00	
Astron RS-35A Power Supply	\$120.00	Still in production
Bencher iambic Key	\$135.00	Still in production
Bencher Straight Key	\$130.00	Still in production
Daiwa CS-201 Antenna Switch	\$25.00	New
Heil FS-3 Foot Switch	\$30.00	Still in production
HI-Gain VB-25FM 5 element beam 2 meter	\$44.00	New
Hy-Gain AV-620 6 band Vertical Antenna	\$280.00	
Icom IC - V8 HT with Charger	\$30.00	Needs Battery
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	\$10.00	
Kenwood SP-230 Speaker	\$20.00	
Kenwood SP-31 Speaker	\$40.00	
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 259 Antenna Analyzer	\$50.00	Old
MFJ 862 Watt Meter	\$55.00	Still in production
MFJ 862 Watt Meter	\$55.00	Still in production
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	
SEC 1235M Power Supply 30 amp	\$100.00	Still in production
Yaesu DX - 1200	\$1,000.00	Still in production
Yaesu FT - 1000MP with hand mic	\$800.00	
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	

Odds-n-Ends

Submitted by Dan Lasley, NE7JN

From the ARRL Contest Update email for November 2, 2016: "NOAA has made available some [tools](#) to help with regional prediction of space weather events. The intent is to be able to warn utilities and space satellite companies ahead of events having the potential to disrupt their operations. The footprint of the regional forecasts is approximately 350 square miles, with a lead time of up to 45 minutes. Researchers from the University of Michigan and Rice University [developed](#) the tools necessary to make this possible."

From the same email: "Carl, K9LA, talks about how a solar minimum can be too deep, even for 160 meters, in a [recent message to the TopBand reflector](#). "With a weak solar magnetic field, more galactic cosmic rays will be able to get into the Earth's atmosphere... Since galactic cosmic rays are mostly very energetic protons, they can get down to low atmospheric altitudes, causing collisional ionization in the D region (and lower E region). A cursory estimate using cosmic ray ionization rates confirms more ionization in the lower atmosphere. 160 meters is not very tolerant of more absorption, so we may see an adverse effect of the weakened solar magnetic field. (via TopBand reflector)"

From the ARRL Letter email for November 10, 2016: "Students at the US Naval Academy in Annapolis, Maryland, are planning an Amateur Radio CubeSat -- dubbed [HFSAT](#) -- that would carry an HF transponder as a primary payload as well as 2-meter APRS as a secondary mission when power is available. The 1.5 U CubeSat will have a linear uplink at 21.4 MHz and a downlink at 29.42 MHz.

From Rick Tillman, WA4NVM: "[4 Brilliant Uses for an old SATELLITE DISH!](#)" The first use is a "long range Wi-Fi Antenna." Anything that mixes baked beans with an SO-239 has to be pretty cool.

From the ARRL Contest Update email for November 16, 2016: "Back in August, [EDN did a survey](#) of printed circuit board fabrication houses for making prototype boards. In addition to the vendors mentioned in the article, the comments also provide some additional possibilities to get your small projects done."

In this month's Lancaster-Marston Column, I write about the triode vacuum tube being 110 years old. The ARRL Contest Update email for November 16, 2016, tells us that "Vacuum tube testers are still in demand from those that use tubes in audio applications, and personal computers can be used to perform a number of tests faster than any human can turn rotary switches, press the test button, and read meters. Here's a [review](#) of some of the digital tube testers that are available, including some that are DIY." Digital tube testers -- what an amazing concept!

From the ARRL Contest Update for November 30, 2016: "Amateurs of Technician class or higher, ages 12 to 18, residing in the continental US, are encouraged to enter a [contest](#) to win an Alinco HF radio, Alinco antenna, and coax."

Still Cranking Out CW at 93!

Submitted by Dan Lasley, NE7JN



https://i.cbc.ca/1.3846778.1478834494!/fileImage/htmlImage/image.jpg_gen/derivatives/original_620/merle-taylor.jpg

Ok, all you young (i.e., less than age 93) whippersnappers, pay attention! The ARRL Letter email for November 17, 2016, tells us the lady pictured above, Merle Taylor, VE1VCI, not only taught Morse code to aviators in World War II, but she is still active on CW today! See the [original article](#) for more about Merle. Sparks will have an article on Merle in the March, 2017, issue.

The Lancaster-Marston Column

Submitted by Dan Lasley, NE7JN

According to their web site, [Daycounter, Inc.](#) "specializes in rapid prototyping, and customized electronic product design." They also specialize in seven flavors of [calculators](#) that will execute on your web browser:

- Passive Component Properties
- Electronics
- Motors
- Power Supplies
- RF
- CAD/CAM
- Programming

Under the RF heading, see the [Decibel Calculator](#) for a conversion between dBm and power in watts. The equation relating these two units is:

$$dBm = 10 \log \left(\frac{power}{0.001} \right)$$

Oddly, I've only seen the dBm equation in print one other time (a years-old issue of QST). Maybe I wasn't paying attention and perhaps you have been.

