

SPARKS

P.O. Box 342768 * Memphis, Tennessee 38134-2768 * Volume 23 * October 2017



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}	
144.390 Digipeater	*Fusion

This month's meeting begins at 7pm on October 10, 2017, 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 Tom Butas, KM4AEM. He will tell us about his new shack. Initially licensed in 2014 at FreeFest, Tom upgraded to General at 2014 Field Day. He began his radio career back in CB days in the early 1970s. He was an avid SWL listener and AM DX'er and served as award chairman for the International Radio Club of America in the early 1980s. His best friend from high school, Mike Newell, now WB4HUC, was a novice at the time and they recently met at the 2017 Huntsville Hamfest for the first time in 40+ years. Tom kept all his old radios and until 2014 really didn't get the bug again to get back into radio. Needing a retirement hobby and "NO CODE" requirement, he decided to get his license. He has been active since 2014 with Delta and Nashoba Clubs and has served as backup net control operator for Delta for about a year. He has been the lead credit analyst for Pfizer in Memphis for the past 6 years. Previously he worked at Ford and Ford Credit for 29+ years. He has been married to Patti for 36 years; they have a son, Andrew, and a daughter-in-law in Memphis.

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 CSEs, 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 2017 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 September, 2017, test session: new Technician Robert Horn, KN4FVT.

President's Corner

Submitted by Ken Laseter, KI4AOH

Hope this month's newsletter finds you and your family safe and healthy.

I need your help! ON SHORT NOTICE, I'm trying to coordinate volunteer radio operators to support the 2017 Bluff City Blues Bike Ride this Saturday morning starting at 6:30 am. The ride will start from 4241 OK Robertson Road and tour north above Millington and back. They plan to have five aid stations and three SAG vehicles. We plan to use the 146.820 repeater so a handi-talkie should work well. If you can volunteer, PLEASE call me at (901) 487-9103 or [email me](#) ASAP.

Once again, we are now planning for the St. Jude Marathon. We still need additional volunteers! Please, if at all possible, volunteer for this worthwhile event. Contact [Roger Schlichter](#), WR4R, and let him know you want to help. This is the largest event we support each year, so we need all hands on deck. Do it now, send Roger an email and hop aboard, we always have fun working this event. I'll see you there!

Also, remember that next month is our annual election of officers. We have included in this issue of Sparks a list of current nominees. If you know anyone who would like to run for an office, have them [contact me](#) and I can add them to the list.

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

In Memoriam

The ham community has lost several members in recent weeks:

- Phil Julian, W4PRJ
- Bernie Mintz, KE4IVP
- Denise Ganucheau, KJ5DG
- Brenda Stauffer, KE4MKK
- Charlie Jester, KK4BTV
- Joe Albrecht, K4UBH

Our thoughts and prayers go out to these Silent Keys and their families.

Submitted by Dan Lasley, NE7JN, with the grateful acknowledgement of contributions by Randy Wilder, WB4LHD, JoAnn Wilder, KB4GGC, Joe Lowenthal, WA4OVO, Barri Munday, WB4SWP, Pat Lane, W4OQG, and Art Stauffer, AI4OU.

Treasurer's Report

Submitted by Linda Laseter, KJ4CTX

DELTA AMATEUR RADIO CLUB

Monthly Treasurer's Report

For month ended September 30, 2017

Submitted by Linda Laseter Treasurer

CHECKING ACCOUNT

BEGINNING BALANCE

BEGINNING BALANCE as of September 1, 2017 **\$3,961.87**

INCOME

Date		Amount	
09/05/17	Membership 2017	\$ 35.00	
09/05/17	Donation	\$ 10.00	
09/12/17	Membership 2017	\$ 20.00	
TOTAL INCOME		<u>\$ 65.00</u>	\$ 65.00

EXPENSES

Date	Check #	To	Description	Amount	
09/05/17	1429	Scott Adams	Refreshments	\$ (43.74)	
09/05/17	1430	Linda Laseter	Door prizes - Christmas	\$ (217.81)	
09/12/17	1431	Jam Enterprises	Door prizes - Christmas	\$ (185.80)	
09/12/17	1432	Joe Lowenthal	Huntsville Bus expenses	\$ (251.91)	
09/12/17	1433	VOID		\$ -	
TOTAL EXPENSES				<u>\$ (699.26)</u>	\$ (699.26)

ENDING BALANCE as of September 30, 2017 **\$ 3,327.61**

CERTIFICATES OF DEPOSIT

	Maturity Date	Balance as of	
Certificate of Deposit #1	10/10/2018	7/26/2017	\$ 10,502.10
Certificate of Deposit #2	10/19/2022	8/27/2017	\$ 10,120.05

TOTAL DARC CASH ASSETS **\$ 23,949.76**

This Month's Board Meeting Minutes
October 3, 2017, submitted by Barri Munday, WB4SWP

Attendees: Steve Frazier, KK4VPT, Scott Adams, KM4PMU, Bill Stevens, WC9S, Dan Lasley, NE7JN, Ken Laseter, KI4AOH, Linda Laseter, KJ4CTX, and Barri Munday, WB4SWP.
Absent: Kevin Zent, K4KLZ. Len Grice, W4MKS, and Joe Lowenthal, WA4OVO.

Ken Laseter called the meeting to order at 7:00pm.

Joe Lowenthal called in to let us know that he is going to hold a General class for 5-6 weeks in November. There will be an Extra class in January, 2018.

Linda Laseter presented the Treasurer's report and the quarterly budget report.

There will be no swap meet in October, but YLs will meet at the club location on the last Saturday in the month for lunch and training.

Ken volunteered to head January's Swamp Stompers public service event and is trying to coordinate the Bluff City Blues bike ride this Saturday.

Linda has acquired door prizes that will be handed out at the November and December meetings. The Board of Directors voted on to reallocate \$200 from the discretionary fund to purchase additional prizes.

Scott Adams discussed initial plans for food at the December club meeting, ham furnished by the club and pot luck provided by club members.

Bill Stevens covered an equipment donation; details to follow once he has set pricing.

The Board of Directors voted to donate \$100 to the ARRL Ham Aid fund for ham radios to be delivered to the Virgin Islands as a result of their hurricane damage.

We have a full slate of nominees for the 2018 Board of Directors; see elsewhere in this month's Sparks for details.

Linda and Bill made and seconded a motion to adjourn at 8:20pm.

Minutes of Last Month's Club Meeting
September 12, 2017 – Submitted by Barri Munday, WB4SWP

Club President Ken Laseter, KI4AOH, opened the meeting at 7:00 pm and reminded everyone to sign in and drop a ticket in the bucket. Introductions were then made by name and call sign.

Ham Hilliard, W4GMM, moved to approve the previous meeting minutes as recorded in Sparks, second not recorded; the minutes were approved by acclamation.

Ham moved to approve the Treasurer's report as recorded in Sparks, second not recorded; the report was approved by acclamation.

Tonight's VE testing produced one new Technician.

Joe Lowenthal, WA4OVO, mentioned a tentative General class beginning November 6th; if not enough sign up he will instead provide a Tech class at EMHC Ambulance on Appling Way with an Extra class to follow in January.

Darrell Sheffield, KK4D, talked about the upcoming MS 150 bike ride from Byhalia to Oxford on September 23 and 24 and asked for volunteers. Ken encouraged new hams to participate.

