



# MARS NEWS

*The Mecklenburg Amateur Radio Society*™



## Prez Sez — A Letter from the President

Greetings, fellow MARS Members,

I hope everyone had a wonderful Thanksgiving and a good start to the Christmas holiday season. We had the honor of hosting the yearly family get together this month and everyone seemed to have a good time.

Radio wise, I did have a quick look at the ARRL 10m contest, but discovered my wet noodle will not tune up on 10m. (and besides I had a party to arrange...) The sooner I get my beam back in the air, the better!

We did have another work party at the club room and managed to pull another couple of lengths of coax thru the conduit to the roof. I took measurements of the proposed mast hinge plate, and am currently having them covered to a drawing and will then send off to a metal shop for pricing. The next work party is on January 2 at 9am for breakfast at Toast Café, then onto the Red Cross to connect up the antennas, etc.

I wish to express my thanks to one and

all for all your support throughout the last four years as president of this great organization. I believe WE have all achieved great success in moving this club forward. I know our new President Eric Webner K4FAN and the newly elected board of Vice President Mitch Barbato KX4MB, Treasurer Tom Hunt KA3VVJ, Secretary and Newsletter Editor P. Susan Nosko N4PSN, and Directors: Patrick Fink W4PFI, Jon Greene KK4ZIZ, Dave Holbrook KC4SGT, Marshal Lail KK4OHF, and Charles Comerford KK4HOK, will carry on with the good work -- along with the help of all members to keep us growing and promoting this wonderful hobby of ours.

All that remains for me to do is to wish everyone a very happy and safe holiday season and for a great 2016 and beyond.

Best 73,

Andy Hawkins  
K4GKK

President  
Mecklenburg Amateur Radio Society.



Andy Hawkins, K4GKK President

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# Upcoming Events

Check our calendar for current events: <http://w4bfb.org/calendar>

## The 2016 MARS New Year's Party!

Our New Year's Party will be on Saturday, January 9, 2016 at 6:00 pm at St. Giles Evangelical Presbyterian Church, 2027 Emerywood, Charlotte. We are having the event catered again this year by Sports Page Food & Spirits. Dinner will begin at 6:30 pm. The menu selection has not been done yet so you will be surprised. (You might find some nice door prizes!)



The cost is \$10.00 per person. You can sign up at the club meeting in November or mail your reservations to Mary Hunt, 1205 Waypoint Court, Stallings, NC, 28104. **The deadline to make a reservation is Tuesday, January 5, 2016.**

Last year our members provided a great dessert bar! If you would like to bring a dessert, please let me know.

— Mary Hunt N4MH

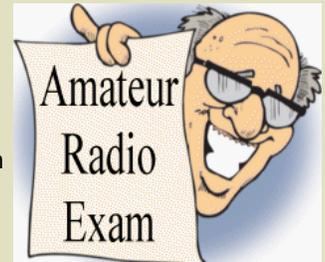


## VE Sessions!

**Do you want to upgrade or get your first ham radio license?**

The Union County Amateur Radio Society (UCARS) will have a VE Exam session on January 16, 2016. Test sessions are open to all and are held at the American Red Cross at 608 E. Franklin Street in Monroe. Test sessions start at 9:30am, please arrive by 9:00am to register. All test elements are given at each session.

The first MARS sponsored exam session will be January 30, 2016 at 9:00am at St. Giles Presbyterian Church in Charlotte. The next session is part of the Charlotte HamFest on March 12, 2016 at 1:00pm at the Cabarrus Arena in Concord, NC.