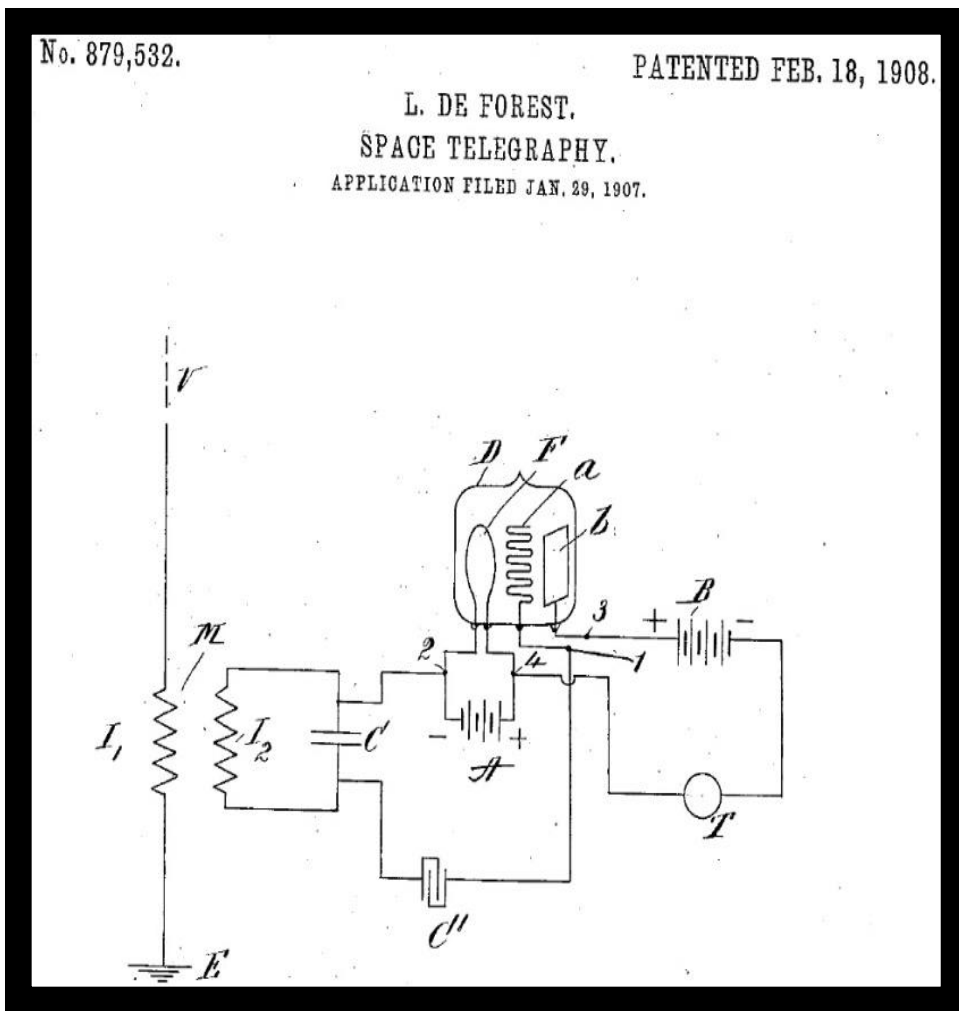
For whatever reason, I can remember this equation more easily if I change it to:

$$dBm = 10 \log (1000 \cdot power)$$

Given dBm, we can solve for power:

$$power = \frac{10^{\frac{dBm}{10}}}{1000}$$

In any case, you can easily work the equations with a scientific calculator if you prefer that method to on-line calculators.



Shown here is Lee de Forest's oldest [patent](#) for a vacuum tube which mentions a grid. The patent says, "Interposed between the members F and b is a grid-shaped member a, which may be formed of platinum wire, and which has one end brought out to the terminal 1."

If you have a warm spot in your heart for vacuum tubes, you will be interested in a recent email from the folks at [Nuts & Volts](#). The email discusses a "Tribute To The Tube And To Radio" and provides a number of interesting links:

- [The Triode is 100 Years Old This Year](#)
- [Making Something From Nothing](#)
- [David Sarnoff And The Birth Of The AM Radio](#)
- [Vacuum Tube In Its 100th Year: Same Old Challenges](#)
- [Vacuum Tubes for the 21st Century](#)
- [The Antique Wireless Museum](#)

Be aware each of these articles first appeared in the November, 2006, issue of Nuts & Volts, so the triode is 110 years old as of the current date.

DX News

Submitted by Dan Lasley, NE7JN

This information is courtesy of the ARRL's DX news emails and The ARRL Letter email for November 10, 2016.