Pat Lane, W4OQG, brought items for sale from the estate of Denise Ganecheau, KJ5DG (SK).

Dan Lasley, NE7JN, announced that David Webb, KV4QI, won the trivia question in this month's newsletter.

Tonight's program is by ARRL Delta Division Director David Norris, K5UZ.

Harold Smith, KM4KSM, was tonight's prize winner; he took home an antenna.

The meeting adjourned at 8:40pm.

Last Month's Program

Submitted by Dan Lasley, NE7JN



Director of the ARRL Delta Division, David Norris, K5UZ, presented last month's program, "Putting the Spark Back in Amateur Radio: ARRL and Our Future." He talked about the duties and responsibilities of people at ARRL headquarters and where our hobby is headed.

You are likely familiar with some of the ARRL employees David mentioned: Carla Pereira (Assistant to the Chief Executive Officer), David Sumner, K1ZZ (former ARRL Chief Executive Officer and currently IARU Secretariat), Lauren Clarke, KB1YDD (Development Manager), Becky Schoenfeld, W1BXY (QST Managing Editor), and Steve Ford, WB8IMY (Manager, ARRL Publications).

A registered professional (civil) engineer with the Arkansas Highway and Transportation Department in Little Rock, David has served for the past six years as ARRL Delta Division Director and has held the positions of EC, OO, OES, VCE, VE, and DXCC Card Checker.

First licensed in 1977, he enjoys chasing DX with 353 DXCC entities confirmed, 5-Band DXCC, 2000 DXCC Challenge and DXCC Honor Roll.

We appreciate David driving over from the center of our sister state to be with us and to present last month's program.

September HQ 101

Submitted by Dan Lasley, NE7JN

Ham Hilliard, W4GMM, began September's HQ 101 discussion about tools of the trade, such as the grid dip meter, wattmeter, and the antenna analyzer, to a crowd that overflowed into the hallway. This was the largest group to date to attend HQ 101:



(Standing, L-R) Tom Dichiara, AC5MR, Jim Cissell, KI4I, Ham Hilliard, W4GMM, Barry McDonald, W5CJ, Billy Benson, W4IOA, David Jackson, KM4SEC, Jim Barnes, N4VOK, Bob Van Keuren, KM4SEB, Perry Hayes, N4PSH, Steve Evans, KM4VYA, and Rick McConville, KN4FLD. (Seated, L-R) Linda Laseter, KJ4CTX, Glen Ellis, K4KKQ.)

After Ham's introduction, we split into two groups so everyone could practice with an antenna analyzer and a two meter magmount antenna. Thanks to Elmers Jim, KI4I, and Tom, AC5MR, for bringing antenna analyzers and for helping with the second group.

Join us upstairs at 6pm on the next club meeting night, October 10, for our next HQ 101 session. Ham, W4GMM, will talk on vertical antennas verses horizontal dipoles and on station grounding. Don't miss HQ 101, it's sure to be interesting!

St. Jude Volunteers Needed

Submitted by Dan Lasley, NE7JN

Roger Schlichter, WR4R, asked me to let everyone know he is looking for volunteers to provide communications for the St. Jude Marathon, December 2, 2017.

This is a fun event to work and is a great place to start if you've never volunteered for a public service event before.

If you are interested, please contact [Roger](#).

The MS 150 Public Service Event

Submitted by Dan Lasley, NE7JN, contributions by Rick McConville, WB9TCB,
and Steve Frazier, KK4VPT

The MS 150 bike ride, a fund raising event for the [National Multiple Sclerosis Society](#), took place on September 23 and 24. The riders had new routes this year, Byhalia to Oxford, MS, and back, with the shorter route being 58 miles and the longer route being 77 miles.



NE7JN photo.

(Standing, L-R) Megan, Karen, and J.W.
(Seated) Jay.

With the radio set up, I helped Jay and J.W. unload supplies from J.W.'s FedEx truck, then Megan and Karen began preparing everything the runners needed at this rest stop.

When I arrived at Rest Stop #4 on Saturday, about 12 air miles from the finish, I found a good place to set up shop, a roofed shelter. I stuck the mag mount antenna on top of the Cube Ice machine, but it didn't provide enough metal and Net Control operator Roger Schlichter, WR4R, reported my signal was scratchy through the repeater.

I moved the antenna to the top of my car and could easily work the Holly Springs repeater, about 20 miles distant, with four watts.



NE7JN photo.

I met Jay at last year's MS 150 event while he was working at the Hernando Court House. If you need to get something done, ask Jay and family members Megan and Karen! J.W also did a great job of moving lots of heavy supplies! I remember him from Hernando also.



Photo by Rick McConville, WB9TCB.

Rick McConville, WB9TCB, worked at Rest Stop #1. Shown above are some thirsty riders!



(L-R) Ed Taggard, K7EDT, ham organizer Darrell Sheffield, KK4D, Dennis Foster, KJ4BDU, and SAG driver Mike Chandler. Photo by Rick McConville, WB9TCB.

I had an interesting eyeball QSO with Rick later in the day. I think he is going to be a great addition to the membership of the Delta Amateur Radio Club. I talked him into being a member of the Strong Arm Crew for April's FreeFest.

The South's six-month summers don't surrender easily and the heat and humidity took its toll on riders. Late in the first afternoon we arranged to transport five riders to following rest stops or to the day's ending point at Oxford.



I was back at Rest Stop #4 on Sunday. The location had shifted west from Abbeville's First Baptist Church to Abbeville Bank. Shown here are Adrienne, one of the SAG truck drivers, and her ham operator and Delta's Vice President, Steve Frazier, KK4VPT.

While Steve and Adrienne were at RS #4, Steve captured drone video of the riders in the area and later combined video from Rest Stop #1 at Taylor Grocery in Taylor, MS, with video from the start/finish line in Byhalia.

Steve did an excellent job on the resulting [video](#)! Check it out!

NE7JN photo.

I learned several valuable lessons on this year's MS 150:

- I wasn't expecting to have commercial power available Saturday so I took a battery but not the power supply for the VHF amp. If you look carefully, you can see a power cord in this article's first photo. I didn't need the power supply, but it's on my pack list for future events.
- When you are trying to arrange SAG truck pickups for four people at once, don't accept on face value the statements of three groups of people. Investigate on your own to establish the facts before calling for multiple SAG trucks. I lucked out here and didn't cause the needless moving of SAG trucks.
- Saturday's location was about 30 feet higher than Sunday's location, which was down in a depression. If I hadn't had a battery-powered 40 watt VHF amp, I couldn't have reached either repeater. If you fail to prepare, you prepare to fail.

- If you don't already have an event's repeater programmed into your HT, wait until the ham organizer publishes the official numbers for the repeater. Don't rely on a repeater list which came from a third party. This one bit me upon my initial attempt to use the Oxford repeater; I had set the PL tone incorrectly.

Thanks go out to the event's ham leader, Darrell Sheffield, KK4D, for another great job of organizing everything ham related, and to Net Control operator Roger Schlichter, WR4R, for a very smoothly operating net.

Thanks also to all the hams who participated and to Adrienne, Jack, Mike, and all the other SAG truck drivers.

US Coast Guard Auxiliary Special Event

Submitted by Dan Lasley, NE7JN, contributions by Bill Flanigan, KK4VPS



Delta's Bill Flanigan, KK4VPS, is a member of the US Coast Guard Auxiliary. Bill let me know the Coast Guard Auxiliary is having a special event on November 10, 11 and 12 to commemorate the 78th Anniversary of the USCG Auxiliary and to honor our military veterans.