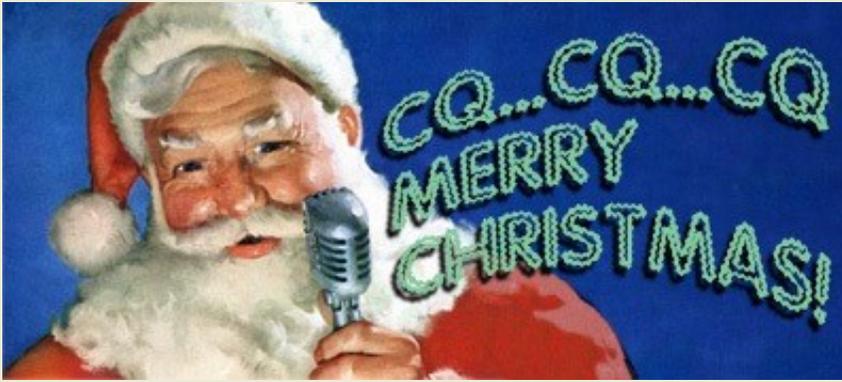


## You are invited!

to join us for good food and conversation before each club meeting between 5:30pm-6:00pm. We meet somewhere different every month, and the restaurants we choose are always easy to find.



You can find the monthly restaurant gathering locations (and directions) [here](#). If you have any questions, please contact any board member. We hope to see you there!



**December 19, 2015**  
**The Piedmont Spotter**  
**Group**

**Presents:**  
**"The Round Man in the**  
**Big Red Suit"**

Mark your calendars for December 19, starting at 6:30pm till about

8:50pm! We are holding our annual Santa Claus Net! That's right, we've tapped into the north pole radio system and linked the repeaters to Ol Saint Nick himself. Please have your children and grandchildren come by and say hello to Santa, and tell Santa what they would like for Christmas.

Santa will also be taking check in's from everyone else too. We'll be linking the 145.230, 146.940 & 224.200 repeaters together for the net, and will also be on Echolink under K4NET-L NODE 625440. The net control for the evening will be Greg "W4GCH" Huffman. Santa would love to hear from you! Until then, 73 to everyone one and Merry Christmas from the Piedmont Spotter Group!



## Thoughts & Prayers

Let's remember those who will have a difficult Christmas this year due to the loss of a loved one. Please pray for the safety of those serving in the military and especially for those who can't be home for the holidays.



### **W4BFB Mecklenburg Amateur Radio Society (MARS) Club Meetings**

Our club meetings are held on the last Tuesday of each month, 7:30pm-9:30pm, in the Fellowship Hall of St. Giles Evangelical Presbyterian Church, 2027 Emerywood Drive, Charlotte, NC 28210.



Everyone is welcome! (Even if you don't have your license.) We love meeting new people, so come visit and see what our club and ham radio is all about.

Visit us at [www.w4fbf.org](http://www.w4fbf.org)



# Winter Field Day Association

WFD 2016 Jan 30-31  
1700z- 1700z (Noon EST)



Winter Field Day Association (WFDA) is a dedicated group of Amateur Radio Operators who believe that emergency communications in a winter environment is just as important as the preparations and practice that is done each summer but with some additional unique operational concerns.

We believe as do those entities of ARRL Organizations like ARES & RACES that maintaining your operational skills should not be limited to fair weather scenarios. The addition of a Winter Field Day will enhance those already important skills of those that who generously volunteer their time and equipment to these organizations. This is why WFDA is open to all licensed amateur radio operators worldwide.

Disasters are unpredictable by nature and can strike when you least expect them. WFDA's goal is to help enhance your skills and ready you for all environmental conditions found in the US and Canada during the spring, summer, fall, and winter.

Preparedness is the key to a professional and timely response during any event and this is what local and state authorities are expecting when they reach out to the emergency service groups that offer their services.

If you are serious about emergency communications as we are, we welcome you to join us for our yearly event. We are sure that you will find this event a pleasant change and challenge to that of a normal summer time field day.  
— Charles Comerford KK4HOK



**Come on out on January 2, 2016, to help replace antenna feedlines to the roof, repair some equipment, and get the club room back into working order!** (Rain date: January 16, 2016)

We'll meet at the Toast Café first for breakfast at 9am. (It's located at 2400 Park Road in

Charlotte, right across the street from the Red Cross building in the small shopping center.) If you have any questions, ask any board member for information. We'll see you there!



