

From your President

Summer is just about here and it's time to get to work on all the events we support with Ham radio communication!

It's hard to believe May is here again and Field Day 2017 is just around the corner! I have selected a new Field Day Chairman, Jean Morgan, KG7NJQ, and we need to do our best to give him all the support needed to execute FIELD DAY in the HARC tradition of 4A excellence! Expect to see and hear more about the immense planning needed to ensure we have another record year!

Our Friday evening programs have been excellent, and we need more volunteers to give a presentation or find someone who can! Let us know what you want to see, hear and experience as part of our regularly scheduled events; either via the HARC email reflector, or at one of the upcoming meetings. The Fox Hunt was a lot of fun, and it was the first time for several members!

A weekend get-together at Monte Sano State Park sure would be a great way have some fun with fellow HARC members! Imagine sitting in the shade in the beautiful Spring weather, surrounded by Ham friends and lots of (QRP) radios! All we need is someone familiar with the park to set it up and coordinate it with the club (K4BFT!) to get it scheduled!

Our Amateur Radio Training classes at the Monrovia Middle School have been a huge success and next year they will be expanded, due to the demand for more! I sincerely hope we can reach out to other schools and duplicate this program with the same results in the next school year!

The Redstone Protection Day event was a big success also, and the calendar will soon be filling up with all the usual Spring and Summer events, such as the and the Spring Krusher, Summer Sizzler and All-You-Can-Eat bicycle rides. Please sign up to assist with one or more of these events. There are lots of upcoming opportunities for fun and fellowship with your fellow HARC operators!

I hope that throughout this last year, I have made it clear that we, as VOLUNTEERS, have contributed to the club and club members' participation, fellowship, readiness and FUN! It has always been my top priority to emphasize member involvement and participation. In the short year I have served as your President, it has been my honor and delight to provide my services and abilities to our outstanding club and to try my best to uphold the HARC traditions of selfless public service and technical excellence! I accepted the challenge knowing the position would be worth the effort to help keep the club moving in the right direction. I have barely achieved



Table of Contents

Letters and Reader Contributions	2-3
HARC Meeting Minutes	4-7
Club Calendar	8
HARC Treasury Report	9
ARES / RACES Meeting Minutes	10
The Power Equation	11
Program / Project Leaders	12
License—Testing Info	13
For Sale	13

From your President—continued

half of the milestones on my checklist, so it will be up to my successor to carry on with the momentum we now have.

I thank all the members of my Board of Directors for their excellent support and tireless efforts. Most of them are staying in their positions, so you are all in good hands! I would also like to thank the previous board and especially Bill Bathgate, KD8IGK, for his trust, faith and influence with the previous election committee (that's a joke!) to nominate me for this position as your leader.

Thanks also to every one of you HARC members for supporting me and keeping the club active and strong!

73 Everyone! God Bless and I'll see you on the radio!
Kevin Ivey, K4IVE

The Huntsville Hamfest needs your help! Each year our Club supplies volunteers to the Hamfest organization to help the event live up to its tagline "The friendliest Hamfest" Our Club's volunteers assist the vendors and flea market visitors with moving their precious cargo in and out of the Arena and numerous other tasks during the event to ensure a smooth-running weekend.

Visit www.hamfest.org and click on the "Volunteers Click Here" link on the left.

The Huntsville Amateur Radio Club®

Club Officers & Info

Kevin Ivey	K4IVE	President	president@harc.net
M.D. Smith	WA4DXP	Vice President	mdsmith@hiwaay.net
Craig Reinhart	KD4IYD	Secretary	clreinhart41@gmail.com
Bob Burns	K4RHB	Treasurer	treasurer@harc.net
Jack Hemby	W5WQQ	Officer at-large	JHemby@knology.net
John Boyette	KK5KKT	Officer at-large	kk5kkt@juno.com
Tom Hatter	K4AKC	Officer at-large	k4akc@arrl.net

Meeting location: Red Cross Building, 1101 Washington St. Huntsville, AL 35801

Meeting time: Every Friday, 7:30 PM (except on major holidays)

Mailing address: HARC, 117 Honor Way, Madison, AL 35758

Visitors welcome at all meetings.