The special event stations will be operating on amateur HF and VHF frequencies with a 1x1 call sign. Event operators will provide QSL cards. If you are working on WAS or other awards, this will be a good opportunity to add states to your list.

Amateur Packet Update

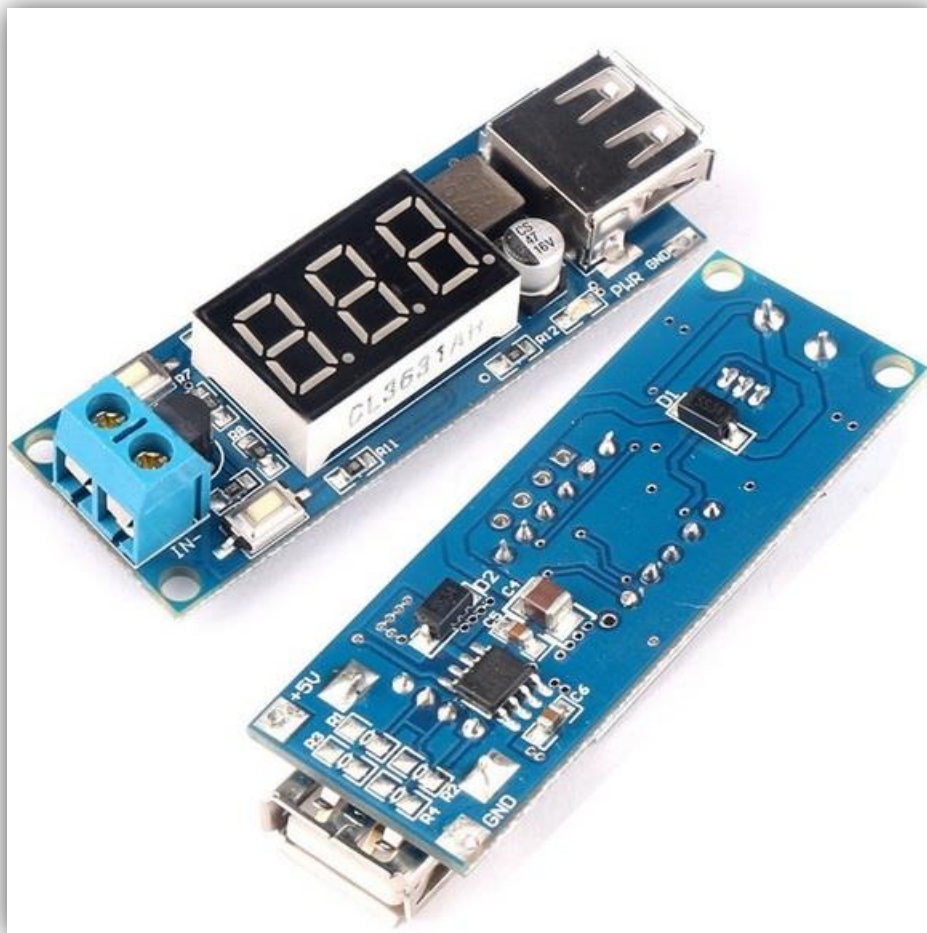
Submitted by James Butler, KB4LJV

Some of the newest amateur radios are SDR rigs. SDR means software defined radio. You can connect with an SDR radio via a new website which has internet links to SDR radios from all over the world. You can select a location from the list and bring up the website. It is now a virtual radio on your screen that you can set the mode, filtering, and even tune the radio for the frequency you want to hear. Different locations support different bands. The screens have a waterfall display so you can see all of the activity on a band. Just point to the signal you want to hear. This is a free service that can let you see band conditions in different parts of the world or check to see how your signal sounds at that location. The webpage also gets you familiar with how an SDR system works. The website address is <http://www.websdr.org/>

Amateur Hardware Update

Article and image submitted by James Butler, KB4LJV

More portable amateur equipment can be charged with a USB adapter. Supplying power to these devices during an emergency is required to have a functioning station. One nice product is a PC board to convert 12 VDC to the USB output of 5 VDC for charging. The 12 VDC source we use also needs to be monitored. This converter has a terminal strip to hookup the 12 VDC source, USB female connector for the 5 VDC output of the board, and a built-in digital voltmeter to monitor the input voltage. Input voltage can be 6.5 to 40 volts DC. Output is 5 volt DC at 2 amps. By hooking up a set of alligator clips or Powerpole connectors you have a nice portable USB power supply. The best part is the price is under \$5.00. Go to Ebay and search "dc to dc USB voltmeter."



Delta Ham License Training, 2017

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 2017 from Delta Classes 18 Technician 2 General 6 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.

Planned Classes

General Class 4-17 November 6 - December 11, 2017: A General Class is planned if there are 10 students by October 15th. If the class is held, it will be on six Monday nights from 6:15-9:30pm at EMHC ambulance company training room, 6972 Appling Farms Pkwy. If you are interested, send an email with your name, call, email address and cellphone number [to Joe](mailto:Joe.Lowenthal@arrl.org) with subject line: General Class.

Extra Class 1-18 January 6 - February 10, 2018: An Extra class is planned if 6 or more General Class hams sign up for the class by December 20th. If class is held, it will be held on 6 Saturdays from 9am to 1pm. If you are interested, send an email with your name, call, email address and cellphone number [to Joe](mailto:Joe.Lowenthal@arrl.org) with subject line: Extra Class.

Possible Technician Class

If General Class 4-17 does not have enough students by October 15th, then we will try to have a Technician class if there are ten students. If you know someone interested, have them send an email [to Joe](mailto:Joe.Lowenthal@arrl.org) with Subject line: Tech Class and put name, email address, and cellphone number in the body of the email.

ARES Emergency Coordinator Appointed

Submitted by John Reiners, KN4BVH, photo by Dan Lasley, NE7JN



Hello, my name is John Reiners, KN4BVH, and I have recently been appointed Emergency Coordinator (EC) for ARES in Shelby County. Giving back to the community has always been important to me, which is what led me to become interested in amateur radio.

A few months ago I was speaking with Joe Lowenthal, WA4OVO, about joining ARES. I quickly found out that not only could I join ARES, but there was a need for someone to fill the EC position so I stepped up and volunteered to fill this void. Some of the responsibilities I now have are:

- To promote and enhance the activities of the Amateur Radio Emergency Service (ARES) for the benefit of the public as a voluntary, non-commercial communications service.
- Manage and coordinate the training, organization and emergency participation of interested amateurs working in support of the community.
- Establish local communications networks run on a regular basis and periodically test those networks by conducting realistic drills.
- In times of disaster, evaluate the communications needs of the jurisdiction and respond quickly to those needs.

- Recruit new members for our ARES program to help make it a stronger, more valuable resource better able to meet more local needs.

So with that in mind, anyone wishing to join ARES can do so by filling out an [online application](#).

We meet the fourth Tuesday of each month at the Baptist Women's Hospital, 6225 Humphries Boulevard, in the conference room adjacent to the cafeteria.

We also have a weekly NET on Thursday evenings at 9:00pm on the 146.88 repeater (-600hz offset, 107.2 PL Tone). If anyone has any questions please contact me via [email](#) or at 901-230-3327.

Editor's note: Thanks to John for volunteering for this important role. John, I appreciate your standing up and taking on a significant position on behalf of the amateur radio community.