# MARS in Motion

*Congratulations to our MARS Officers for 2016!*

President - Eric Webner K4FAN  
Vice Pres - Mitch Barbato KX4MB  
Secretary - P. Susan Nosko N4PSN  
Treasurer - Tom Hunt KA3VVJ

*Directors:*

Patrick Fink W4PFI  
Jon Greene KK4ZIZ  
Dave Holbrook KC4SGT  
Marshall Lail KK4OHF  
Charles Comerford KK4HOK

— George Hohas W4GEH



**WELCOME**  
**NEW MEMBERS**

**Thomas Byrum N3TCB**  
**Ted Hand W4SOC**  
**David Moore KM4NJK**

*Thank  
you*

I just want to thank all the W4BFB members who helped with the Concord Christmas parade on Saturday, November 21 and Kannapolis' Parade of Lights on Saturday, December 12. Without the selfless time from W4BFB members given to these two Cabarrus County Amateur Radio Society projects, they would not have been a success. We look forward to helping at the Charlotte Hamfest in March.

Sincerely and 73,  
Greg Huffman W4GCH  
Co-Net Manager and Sat NCO Piedmont Spotter Group

*Pictured: P. Susan Nosko N4PSN  
Photo: Steve Nosko W4SJM*



2015 Kannapolis Parade

# MARS Show & Tell

A few years ago, I lost power right when it got dark. I brought out my gasoline generator and fired it up. It ran our house just fine. But when bedtime came, I didn't want to hear it. I also didn't want to run it all through the night and place the wear and tear on it – just to run the security system and the refrigerator. So was born my easily movable battery backup system.

I started by purchasing four large AGM deep cycle batteries from a local marina, and soon learned that they were very heavy and burdensome to carry. To solve that problem, I bought a small hand cart to place them on.

For safety, I mounted covered battery cases on the cart to keep the batteries from being damaged or shorted out. Also for safety, I placed 75 amp fuses at each battery in case of a dead short. Each battery is connected with 2 gauge wire.

I installed a 12 volt battery percentage drain meter on the unit to help me determine the amount of power left in the batteries during usage. I have two large “on” and “off” switches on the setup, so as to keep the power inverter from draining the batteries during storage.

I placed a 3000 watt modified sine wave AC power inverter on the cart for running my 110 AC appliances. I then attached quick disconnect 12 volt plugs (like those on my ham radios) on the batteries to run all my ham equipment (to keep me on the air during power outages or field usage). I figured then I needed two 12 volt charging ports

(like those on your car used for cigarette lighters or for charging your cell phone). I then added a pair of mag lights on the cart for easy access in case I needed additional light.

The unit is charged up when needed during emergencies with solar panels, if sunlight is available. However, if weather is bad or it's cloudy, I have a 12 volt charger I built out of a car alternator and a tri fuel 6.5 HP small engine that will run off of gasoline, propane, or natural gas. The battery backup unit (when not in use) is stored with a desulfinator battery tender –



to keep the batteries up to tip-top charge and ready for use.

The unit is constantly evolving for making life easier during power outages. I went way, way over budget from what my original setup was intended to be, so I pretty much won't be doing high-end modifications to it anymore, except for replacing the modified sine wave inverter with a pure sine wave inverter.

73's and hope you enjoy my little do-it-yourself project.

Rodney Moore  
W2ROD





## IMPORTANT: AARL GRASSROOTS CAMPAIGN NOTICE!

Hello everyone! It has been brought to my attention that letters sent to Senator Richard Burr requesting support of S 1685 Amateur Radio Parity Act were misinterpreted as NOT supporting the Bill.

Yesterday, I received a reply from Senator Burr regarding the letter I sent to him. In his letter, it was stated, "Please know that I will keep your opposition in mind should this legislation be considered by the full Senate." I called the Washington DC office of Senator Burr to alert him that the intent of my letter had been misinterpreted. I gave them my name and mailing address, and asked

that they amend their records to show my support for S 1685 Amateur Radio Parity Act.

If you receive, or have received, a letter from Senator Burr indicating that you do NOT support S 1685, it would be appreciated greatly if you would contact Senator Burr, as well. His telephone number is (202) 224-3154 and his FAX number is [\(202\)228-2981](tel:(202)228-2981).

Please note that several hams in NC have received phone calls from Senator Burr's office acknowledging the error.

Thank you very much for all that you are doing for amateur radio, particularly for the ARRL Grassroots Campaign in support of the Amateur Radio Parity Acts of 2015.