Club callsign: K4BFT (<http://www.qrz.com/db/K4BFT>)

Website: www.harc.net

Mail reflector signup: follow the link below the HARC logo on the home page

Letters & Reader Contributions—continued

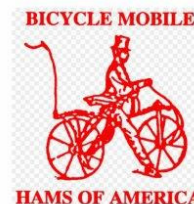
The Alabama QSO Party is just around the corner – **June 3 11 AM to 11 PM** (local). This event is perfect practice for Field Day... as an Alabama resident the rest of the country is trying to contact you! For the adventurous, you could scope out and operate from a less populated county and be REALLY popular on the bands. For complete rules and more operating suggestions, visit <http://www.alabamagsoparty.org/2017%20flyer%20new.pdf>

As a result of feedback from several of you guys, Saturday, May 6, 2017 at 1:00 pm is the date and time the inaugural meeting of the Bicycle Mobile Club. There are no dues. We will take our ride afterwards for those of you who want to go (or just attend the meeting if you wish). Distance 6-8 miles at very easy pace.

Meet at my office & parking area.
Civic Plaza Building
307 Clinton Ave. W., Suite 100
Corner of Church St. & Clinton Ave.

Opposite corner from Regions Bank 7 story building. Parking lot is on side of building on Church Street. I will have the front door unlocked, so come in, first door on the left that Says "Smith Broadcasting" on the door.

73,
M.D. WA4DXP
for Club KM4MNE KILO MIKE 4 "MIGHTY NICE & EASY" bike rides.



KM4MNE

Huntsville Bicycle Ham Radio Group

Had the MFJ Cobweb antenna assembled on the ground (on a tripod) for several months. Got it up with the nice weather yesterday, and the help of two good strong men. Still took us all 3 working for 4 hours to get it finished. I had to make and pre-drill 2x4 wood blocks to bolt onto the 6x6 gate post and clear overhangs (done several days earlier) before we could start to assemble antenna on the Rohn TV type of telescoping steel tower. It's basically as self supporting with nylon guys at the top for a bit of stability. Sections are not nearly telescoped out to the full 42' height, but clears the tree just underneath it. It is 5 band 20, 17,15,12,10 meters. I could only test it on 20,since other bands were dead late yesterday. It only had about 1-2 S-units of gain over my all band OCF Windom I have been using. I think it will perform better at higher frequency, particularly the WARC bands. In first photo, all feedlines come to the little black box at the end of the short pole. You adjust for center frequency for each band on the junction plastic strips on the other side. Pattern is nearly omni directional and horizontal polarized. Just FYI.

73,
M.D. WA4DXP



Meeting Minutes by Craig KD4IYD

April 7, 2017

Announcements:

Kevin K4IVE called the meeting to order at 7:40 PM by welcoming 23 members and 1 visitor.

Kevin K4IVE mentioned that there was a potential volunteer for Field Day Chairman and that he would announced that to club at next week's club meeting.

Kevin K4IVE announced that we are still in need for a Redstone Protection Day Chairman. If you are interested in volunteering please see Kevin.

Rick KE4IOH noted that when you go to Kroger's you can donate part of your purchase to the club, by simply letting the cashier know that you wish to do so. See Rick for further details.

Old Business:

Kevin K4IVE mentioned that the Amateur Radio class at Monrovia Middle School was canceled this week because we had a lot of stormy weather. The class will resume next week at its scheduled time.

New Business:

Steve KD2JSW, one of the club's property clerks, stressed that if you know where some of the club's property is or have some of the club's property please let him know so that he can account for all of the club's assets. Bob K4HRB mentioned that \$200 had been appropriated by the board to buy a locker to secure some of the club's assets and that he would get together with Steve next week to make that purchase.

Kevin K4IVE announced the members of the Nominating Committee, they are: Tom-KG4CUY -Chairman, Dick-W1TV, and Leigh-WD4CPF.