Voting in November!
Submitted by Dan Lasley, NE7JN

At the November Delta Club meeting we will be voting for these positions:

President	Steve Frazier, KK4VPT
Vice President	Bob Van Keuren, KM4SEB
Secretary	Steve Evans, KM4VYA
Treasurer	Linda Laseter, KJ4CTX
Director of Training	Joe Lowenthal, WA4OVO
Director of Publications	Bob Vawter, KW4RJ
Director of Meetings & Special Events ...	Scott Adams, KM4PMU
Director of Programs	Kevin Zent, K4KLZ

If a club member wishes to run for one of these positions, please contact [me](#) as soon as possible. To be considered for a position, you must be a member of the club and you must have attended at least six meetings since the November, 2016, meeting.

Puerto Rico Health and Welfare Traffic

Submitted by Ricky Chambers, KF5WVJ

This is a copy of an email from the ARRL regarding information and health and welfare traffic being sent into Puerto Rico from amateur operators state side:

"Advisory: Requests for Information from the Public and the Press

Many individuals have loved ones in Puerto Rico and they are understandably hopeful that Amateur Radio operators can relay messages to them. As a result, some are contacting amateurs with requests to pass message traffic to the island. At the same time, individual amateurs and clubs have reported that local press representatives have contacted them to request information about Amateur Radio involvement in Puerto Rico. This is likely to increase as word spreads in the national media about our activities.

For inquiries from the public, ARRL advises that these individuals should be informed that amateurs traveling to the island to support the American Red Cross effort will be tasked with handling outbound traffic only. With that in mind, members of the public should access the [American Red Cross Safe and Well System](#). Status information from friends and relatives in Puerto Rico will be entered into the system as it arrives from amateurs stationed there.

For press inquiries, please ask reporters to contact ARRL directly at newsmedia@arrl.org. A system has been established at ARRL Headquarters to respond to press inquiries in a timely and accurate manner."

If you get a request to pass traffic into Puerto Rico, please give them the information indicated in this email. There is still some traffic coming out of the islands; try tuning around the 20 meter (try 14.260 - 14.265 MHz) or 40 meter bands. The Net Controller for these nets will give you three names and phone numbers and the names of people on the island making the request to make a contact state side to let them know their family members are safe. Once you complete the contact via phone call, report back to the Net Control operator; he will then give you three more and so on.

The Seiuchy CW Aid

Submitted by Dan Lasley, NE7JN, contributions by Steve Nace, WB4MOR,
and Zeb Wisard, HB9FXW



As my XYL and I were riding our bikes recently near the eastern end of the Wolf River trail, I saw someone sitting at a picnic table with what appeared to be a magnetic loop antenna. Upon investigating I discovered Steve Nace, WB4MOR,

was operating CW QRP on 20 meters. In discussing CW with Steve, he told me about [Seiuchy](#), a free on-line aid to improving your CW skills.

Zeb Wisard, HB9FXW, the developer of Seiuchy, says, "Learn to ignore the padding and focus on what matters, what you should log. Headcopy isn't that hard, it's easy." Seiuchy is available for a phone or tablet and also includes a very useful customizable full QSO simulator.

Zeb's QTH is Switzerland and although he says, "English isn't my mother tongue," his descriptions are clear, precise, and infinitely better than I could do were I to attempt to document something in French!

If you are learning CW, check out Zeb's Seiuchy web site. His "Other CW training resources" includes a link to [Learn CW Online](#), another amazing CW resource mentioned (courtesy of Harold Crouch, KC9SZC) in a prior issue of Sparks.

What does "Seiuchy" mean? KB6NU's [Ham Radio Blog](#) says, "It comes from Seiuchi, the Japanese word for walrus, which in turn is translated into "Morse" in French. I pronounce [it as] "say-you-she" (but with kind of a French accent)."

Thanks to Zeb for a very useful CW resource and for permission to use his [logo](#).

YL News

Submitted by Linda Laseter, KJ4CTX

YL NET – Please join us each Saturday night at 8:45 p.m. on the 146.820 repeater for the YL Net.

Welcome to the YL Net Ann, WB4FAA, Doris, KJ4THA, and Lisa, NOAMO. We are so glad you joined us this month and look forward to hearing more from you.

Janice, KK4BB, and Stacy, KJ4MDA, had great participation this month when they called the YL Net. Good job, ladies. Net participation on my night however was somewhat less due to several of my regular check-ins being otherwise engaged. No problem. I appreciate all who checked in and I know the others were participating in good causes and will be back on the air with us this week.

YL LUNCHEON – We are always glad to see new faces at our YL luncheon and this month's luncheon was no exception with Doris, KJ4THA, and Janet, KN4FBI, joining us at Olive Garden. The food was good and the fellowship even better. We missed a few of our regulars but know they will be back next month.

Speaking of next month you will not want to miss our program luncheon at the Ellendale Church of Christ. Not only do we plan to have the Elmers back to help us with our radios and questions, but we also have a short program on protecting yourself in today's environment. We also have a great menu planned of homemade Bar-B-Q, baked beans, potato salad, deviled eggs, drink, and dessert for which we are charging a mere \$6.00 so you ladies do not have to cook.

Congratulations to Janet, KN4FBI, who won this month's door prize which was two battery operated lights. She was excited and knew just where she could use them.

See you at the October luncheon.

Our October luncheon will be:

11:30 a.m., Saturday, October 28, 2017

Ellendale Church of Christ (the regular DARC meeting location)

7365 US-70

Memphis, TN 38133

Our November luncheon will be:

O'Charley's

11 :30 a.m. Saturday, November 18, 2017

2844 New Brunswick Road (east of Wolfchase)

Memphis, TN 38133

HF Propagation, Part 13: "Unpropagation"

Submitted by Dan Lasley, NE7JN

For those of you who are superstitious, this month's propagation article is on bad luck in radio communications. I'm calling this article "*unpropagation*" as a way of distinguishing elements which foster good HF propagation from those nasty, devilish elements which hinder good propagation. Find your four-leaf clovers and lucky amulets, gather your karma, cast out the wicked, and let's begin.

In this article we ignore equipment failures, broken antennas, loss of power, and other bad luck and concentrate on nature's causes of poor propagation:

- solar wind
- coronal mass ejection
- lack of sunspots
- QRN from an uncooperative ionosphere
- QRN from thunderstorms
- The curse of 40M
- the D-layer
- sudden ionospheric disturbance