73, Karl W4CHX, ARRL NC Section Manager  
(919) 669-6068 (cell)



### MARS Membership Renewal

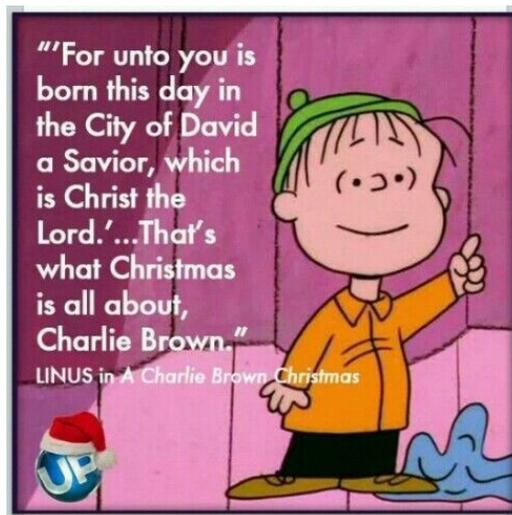
It's that time of year again! - Time to renew your 2016 club membership to the Mecklenburg Amateur Radio Society.

There are a few ways you can renew - whichever works better for you! If you like the feel

of paper in your hands, you can always print out a copy of the renewal form (yes, please fill out a form even if you've been around for years... it allows us to ensure all your information is up to date!) from [this link](#) - fill that out, and either mail your check and form to me or bring it to the next club meeting.

Otherwise, if you want to save a tree, you can visit our [Online Renewal Form](#) and renew online with PayPal! Similarly, we ask you fill out the entire form on the site as well.

Thanks — Tom Hunt, Club Treasurer KA3VVJ



## ***ASK YOUR ELMER***



They say one of the best ways to learn something is to ask questions and some of your best resources are right within our club. These club members are willing to share their knowledge with you to help you become a better, more informed ham. Please email them with any questions!

Antennae	Bob Ferdinand, K9TMU; Bill Miller, KT4YE; Mike Wentz, KE4EHC
Digital Modes	Stan Bagwell, AJ4ZL
D-STAR	Eric Webner, K4FAN
ICOM Radios	
Kenwood Radios	Bob Ferdinand, K9TMU; Bryan Ferdinand, K4NET
Packet Radio	Bill Newsome, AC4ZR; Seth O'Neal, KF4LLF
Ten-Tec	George Hohas, W4GEH
Yaesu Radios	Mitch Barbato, KX4MB

**For Sale One Last Time:** Radio Equipment from George Siegrist N3BW  
 Contact Andy Hawkins, K4GKK for information. They'd make a great Christmas gift  
 for you or someone you love. — The Editor



### **HF Equipment:**

MODEL	DESCRIPTION	EST. VALUE
Kenwood TS-590	HF/50MHz All Mode Transceiver, Good Condition	\$1000-\$1400
Icom IC718	160 thru 10 meters, good condition	\$350 - \$450
Icom IC746 Pro.	HF/50MHz/144MHz All Mode Tranceiver, GC	\$1,000 \$800-\$1800
Icom IC756 Pro III	HF/50MHz All Mode Tranceiver, Good Condition	\$450-\$600
Ameritron AL-811 Amp.	600 W PEP, all HF bands Covered, Good Condition	
MFJ Versa Tuner III	Antenna Tuner, 5KW capability, Good Condition	\$100-\$150
Ameritron ARB-704	Transceiver to Amplifier Interface Box	\$30 - \$40

### **Power Supplies:-**

MFJ-4245MW	45 Amp Switching Power Supply, Good Condition	\$100
Samlex SEC 1223	23 Amp Switching Power Supply, Good Condition	\$50-\$70
Icom PS-125	25 Amp Power Supply. Goes with Icom IC 746 Pro.	\$180 - \$250

### **Mics, Keys & Headsets**

Icom SM-20	Desk Mic. Good Condition.	\$80 - \$125
Icom SM-5	Desk Mic, Good Condition.	\$40 - \$60
Icom HM-36	Hand Mic Fir IC-7200 or similar rig.s Qty 2	\$10 - \$15 ea.
Hiel Pro Set Plus	Headphones & Mic	\$50 - \$75

## For Sale: Radio Equipment from George Siegrist N3BW (Continued)

Contact Andy Hawkins, K4GKK for information.