Tom KG4CUY noted that the nominations that they have received so far are the following: M.D.-WA4DXP-VP, Bob-K4HRB-treasurer, Craig-KD4IYD-Sec. and members at large Jack-W5WQQ and Tom-K4AKC. Tom went on to stress that we are still looking for a nomination for president and a nomination for member at large. He went on to proclaim that the nominations are still open and encourages anyone who is interested in holding office please step forward and make themselves known to the nomination committee.

The business meeting adjourned at 8:12 PM

Program: E -HAM Practice General Exam conducted by Kevin K4IVE

Everyone took the exam as a group and voted on the answers. There was much discussion and much learned. It was an interesting experience that showed us what we remembered, forgot and the knowledge we gained along the way.

The meeting adjourned at 9:05 PM

April 14, 2017

Meeting Minutes—continued

Announcements:

Kevin K4IVE called the meeting to order at 7:30 PM. He then welcomed all members and visitors. He asked the members to introduce themselves by name and call sign. There were approximately 26 members and 2 visitors present.

William KK4FDF announced that there would be Fox Hunt on Friday two weeks from tonight April 28, 2017. More information will be forthcoming on the Fox Hunt.

Old Business:

Leigh WD4CPF gave an update on the Monrovia Middle School's enrichment class on amateur radio for this week. He said that school was out Friday, so there was no class and nothing to report.

Dick W1TV gave a brief report from the Nominating Committee. He mentioned that all but one of the positions had at least one person running for that office. He went on to say that they had a lead on who to approach to be nominated for that position. He then said there is one week left to come forward and let it be known if you are interested in one of the positions.

Steve KD2JSW noted that the storage locker that was mentioned at last week's meeting has been purchased. Another member of the club mentioned that we might look into school lockers that are being taken out of schools that are being closed down.

Kevin K4IVE expounded that we are still looking for a Chairman for Redstone Protection Day which is a week from Thursday. Warren KJ4RAQ said that he would take on that responsibility and several others step forward to volunteer.

Dick W1TV stated that he needed volunteers to help in communication for the Spring Crushers Bicycle Ride that will take place on Saturday, May 6, 2017. He passed around a list, so that you can sign up to help. For more information or to volunteer please see Dick.

New Business:

Kevin K4IVE announced that we are looking for a Chairman to set up communications for the Bike MS Ride. He went on to mention that this is a big event, as far as number of participants, with 6 rest stops. Anyone wishing to volunteer for this position or help please see Kevin.

Kevin K4IVE mentioned that we needed to start planning the Club Fun Day. He is asking someone to step forward to be chairman of this endeavor. It has \$225 already set aside in the budget. For more information or to volunteer see Kevin.

Bob K4HRB gave an abridged treasurer's report: checking \$8194.72, educational materials account \$48.42, go kit account \$33, the total for all accounts \$8305. A complete financial report can be found on the HARC website.

The business meeting adjourned at 8:10 PM

Program: An Episode of Amateur Logic TV was shown.

During the show Kevin K4IVE logged in to the live chat room for the show and received a shout out for the club.

Meeting Minutes by Craig KD4IYD

The meeting adjourned at 9:30 PM.

April 21, 2017

Announcements:

M. D. WA4DXP called the meeting to order at 7:30 PM. He welcomed all members and visitors. He then asked the members to introduce themselves by name and call sign. There were approximately 29 members and 2 visitors present.

Rick KE4IOH mentioned that if you want to volunteer for the Huntsville Ham Fest you need to go to the Huntsville Ham Fest website and fill out the form for volunteering.

M. D. WA4DXP thanked Mark N4BCD for his always excellent newsletters, which was met with a much deserved round of applause by the club. He then went on to say that Mark is always in need of good articles to print in the VOX. Mark N4BCD concurred with that sentiment.

Old Business:

John N4CNY gave an update on the Monrovia Middle School enrichment class on Amateur Radio. He revealed that he had been gone the last two weeks but due to testing at school they had not held the enrichment class. This week's class was on antennas and the students seem to pick it up really quickly. Testing for the Technician Class License will take place in approximately 3 weeks. He thinks that about 75% of the class will pass the test. M. D. thanked him and his crew for all their hard work. He was given a hearty round of applause.