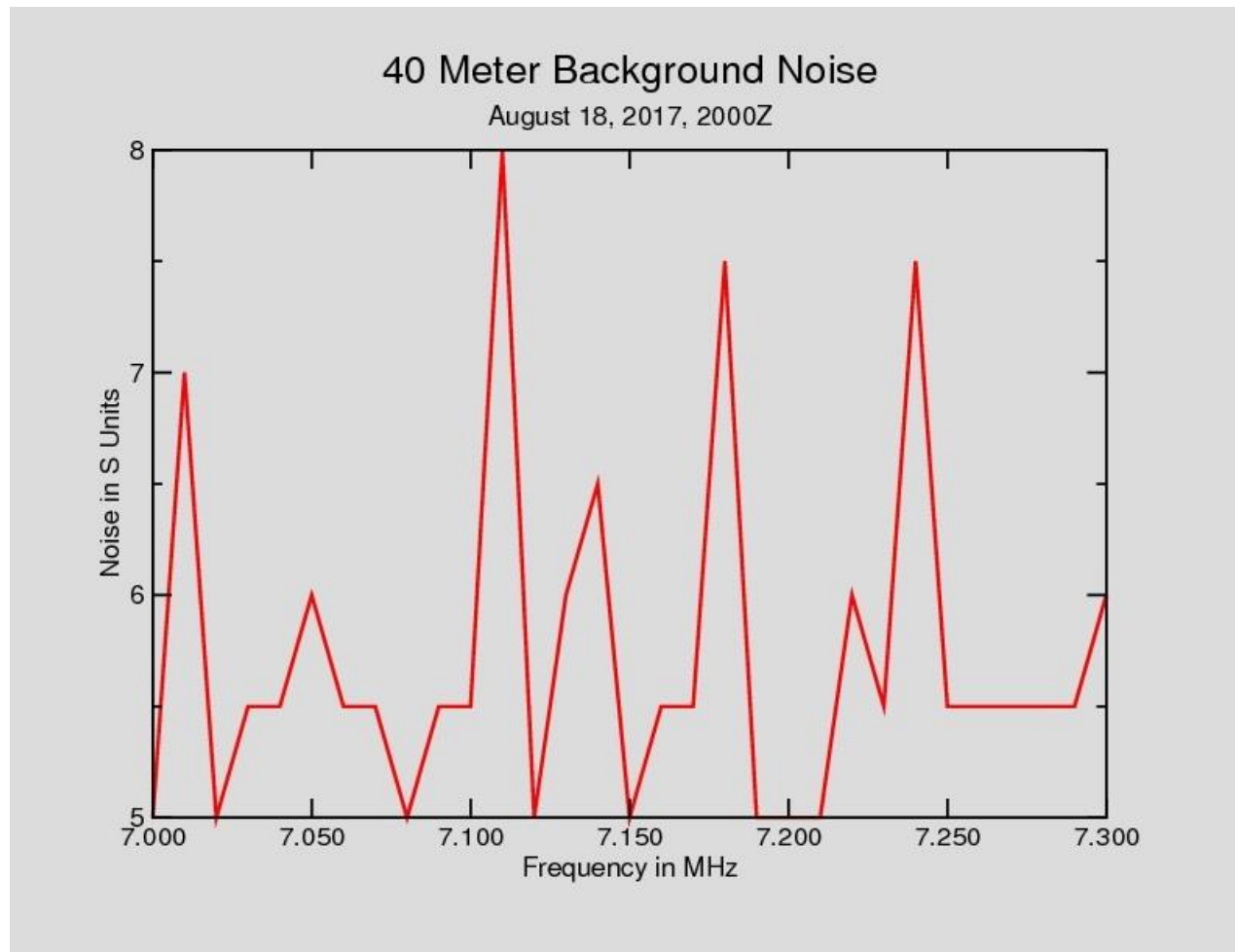
Paul Harden, NA5N, tells us the [solar wind](#) "is the constant outflow of gasses, electrons, and particles from the sun ... Disturbances to the solar wind, from a solar flare or coronal hole, can cause serious disruptions to HF by triggering a geomagnetic storm." The solar wind has a typical velocity of about 350 kilometers per second; "an increase to 600 km/sec. generally triggers a minor geomagnetic storm, around 1000 km/sec. a major storm, and much above that, a severe storm." Minor geomagnetic storms hinder propagation, with correspondingly stronger storms causing more hindrance.

We turn to [spaceweather.com](#) for a definition of a [coronal mass ejection \(CME\)](#): "a giant cloud of solar plasma drenched with magnetic field lines that are blown away from the Sun during strong, long-duration solar flares and filament eruptions." A CME, whether a direct strike on planet earth or a glancing blow, can cause geomagnetic storms and partial or complete radio blackouts. (There are instances in which a CME can temporarily enhance conditions, but we're discussing *unpropagation*, not good propagation.)

Sunspots do not contribute directly to good propagation (they are far too small), but a lack of sunspots indicates a reduction in the [ultraviolet radiation which positively affects the ionosphere's F-layers](#), the primary regions contributing to good HF propagation. [One](#)

[prediction](#) for the end of cycle 24 (the current cycle) is September, 2020. Let's keep our fingers crossed for an earlier end!

Another contributor to *unpropagation* is QRN, which has several sources, including an uncooperative ionosphere and static crashes from thunderstorms. Below is a graph of background noise in S units on 40 meters. At the time solar conditions were as follows: K = 3 (an unsettled geomagnetic field), solar flux = 82 (typical for this part of the solar cycle), and the solar wind was ripping along at 573 kilometers per second (approaching a minor geomagnetic storm). Note that the noise floor is S5 and the background noise peaked at S8 at 7.11 MHz. The difference between noise floor and noise peak is about 18 dB, a considerable difference!



Let's consider QRN from thunderstorms: if you're too close to a lightning strike and you haven't disconnected your antennas, your radio may go QRT permanently and if you are unlucky, you may follow it!

In "[HF Propagation, Part 5](#)" ("The Curse of 40 Meters") and "[HF Propagation, Part 6](#)" ("The Curse of 40 Meters, Part II") I covered a noise source that several of us on 40 meters hear on a regular basis. As I said in Part 5, I'm guessing this noise is some weirdness in the ionosphere but I have no proof.

Especially on the lower end of HF, the D-layer acts like a wet blanket to soak up your RF. In fact, you get smacked twice, once when your signal tries to penetrate the D-layer going outbound from your QTH and a second time when your refracted signal tries to penetrate the D-layer again as it is inbound to the remote QTH. (I'm ignoring ground waves.) If you have the option of operating with both endpoints of a QSO in the dark, you can avoid the wet blanket effect of the D-layer.

["Sudden Ionospheric Disturbances](#) or SIDs are often experienced on the HF or short wave bands where they may also be called blackouts, short wave fades (SWF), or they are sometimes referred to as the Dellinger effect, after the person who first noted them. As the name implies they occur suddenly, and they cause a blackout of ionospheric radio propagation for a number of hours. This may cover part, or even all of the HF radio spectrum."

I hope you can avoid *unpropagation* to the degree possible. For our English readers, good luck. For our foreign readers, *veel geluk, viel gluck, bonne chance, buona fortuna, boa sorte, udachi, buena suerte, lycka till, and 頑張つて*.

If the gods of propagation issue lemons, make lemonade, then go play a round of golf, take a walk, or ride a bike, and try HF again later.

Homebrew is alive and well!

Submitted by Dan Lasley, NE7JN, contributions by Walter Legan, KA4KXX

One morning the 40 meter group heard a very weak signal. The locals had no copy, but Allen, WB4MIO, in Eufaula, AL, and Ken, NT0Y, in Orlando, FL, both copied the weak signal. Someone asked the weak signal guy to stick around. A few minutes later his second attempt to get through was no better than the first, but thanks to the ionospheric gods of propagation, his third attempt arrived with an S6 signal strength and I copied every word. The weak signal was from Walter Legan, KA4KXX, who is also in Orlando and is 672 air miles from my QTH.

Walter told us his rig is a six watt, homebrew, scratch-built version of a very popular design called the BITX, which stands for "Bi-Directional Transceiver." With only six watts, no wonder we had so much trouble hearing him on his first two attempts! Intrigued by Walter's homebrew rig, I asked for details. Walter obliged, so I am using his words to describe the parts.