Vibro Plex Keys	Ser #'s 09343 & 06493. Qty 2	\$120 - \$150 ea.
MFJ-281 Speakers	MFJ Cleartone Speaker. Qty 2	\$10 - \$20 ea.
Signal Link USB	Tigertronics Signal Link interface	\$50 - \$70 ea.

### VHF/UHF - RX/TX's

Alinco DR605	VHF/UHF Mobile Transceiver	\$150
Icom IC-2100	2m VHF Mobile Transceiver	\$150
Kenwood TH-F6A	2m/220/440 Tri Band Handheld = HF Transceiver	\$200 - \$275
MFJ-921	2m/220 Antenna Tuner w/meter	\$20 - \$40

### Miscellaneous Items

Rigrunner 4008	Anderson Power pole Multitap Power Strip	\$50 - \$80
MFJ-1703	Antenna Switch	\$15 - \$20
MFJ-704	Low Pass Filter	\$40 - \$60
Foot Switch	Foot Switch	\$30
MFJ-250	Cantenna Style Dummy Load	\$30-\$40
Radio Wavz	Antenna Hyperhanger Catapult Launcher	\$60
Spi-Ro MFG	80m Dipole Kit	\$40
RigExpert CX201	2 Way antenna switch	\$15
Channel Master 9521	Small Antenna Rotator	\$20

### Books

ARRL	Antenna Book 21st Edition	Make Offer
??	Basic Radio 1st Edition	Make Offer
??	Basic Electronics	Make Offer
ARRL	Wire Antenna Classics 1st edition	Make Offer
??	Basic Antennas	Make Offer
??	Vertical Antennas	Make Offer
ARRL	2010 Handbook	Make Offer
ARRL	Electrical Grounding 4th Edition.	Make Offer
ARRL	Emergency Communications Handbook	Make Offer
??	Practical wire Antennas - G3BDQ	Make Offer

Various equipment manuals with receipts



## Do you need a new or updated member badge?

Please see Patrick Fink, W4PFI and he'll make one for you. Provide him with a headshot and your call sign, and he'll deliver it to you at a future club meeting. You can contact him at [w4pfi@arrl.net](mailto:w4pfi@arrl.net).



The MARS NEWS is published monthly and posted on the Mecklenburg Amateur Radio Society website (<http://w4bfb.org>) the week prior to our club meeting. If you have a picture or a story (in .doc format), please send it to me via [N4PSN@carolina.rr.com](mailto:N4PSN@carolina.rr.com). Once I receive your submission, I'll respond with an "I got it." If you didn't get it, I didn't either! Please ensure all submissions are given to me by the second Sunday of each month.



As the MARS NEWS editor, I am honored to serve the good people of the Mecklenburg Amateur Radio Society,

*P. Susan Nosko, N4PSN*



e Make a Wish Occasion J  
 e May all your dreams come true O  
 l **Happy** the gift of you Y  
 e **Bash** Memories O  
 b **yearly Birthday!** U  
 r **Anniversary of one's birth** S  
 a Gather **IN HONOR OF YOU Party**  
 t together  
 e Your Special Day Spending time with family and friends

### December Birthdays!

Randy Coley KK4VFY	Richard Marby KM4HTM
Charles Comerford KK4HOK	Richard Matteson KA4WXS
Toni Fink KK4TRH	P. Susan Nosko N4PSN
Perry Garris KF4UVL	Greg Turner W3CL
Andrew Hawkins K4GKK	Anne Wood KF4ZWI

**Shop AmazonSmile and Support MARS!** AmazonSmile offers the same great products, deals, and shopping experience as Amazon. The only difference is Amazon donates a portion of your purchase price to the charitable organization of your choice.

**Step One:** Go to [smile.amazon.com](http://smile.amazon.com) log in using your email and password as if you were at amazon.com from there select a charitable organization you would like to support.