Dick W1TV announced the updated list of nominees running for next year's officers. They are: Pres.-Billy-KM4BGF, VP-M. D.-WA4DXP, Treas.-Bob-K4RHB, Sec.-Craig-KD4IYD, For the 3 Member at Large Positions: Mark-N4BCD, John-KK5KKT, Tom-K4AKC, and Jack-W5WQQ. He mentioned that the nominating committee is still taking nominations so if you are interested please let the nominating committee know. The election will be held on Friday May 5, 2017

New Business:

M. D. WA4DXP announced that the club had a new applicant for membership. He is: Jason-KK4FZN. The club approved his membership unanimously.

The business meeting adjourned at 8:00 PM.

Program: Old Timers Night emceed by M. D. WA4DXP

Leigh, John, M. D., Bob, and Jack and several others regaled us with their humorous stories of how and when they got into amateur radio, their first rigs, and their reminiscences of all the fun they've had and all the friends they have made. They were greeted at the end of the evening with a thunderous round of applause.

The meeting adjourned at 8:55 PM

April 28, 2017

Meeting Minutes—continued

Announcements:

Kevin K4IVE called the meeting to order at 7:35 PM. He welcomed all members and visitors. He then asked the members to introduce themselves by name and call sign. There were approximately 33 members and 3 visitors present.

William KK4FDF revealed the rules for tonight's program then left to hide the Fox. to

Rick KE4IOH mentioned that he is looking for volunteers for the Huntsville Hamfest. Please go to the Huntsville Hamfest website and click on volunteers and fill out the form. He stated that he needed more volunteers.

Kevin K4IVE declared that Redstone Protection Day went well.

Old Business:

John N4CNY gave an update on the Monrovia Middle School enrichment program on amateur radio. He said that on Friday, May 5 they will cover the subject of Coax cable. On Wednesday May 10 they will cover the topic of Safety. Then on Friday May 12 the technician class exam will be given. On Friday May 18 there will be an awards ceremony for the class. This will end the enrichment program for this year. He added that this class was used as a barometer to see if other organizations could be used as enrichment programs for the school. The assistant principal stated that not only are we welcome back next year but they want to expand the program to include other organizations. John and all the other volunteers were treated to an appreciative round of applause for all their hard work.

Tom KG4CUI the chairman of the nominating committee stated that no new nominations have been received since last week. He did stress, however, that nominations will be taken until the voting takes place at the Friday, May 5, 2017 meeting.

New Business:

Kevin K4IVE revealed that the Field Day Chairman is John KG7NJQ. He stressed that we all need to support John and help him in any way we can to make Field Day a success.

The business meeting adjourned at 8:05 PM.

Program: Fox Hunt conducted by Hunt Master William KK4FDF

Officer Election Night—May 5

Club Calendar

30-Apr	1-May	2-May	3-May	4-May	5-May	6-May
					Officer Elections / Monrovia School Test Day	License Exam & Spring Crusher Bike Ride (Elkmont HS)
7-May	8-May	9-May	10-May	11-May	12-May	13-May
		NADXC Meeting				
14-May	15-May	16-May	17-May	18-May	19-May	20-May
		LCARA			Dayton Hamven- tion	Dayton Hamven- tion
21-May	22-May	23-May	24-May	25-May	26-May	27-May
Dayton Ham- vention						
28-May	29-May	30-May	31-May	1-Jun	2-Jun	3-Jun
	Memorial Day				Officer Installation	License Exam & Bike MS (James Clemens HS)
4-Jun	5-Jun	6-Jun	7-Jun	8-Jun	9-Jun	10-Jun
11-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun	17-Jun
		NADXC Meeting				
18-Jun	19-Jun	20-Jun	21-Jun	22-Jun	23-Jun	24-Jun
					Field Day Setup	Field Day
25-Jun	26-Jun	27-Jun	28-Jun	29-Jun	30-Jun	1-Jul
Field Day					Auction Night	License Exam
2-Jul	3-Jul	4-Jul	5-Jul	6-Jul	7-Jul	8-Jul
		Independence Day				
9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul
	Trial Date 9 AM	NADXC Meeting				

Treasurer's Report by Bob K4RHB

Treasurer's Report The Huntsville Amateur Radio Club Balances

by Bob Burns, K4RHB

Sunday, April 30, 2017

ACOUNT	Starting Balance	Ending Balance
Checking Account	\$ 8,194.72	\$ 8,267.97
Go Kits Account	\$ 33.00	\$ 33.00
Educational Materials Account	\$ 48.42	\$ 48.42
Antenna Projects Account	\$ 28.86	\$ 28.86
TOTAL MONETARY ASSETS		\$ 8,378.25

A full Treasurer Report is available on the website.