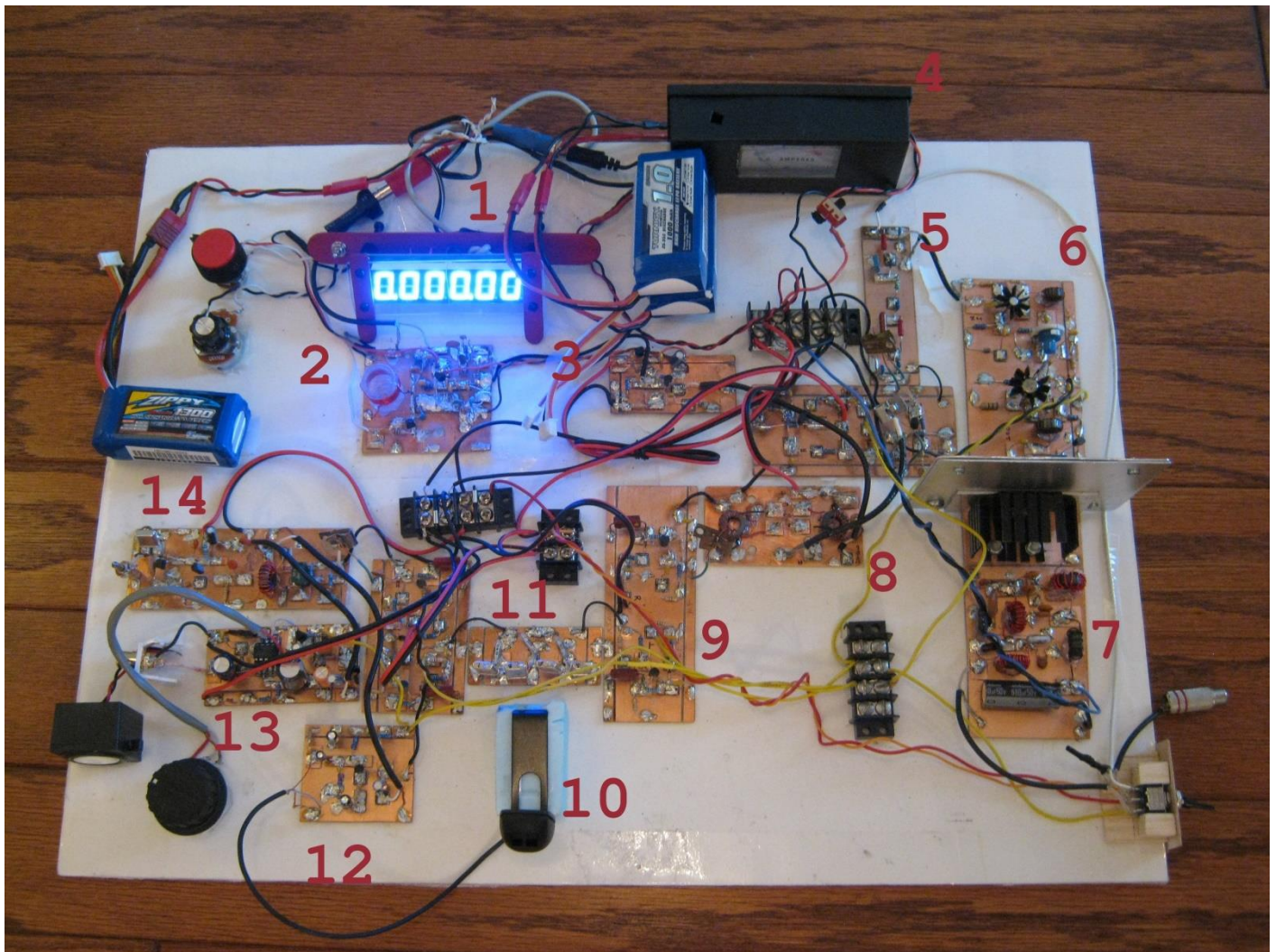


Photo by Walter Legan, KA4KXX.

1. "A 6-digit frequency counter, commonly available on EBay for about \$10; it can be programmed to show the actual frequency of operation while monitoring the VFO frequency.
2. The circuit board just right of "2" in the photo is the VFO, which in my case runs from 3260 to 3430 KHz to cover the entire phone portion of the 40 meter band plus the upper part of the CW band so I can hear the [Sunrise Net](#).
3. The circuit board just right of "3" is the VFO buffer and VFO power supply regulator.
4. The meter monitors DC current flow for the final RF power amp stage, 1 amp maximum.
5. The circuit board just to the left of "5" is a bandpass filter; the board immediately below is a bi-directional amplifier.
6. This board is a transmit pre-amp and driver.
- 7-9. These circuit boards are an RF power amp (7), a mixer (8), and a bi-directional amplifier (9).
10. This is a surplus microphone designed for mounting on an automobile visor with the bracket bent 90 degrees from the original positional. I plan to add CW transmitting capability to this rig at a later date.
11. This board, just below "11", is a crystal ladder filter, which in my design is at 10.56 MHz; the circuit board just to the left of "11" is a bi-directional amplifier.
- 12-14. These circuit boards are a microphone pre-amp (12), an audio amplifier (13), and a BFO and modulator/demodulator (14).

The large red knob in the upper left corner is the coarse frequency adjustment, the smaller knob below that is fine frequency adjustment, and the large knob in the lower left is the volume control. Except for a few other adjustments during initial calibration, no other adjustments are necessary to operate this radio!

The lower right corner has an antenna connector and the transmit/receive switch. The power switch is shown dangling in front of the DC ammeter."

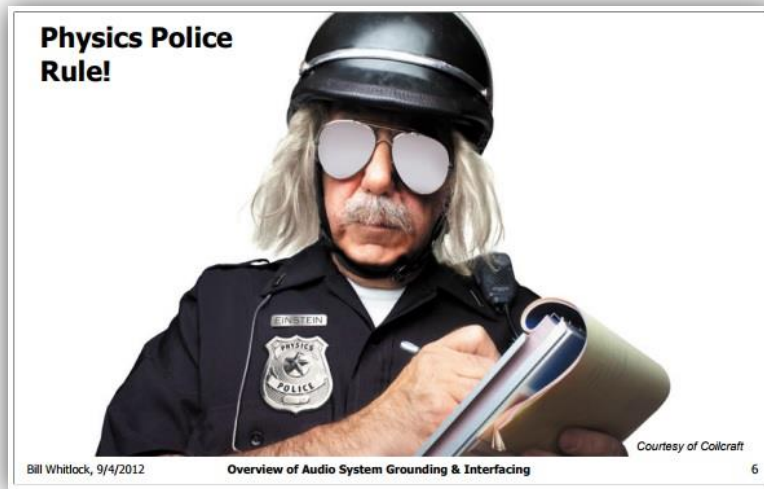
Walter told me he uses an east-west V-shaped dipole 50 feet long and about 30 feet high with a coax feedline and balun. His antenna length was dictated by the distance between two trees, so he electrically lengthened the dipole with loading coils.

Walter, thanks for your feedback and congratulations on your homebrew rig! Your signal covered 112 miles per watt!

Walter plans a homebrew linear for this rig. Let us know how it turns out, Walter.