Note: This month we list three hams who will be active in Antarctica in the near future. Call signs VP8DPJ and DP1POL are available at qrz.com now.

Yath Yoshikawa, JG2MLI, will head back to the Japanese Polar Research Syowa Station on East Ongul Island to operate with the commemorative call sign 8J60JARE, marking the 60th anniversary of the Japanese Antarctic Research Expedition (JARE) from January 2017 until January 2018. He will operate SSB, CW, RTTY, and digital modes on 40 through 10 meters and will post his logs to Club Log.

ANTARCTICA. Alan, MWOYCC is QRV as VP8DPJ from the Rothera Research Station on Adelaide Island, IOTA AN-001, until April 2018 while on work assignment. QSL via operator's instructions.

ANTARCTICA. Felix, DL5XL is QRV as DP1POL from the German Neumayer Station III, IOTA AN-016, until February 2017. Activity is on all HF bands using mainly CW and possibly some SSB and digital modes. QSL via DL1ZBO.

PALESTINE, E4. E44QX will be active from Jericho on the West Bank from December 8 to 12 with DF8DX operating holiday style. QSL direct, via the bureau, OQRS, LoTW.

TANZANIA, 5H. Maurizio, IK2GZU will be QRV as 5H3MB from November 7 to December 2. QSL to home call.

MADAGASCAR, 5R. Eric, F6ICX is QRV as 5R8IC from Saint Marie Island, IOTA AF-090, until February 4, 2017. Activity is holiday style on 40 to 10 meters using mainly CW with some SSB, RTTY and PSK63. QSL to home call.

THAILAND, HS. Dennis, W1UE is QRV as HSOZIA from Chiang Mai. He may be active on 160 and 80 meters. QSL via operator's instructions. (No end date given.)

SARDINIA, IS0. Special event station IIOEUDX is QRV until the end of 2016 in celebration of the 30th anniversary of the EUDXF. QSL via ISOAGY.

ST. KITTS AND NEVIS, V4. John, W5JON will be QRV as V47JA from Calypso Bay, St. Kitts, IOTA NA-104, from November 15 to December 15. Activity will be on 160 to 10 meters, including 60 meters, using SSB. QSL direct to home call.

DEMOCRATIC REPUBLIC OF CONGO, 9Q. Christian, IS0BWM will be QRV as 9Q0HQ/3 from Kenge from November 20 to December 25. Activity will be on the HF bands using SSB. QSL direct to home call.

GREECE, SV. Members of the Radio Amateur Union of North Aegean are QRV with special event call sign SX25LSV from Lesbos Island, IOTA EU-049, until the end of 2016 to celebrate the club's 25th anniversary. Activity is on the HF bands using SSB and various digital modes. QSL direct to SZ8LSV.

WEST KIRIBATI, T30. Jack, T30TM is a permanent resident on Tarawa, IOTA OC-017, and is currently active on the HF bands. QSL direct to VK1TX.

MALI, TZ. Laurent, F5IXR is QRV as TZ5ZR until February 2017. He may be active on 160 to 6 meters. QSL via F5MXH.

The Nordic Radio Amateur Union sponsors a [contest](#) on 10 meters on the 1st Thursday of the month.

FIJI, 3D2. Jim, WB2TJO will be QRV as 3D2JS from Taveuni Island, IOTA OC-016, beginning from December 2016 to March 2017. Activity will be on the HF bands and 6 meters using CW, SSB and some digital modes. QSL to home call.

[ARRL 10 Meter Contest](#), Starts 0000 UTC Saturday, December 10; runs through 2359 UTC Sunday, December 11. U.S. stations send RS(T) and two-letter state. If the band is open, you have an excellent chance to work a number of states and lots of DX.

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>.

2016 BOARD OF DIRECTORS

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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 Nin'er 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

DELTA CLUB ADVERTISEMENTS

See Advertisement Order Form for Instructions.



MID-SOUTH AMATEUR RADIO SUPPLY (MSARS)

6631 Vallendar Cv., Bartlett, Tennessee 38135

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HT	Magnet	UHF	RG-213
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Base Station	Roof Mount	SMA	RG-58
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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W5VAA

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!

This ad space is available

DELTA CLUB ADVERTISEMENTS

See Advertisement Order Form for Instructions.

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
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224.42- 443.20+ (107.2Hz tone)



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This space is available!

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**

Date: _____

Name: _____

Call Sign: _____ Phone: _____ Email: _____

TO PLACE AN ORDER

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.

SPARKS ADVERTISING

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\$50.00			\$25.00			\$15.00			\$10.00		
for 3 Months			for 3 Months			for 3 Months			for 3 Months		
7" w X 8 ½" h			7" w X 4" h			3 ½" w X 4" h			3 ½" w X 2" h		
Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	July 2016	Aug 2016	Sept 2016	Oct 2016	Nov 2016	Dec 2016