Two meter Inverted V's are omnidirectional. Try one!



ARES / RACES Meeting Minutes by Steve KM4CJ

April 13, 2017

The meeting was conducted in the Huntsville-Madison County EMA's EOC.

The sign-in log indicates 18 in attendance.

Business meeting started at 18:00 central time.



Tim, KK5H, opened the meeting by welcoming everybody.

Steve, KM4CJ, gave a treasury report of \$349.

Announcements:

Tim, KK5H, made the following announcements:

The State will be having an exercise April 15th from 8-10 am. The purpose of the exercise is for operators to check out their equipment for emergency preparedness. Stations are encouraged to check-in to a local net.

The antenna and feedline at the Monrovia Volunteer Fire Department #1 has been installed. Thanks to Mike, KD7OQC for doing the coordination. Scott, W4SSW, said the Madison County EMA will provide an ICOM dual band radio and Bill, K4IBY, says he will donate a power supply. Thanks to all involved in the project!

Our May 11th meeting will be at the National Weather Service in Huntsville. Meet outside at 5:50pm so we can all go in at the same time.

Mike, KF4BOG, Special Needs Coordinator, gave a report on the weather service program held for the deaf and blind. He discussed some of their unique requirements to be able to receive weather warnings.

Program:

Wayne – K4TTZ, provided information on the State Exercise planned for April 15th. He also discussed duties and responsibilities of being a control operator.

Meeting adjourned 19:10 central time.

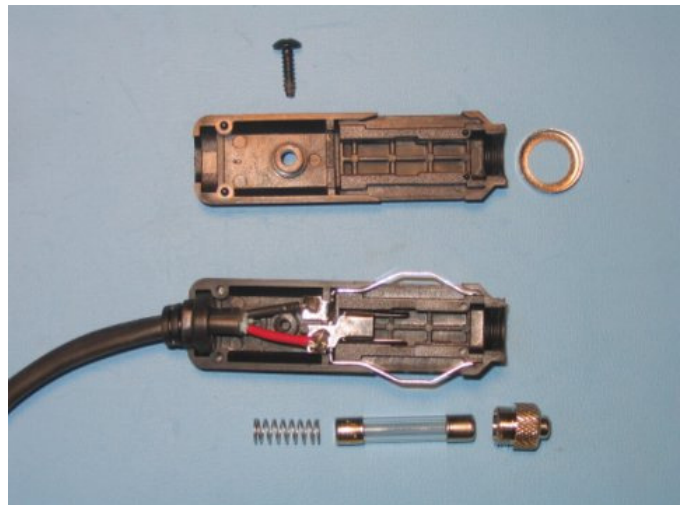
The Power Equation-by Mark N4BCD

On a cross-country trip I programmed my 2m radio with a long list of frequencies & offsets hoping to break the boredom with QSO's along the route. While I did make a few contacts in a few cities, the most memorable contact was simplex with a KC4 call through rural Kentucky. He was easy to identify – a pickup truck with a ham radio license plate, 2 screwdriver antennas, a half dozen VHF antennas, and what I later learned was a steerable 2m array mounted on the roof of the cab for direction finding.

As I passed him I tapped the horn and attempted a hopefully understood hand signal – an open hand followed by the peace sign for 52. He got the message and we met up on 146.52 very quickly. We killed time and enjoyed a 20+ minute chat before I suddenly had to power down – the unmistakable smell of hot plastic in the car. The cigarette lighter plug was extremely hot when I unplugged it.

Mental diagnostics would be the only troubleshooting I could do until returning home and I suspected the pre-programmed frequency list might have led to the problem. My repeater list has all the power levels set to Low3, which on the Yaesu FT-1990 is 25 watts. But I set the Simplex frequency to High which was 55 Watts. Clearly I was overloading the plug but not the circuit capacity of the lighter socket because the fuse never blew.