**Step Two:** Select **Mecklenburg Amateur Radio Society**

**Step Three:** Shop, Amazon Smile will remember the charity you selected and will always donate 0.5% of your eligible purchases to that charity.



# METROLINA 2-METER EMERGENCY NET™

## M2MEN Controllers

**Sunday:** Tim, N41B

**Monday:** Rodney, W2ROD

**Tuesday:** Stan, AJ4ZL

**Wednesday:** Dave, KJ4SJY

**Thursday:** Jon, KK4ZIZ

**Friday:** John, WB2NHQ

**Saturday:** Marshall, K4OHF

Join us for the  
Metrolina 2-meter  
Emergency Net™ every  
night at 9:00pm! The  
primary frequency is  
our **146.94** repeater  
and the alternate  
backups are our  
**145.29** repeater or  
**146.52** simplex.

## M2MEN Alternate Controllers

Brandon, KM4FLU

Mike, KK4JFM

Paul, K4VCF

Steven, KI4FAQ

*If you are interested in becoming  
an alternate net controller, please  
contact our Net Manager (John  
White) at [wb2nhq@arrl.net](mailto:wb2nhq@arrl.net) or at  
[M2MENNetManager@W4BFB.org](mailto:M2MENNetManager@W4BFB.org).*

## JABBERNET

Join Bob, K9TMU for some fun on the Jabbernet  
at 7:30pm every Tuesday night on 224.40, linked to  
the .94 repeater and EchoLink.

## Other Local Nets

**Sunday** — Mecklenburg Simplex Net,  
8:30pm (147.505)

**Wednesday** — Mecklenburg ARES Net,  
7:30pm (146.94- PL 118.8)

**Wednesday** — Union County Skywarn  
Net, 8:30pm (145.39- PL 94.8)

**Thursday** — UCARS 2m Net, 8:00pm  
(145.390- PL 94.8) (444.425+ PL 94.8)

**Saturday** — Union County ARES Net,  
8:00pm (145.39- PL 94.8)

**Saturday** — The Dixie Radio Pirates,  
Weekly Net, 8:30pm (145.410- PL 136.5)



## Nightly

Piedmont Emergency Training Net, 8:00pm  
(145.350- PL 131.8)

The Piedmont Spotter Group Net, 8:00pm  
(145.230- PL 118.8)

Rock Hill Net, 8:30pm (147.030+ PL 88.5)

## EchoLink



EchoLink is available for download on  
your computer through  
[www.echolink.org](http://www.echolink.org), as well as for use  
on your smartphone (Android and  
Apple iPhone) through the App Store.

To access our repeaters, connect to [K4NET-L](#) or  
node number [625440](#).

## Packet Radio

W4BFB & Local 1200 Baud  
Packet Radio Frequencies:  
145.010 / 145.090 /  
223.400 / 446.500



W4BFB-9 = Charlotte BBS / W4BFB-2 =  
World Wide Chatroom (All W4BFB packet  
nodes have links to all listed frequencies)

# ARRL — North Carolina News

## Excerpts from ARRL NC Section Newsletter - November 2015

The **November 2015** Newsletter from North Carolina Section Manager, Karl Bowman, W4CHX.  
*Posted Dec 3, 2015* Happy Holidays from Karl W4CHX, your ARRL NC Section Manager!

HR 1301 AMATEUR RADIO PARITY ACT OF 2015 (UPDATE) - As of November 30th, HR 1301 has 114 co-sponsors, including 5 Representatives from North Carolina: David Price (D-NC-4); Walter Jones, Jr (R-NC-3); Patrick McHenry (R-NC-10); David Rouzer (R-NC-7); and, Renee Elmers (R-NC-2). For further information, see <http://www.arrl.org/amateur-radio-parity-act> (from the ARRL website)

S 1685 AMATEUR RADIO PARITY ACT OF 2015 (UPDATE #1) - In June, S 1685 Amateur Radio Parity Act of 2015 was introduced in the US Senate. The wording in S 1685 and HR 1301 are identical. Senator Roger F. Wicker (R-MS) introduced S 1685 into the US Senate. As of November 30th, there are 3 co-sponsors: Senator Richard Blumenthal (D-CT), the original co-sponsor of the Bill; Senator Al Franken (D-MN); and Senator Jerry Moran (R-KS). (from the ARRL website)