The "Pin 1 Problem" and Amateur Radio

Submitted by Dan Lasley, NE7JN, contributions by Larry May, K4QZF



You have to love a presentation that on page six has Officer Einstein saying, *"The immutable laws of physics rule everything electric and magnetic ... period!"*

The presentation, "[An Overview of Audio System Grounding & Interfacing](#)" is by Bill Whitlock, "a widely-recognized expert on power, grounding, and signal interfacing through his seminars and lectures at trade shows and universities."

Neil Muncy, 1938-2012, was a [noted audio engineer](#) who is remembered for many accomplishments, but especially for his efforts in reducing hum and electromagnetic interference (EMI) in audio systems. In Neil's 1995 paper, "Noise Susceptibility in Analog and Digital Signal Processing Systems," audio authority [Jim Brown](#) says, "Neil Muncy described a common equipment design error that allows current flowing on the shields of audio wiring to enter equipment and cause audible interference. He called this design error "the Pin 1 problem," because it was an improper connection of the shield terminal, pin 1 in XLR connectors." ([Wikipedia](#) says an XLR connector "is a style of electrical connector, primarily found on professional audio, video, and stage lighting equipment.")

If you transmit a signal other than CW or frequency shift keyed RTTY, you are susceptible to the amateur equivalent of Neil's Pin 1 Problem. While modern radios with nothing more than a microphone don't typically have hum or EMI issues, when you connect a computer to a radio (whether directly via USB or through an interface), you may introduce ground loops and other problems.

I have discovered a wealth of knowledge about the Pin 1 Problem and much of it applies to amateur radio operations. Here is a brief synopsis of several papers on the problem:

[Shielding and Shielded Cables](#) by Ward Silver, N0AX. An excellent overview of cabling practices, it also discusses the Pin 1 Problem.

[Power and Grounding for Audio and Video Systems, A White Paper for the Real World -- International Version](#) by Jim Brown. An excellent overview of power and grounding issues and their effects on audio and video.

[Design of High-Performance Balanced Audio Interfaces - Part 7](#), by Bill Whitlock. Bill says, very succinctly, "The pin 1 problem effectively turns the SHIELD connection into a very low-impedance SIGNAL input!" His article has more to offer, including a design checklist.

[Understanding, Finding, & Eliminating Ground Loops](#) by Bill Whitlock. Bill gives us the background necessary for understanding ground loops then shows a number of techniques for dealing with them. He also discusses squelching RF. Bill refers to analog wizard Bob Pease on page 12. Any reference to Pease is a good thing in my way of thinking.

If you have a pin 1 problem or want to avoid this problem, especially if you design your own radio/computer interface, read the above references.

Thanks to Larry May, K4QZF, for feedback on FSK RTTY.

The NCDXF/IARU Beacon Network

Submitted by Dan Lasley, NE7JN, contributions by Elwood Downey, WB0OEW

In the early 1970s, the recently established Northern California DX Foundation (NCDXF) began looking for a project for the amateur radio community. After considering several possibilities, they settled on creating a world-wide beacon network. The history of their [beacon project](#) is an interesting read.

The NCDXF eventually established [18 beacons](#) at widely scattered locations around the planet. Each beacon transmits on 14.100, 18.110, 21.150, 24.930, and 28.200 MHz.

The [transmission schedule](#) is a real-time indication of which beacon is active and on which band:

- "Each beacon transmits once on each band once every three minutes, 24 hours a day.
- A transmission consists of the callsign of the beacon sent at 22 words per minute [WPM] followed by four one-second dashes.
- The callsign and the first dash are sent at 100 watts. The remaining dashes are sent at 10 watts, 1 watt and 100 milliwatts.
- At the end of each 10 second transmission, the beacon steps to the next higher band and the next beacon in the sequence begins transmitting."

On a recent morning at about 1400Z, I heard the 14.100 MHz 4U1UN beacon in New York. The 100 and 10 watt transmissions were clear from the rig's speaker and I could hear the one watt transmission with headphones.

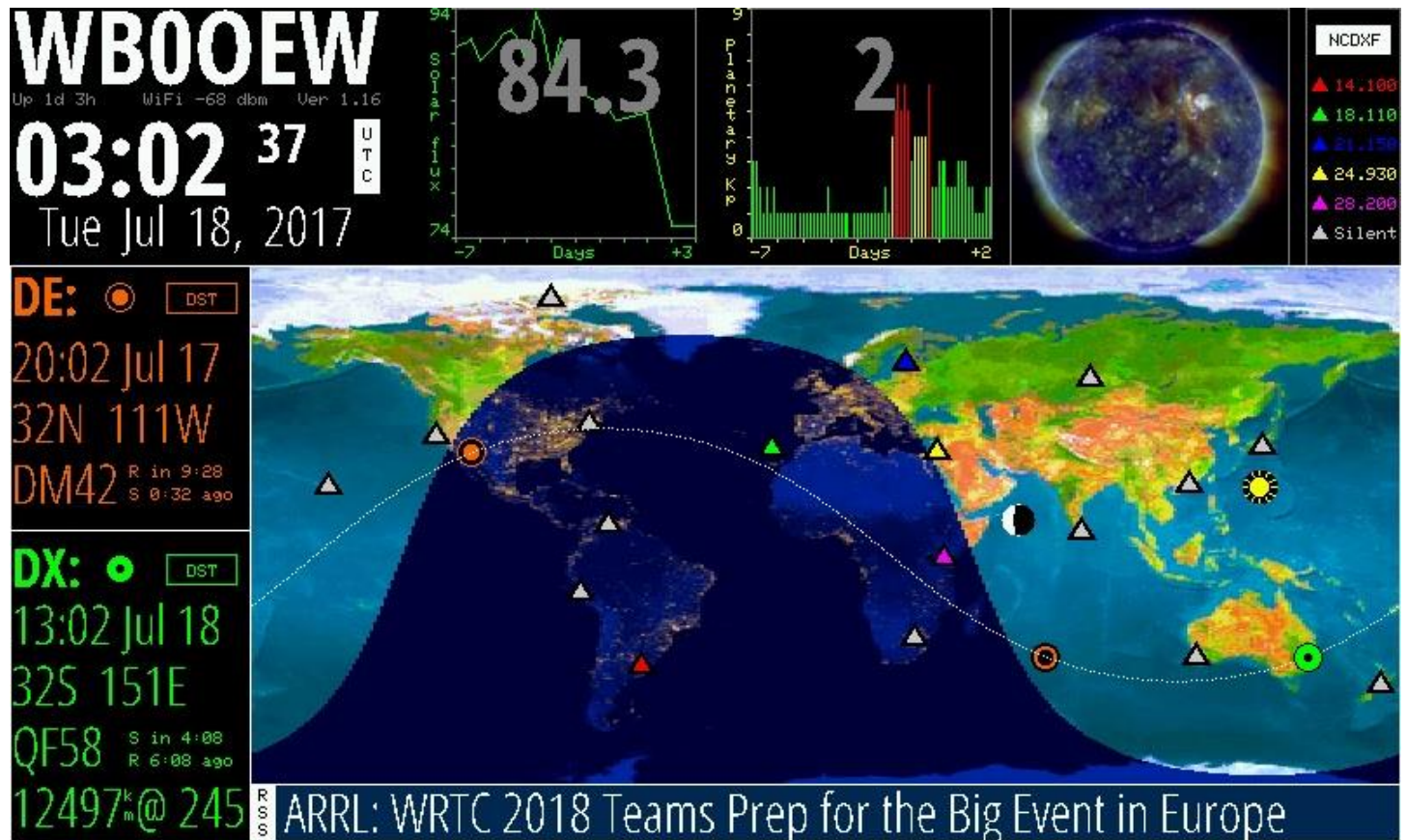
A note to the CW-averse reader: you can use the NCDXF beacons even if you can't copy 22 WPM or don't have access to the NCDXF transmission schedule. I'm learning to copy CW but there is no way I can reliably copy CW at any rate close to 22 WPM. I've discovered, however, I can usually copy at least the first letter of the beacon call sign, although I may have to listen for several repetitions.