Back home I removed my homebrew power dongle and made some resistance measurements before disassembling to find partially melted plastic and a discolored fuse. The negative lead was about 0.1 ohms but the positive lead through the fuse was about 0.35 ohms. From the radio manual, line current is 11 Amps at high power and 7 Amps at Low3 power. Let's do some Technician math.



Power dissipation is current squared times resistance. Since both positive and negative leads are within the same plug shell we'll add those together ($0.1 + 0.35 = 0.45$ ohms). Power (i.e. heat) = 11 Amps squared times 0.45 ohms = 54 watts. That figure would be for 100% transmit but since one spends half their time listening let's divide that by half – 27 watts.

A typical accessory plug has numerous points of contact that over time can corrode and increase series resistance

Bad things happen with that much power in a small plastic plug without airflow and I'm glad the smell of melting plastic alerted me to the trouble before having to deal with flaming plastic at 80 miles per hour.

There's another law broken in this story, Ohm's. Voltage drop is current times resistance, so voltage at the radio = battery voltage (in my car 14v) minus line drop. Solving for line drop = 11 amps x 0.45 ohms leave barely 9V at the radio.

The fix was relatively simple. I ordered an unfused plug; after all, the cigarette lighter socket is already fused in the car wiring and there are fuses in both radio leads. Since changing the wiring it also eliminated the frequent drive-time complaints that my signal was dropping out.

I'm relating this story with the hope that everyone review their installation for weak links in their power supply lines.



GigaParts
www.gigaparts.com

Huntsville's Own
Amateur Radio Superstore
(256) 535-4442



Everything you need for your next ham radio project!
Rope • Coax • Connectors • Tools

Program and Project Managers

Madison County Emergency Coordinator	Tim Holland, KK5H
Field Day Chairman	tbd
Public Information Officer	Chuck Cashulette, AC4AL
K4BFT Club Station Trustee	Tom Duncan, KG4CUI
Picnic/Food Coordinator	Peggy Bell, K4EGB
Training/Education Coordinator	Jack Hemby, W5WQQ
VOX Publisher	Mark Brown, N4BCD
Program Coordinator	John Strohm, WB5YOO
Webmaster	M.D. Smith, WA4DXP
Repeater Program Announcer	Kelley Johns W4VPZ

License—Testing Info

License exams are at 9AM the first Saturday of every month at the Red Cross Building, 1101 Washington St, Huntsville, AL 35802.

The fee is \$10 (cash) (\$5.00 for students) You must bring some form of Government-issued picture ID and for those upgrading, the original plus a copy of your current FCC license.

Please see our website: www.cavechamexam.com for more information.

Questions may be emailed to [cave.org \(at\) gmail \(dot\) com](mailto:cave.org@gmail.com).

73,
Joe Henderson, N4CB, CAVEC CVE.

For Sale

LD-5 Software Defined Transceiver, 5-Band – Sells new for \$575, Offering now for sale for \$400 + your choice for Shipping

Link for Manual: http://www.Inrprecision.com/manual/LD-5_Updated_Manual_7_13_15.pdf

<https://www.youtube.com/watch?v=66nERyHDkmg>

<http://www.Inrprecision.com/store/#!/LD-5/p/39885476/category=10468544>

Craig NM4T [craigb44 \(at\) msn \(dot\) com](mailto:craigb44@msn.com)

Yaesu FT-950

160 thru 6m, 100W. Excellent condition with updated Firmware. Complete with all accessories and original double boxes. This is a full sized radio mid-grade radio at the price of today's menu-driven mini-units. Easy to operate.

<http://yaesu.com/indexVS.cfm?cmd=DisplayProducts&ProdCatID=102&encProdID=292E02F4E4D00EC99887A63E7B8ECD1B>

<http://www.eham.net/reviews/detail/6923>

Pre-hamfest price \$675 [Mark \(dot\) N4BCD \(at\) yahoo \(dot\) com](mailto:Mark.N4BCD@yahoo.com)