If the first character of the beacon call sign is "4" then the call sign has to be one of 4U1UN, 4S7B, or 4X6TU. That means we've eliminated 15 of the 18 possibilities. I've also discovered it's easier for me to copy the last character of a call sign than any of the characters in the middle. The last letter of the three call signs beginning with "4" is N, B, or U. N (dah-dit) doesn't sound much like B (dah-dit-dit-dit) or U (dit-dit-dah), so that helped narrow down the call sign to 4U1UN in New York.

If you're up for a challenge but you don't know CW, listen to a beacon frequency, consult a [CW chart](#) or [CW graphical representation](#), and try to figure out which beacons you're hearing. No, it isn't easy, but you chose amateur radio for a hobby, not basket weaving. The challenges are more difficult, but the rewards are correspondingly more satisfying.

The NCDXF/IARU [Beacon Network, 1979-present](#) provides links to an NCDXF beacon article from QST ([part one](#) and [part two](#)) and to its [update](#); all are worth reading. Don't miss "[Tools and Programs for Beacon Listeners](#)." There's much to explore at this site.

In the October, 2017, issue of QST, Elwood Downey, WBOOEW, describes his [amazing HamClock](#), a device to "show accurate time, geography, time zone, solar activity, sunrise and sunset times, Maidenhead locators, beam heading, Northern California DX Foundation (NCDXF) beacons, news headlines, and other timely information." Elwood's Raspberry Pi-based unit includes three pre-assembled modules, a display, wire interconnects, and a couple of resistors!



The upper right corner of his HamClock shows, in real time, the active NCDXF beacons.

Elwood told me his career has been in astronomical instrumentation, with his current project being a next-generation adaptive optics control system for the [Multiple Mirror Telescope](#).

I first discovered Elwood's work in the late 1980s through his Ephem astronomical software for PC DOS. Ephem provided an amazing solver for astronomical problems. I later switched over to [XEphem](#) running under Linux. If you have an interest in astronomy, you owe it to yourself to check out XEphem!

Thanks to Elwood for permission to reproduce the [image](#) of his HamClock.

September Trivia Question Winner

Submitted by Dan Lasley, NE7JN

Page 30 of the September [Sparks](#) showed coaxial cable equations from Texas Instruments' [Analog Engineer's Pocket Reference](#).

If you solve equation 89 for C and equation 90 for L, then plug C and L into equation 91, you'll get an answer which is different from the result shown in equation 91!

Coaxial cable equations

$$\frac{C}{\ell} = \frac{2\pi\epsilon}{\ln\left(\frac{D}{d}\right)} \quad (89) \text{ Capacitance per length}$$

$$\frac{L}{\ell} = \frac{\mu}{2\pi} \ln\left(\frac{D}{d}\right) \quad (90) \text{ Inductance per length}$$

$$Z_o = \sqrt{\frac{L}{C}} = \frac{1}{2\pi} \sqrt{\frac{\mu}{\epsilon}}$$

INCORRECT → ← *CORRECTED*

$$= \frac{1}{2\pi} \left(\ln\left(\frac{D}{d}\right) \right) \sqrt{\frac{\mu}{\epsilon}}$$

Last month's trivia contest was to provide the correct answer for equation 91 given the prior two equations. David Webb, KV4QI, gave the correct answer and won two tickets to Range USA. Congratulations, David!

His answer is shown above.



David has won the last two trivia contests. Come on, folks, give David some competition on Sparks' trivia contests!

Odds and Ends

Submitted by Dan Lasley, NE7JN



Ten-Ten sponsors eight QSO parties each year. The [International Fall CW QSO Party](#) starts 0000 UTC Saturday, Oct. 21, and ends 2359 UTC Sunday, Oct. 22. If you aren't familiar with 10-10, the "[Ten-Ten International Net](#)", or 10-10 for short, is an organization of amateur radio operators dedicated to maintaining high levels of amateur radio communications on the 10-meter amateur band."



The [CQ World Wide DX Contest \(SSB\)](#), starts 0000 UTC Saturday, Oct. 28, and ends 2359 UTC Sunday, Oct. 29. The web site says, "Over 35,000 participants take to the airwaves ... with the goal of making as many contacts with as many different DXCC entities and CQ Zones as possible." Need QSL cards? Check it out!

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 2017 are listed in *italics*.

Public Service Events

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

2017 Date	Event	Contact Information
May 6	March of Dimes March for Babies	Linda Laseter, KJ4CTX
June 17	Diabetes Tour de Cure	Pat Lane, W4OQG
Sep. 23-24	2017 Bike MS: FedEx Rock-N-Roll	Darrell Sheffield, KK4D
Oct. 7	Bluff City Blues 100 Ride	to be determined
Dec. 2	St. Jude Marathon	Roger Schlichter, WR4R
2018 Date	Event	Contact Information
Jan. 14	Swamp Stompers 50K/25K Run	Ken Laseter, KI4AOH

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>

As of July 1st, 2017, you must send a copy of or show an ARES membership card to keep from paying the \$25 surcharge for new plates or renewals. If you send a renewal in by mail with the lesser amount and do not include a copy of your ARES membership card, they will return your renewal and check due to insufficient funds.

If you want to become an ARES member, complete an ARES Registration Form FD-98 at <http://www.arrl.org/files/file/Public%20Service/fsd98.pdf>. Send completed form to Shelby County ARES c/o Joe Lowenthal, 6675 Ashbridge Cove, Memphis, TN 38120 or email to wa4ovo@gmail.com.

If you are not an ARES member and you do not want to pay the \$25 surcharge for renewal, you can get a regular plate for no additional charge. You will need a copy of your previous registration or there is an additional \$3 charge.

If a spouse is also a ham, only one of the couple needs to be an ARES member if the auto is registered in both names. If registered in the spouse's name, the spouse must have an ARES membership card.

The following link from the Tennessee Department of Revenue <https://www.tn.gov/revenue/article/emergency-safety> has the Amateur Radio auto tag information and listed below:

Amateur Radio

Available to: Tennessee residents who hold an official FCC-issued amateur radio license (unrevoked and unexpired).

Documentation Required: Application supported with copy of the FCC Amateur Radio license.

Cost: Annual fee of \$51.50; Members of emergency, rescue squad and Amateur Radio Emergency Service - \$26.50.

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](#). The 2017 membership renewal fee remains a very modest \$20 for an individual, with an additional \$5 fee for family membership. Thanks for Your Active Support of Delta Amateur Radio Club!

Memphis Area VHF/UHF Nets

Updated September, 2016

Name of Net	Freq. MHz	Offset/Tone	Local Time	Day of Week
Delta Club Information Net	146.820	- (107.2)	8:00p	Daily
YL Net	146.820	- (107.2)	8:45p	Sat
Mid-South 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 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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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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7365 Hwy 70, Bartlett TN



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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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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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