S 1685 AMATEUR RADIO PARITY ACT OF 2015 PASSES SENATE COMMITTEE (UPDATE #2) - On November 18th, the US Senate Committee on Commerce, Science, and Transportation endorsed S 1685 Amateur Radio Parity Act of 2015. This action means that the Bill is successfully out of committee for a vote on the floor of the full US Senate. It is not known when the full Senate vote will take place. For further information, see <http://www.arrl.org/news/view/amateur-radio-parity-act-passes-senate-committee-gains-cosponsors> Senator Roger Wicker (R-MS), the sponsor of S 1685 Amateur Radio Parity Act of 2015, has praised the approval of the Bill by the Senate Committee, see <http://www.arrl.org/news/amateur-radio-parity-act-senate-sponsor-praises-bill-s-committee-passage> (from the ARRL website)

AMATEUR RADIO PARITY ACT OF 2015 PAGE ON ARRL WEBSITE (REMINDER) - A combined web page has been setup by the ARRL to provide information related to HR 1301 and S 1685. ARRL members are urged to contact their Members of Congress in the US House of Representatives and the US Senate and ask them to sign on to the Bills as a co-sponsor. For further information, see <http://www.arrl.org/amateur-radio-parity-act> (from the ARRL website)

ARRL INVITES NOMINATIONS FOR 2015 INTERNATIONAL HUMANITARIAN AWARD (DEADLINE, 12/31) - Nominations are now being accepted for the 2015 ARRL International Humanitarian Award. The ARRL established the annual prize to recognize amateur radio operators who have used ham radio to provide extraordinary service to others in times of crisis or disaster. The deadline for submitting nominations is December 31, 2015. For further information, see <http://www.arrl.org/news/arrl-invites-nominations-for-2015-international-humanitarian-award> (from the ARRL website)

THE 2016 ARRL FOUNDATION SCHOLARSHIP PROGRAM IS NOW OPEN (DEADLINE, 1/31) - The ARRL Foundation is currently accepting applications from eligible radio amateurs pursuing higher education. In 2016, more than 80 scholarships will be awarded with amounts ranging from \$500 to \$5,000. One applicant will be selected for the prestigious William R. Goldfarb Memorial Scholarship, which is presented to a high school senior pursuing a degree in business, computers, medical, nursing, engineering, or science. The application window will close at 11:59 PM EST, January 31, 2016. Transcripts must be received by Thursday, February 18, 2016. For further information, see <http://www.arrl.org/scholarship-program> (from the ARRL website)

ARRL INVITING NOMINATIONS FOR SIX AWARDS (DEADLINES, MARCH - APRIL, 2016) - The ARRL is inviting nominations for six (6) awards honoring excellence in amateur radio. The awards include: 1) the Hiram Percy Maxim Award, which honors a young amateur radio operator; 2) the ARRL Herb S. Brier Instructor of the Year Award; 3) the ARRL Microwave Development Award; 4) the ARRL Technical Service Award; 5) the ARRL Technical Innovation Award; and, the Knight Distinguished Service Award. For further information on these awards and others, the nomination procedures, and deadlines, see <http://www.arrl.org/news/nominations-solicited-for-six-arrl-awards-2> and <http://www.arrl.org/arrl-award-nominations> (from the ARRL website)

ARRL NATIONAL PARKS ON THE AIR 2016 - In 2016, amateur radio will help the National Park Service (NPS) celebrate its 100th anniversary by activating NPS units, promoting the NPS, and demonstrating amateur radio to the public via National Parks On The Air 2016 (NPOTA). For information on rules, answers to frequently asked questions, activator tips, NPOTA documents, answers to basic questions from NPS employees, the Leaderboard, list of NPOTA units, merchandise, NPOTA on social media, and latest news, see <http://www.arrl.org/NPOTA> (from the ARRL website)

# More ARRL — North Carolina News

FALL 2015 ISSUE OF RADIO WAVES NOW AVAILABLE - The Fall 2015 issue of the Radio Waves is now available. Articles in this issue include: Using sensors to explore terraforming; STEM school and academy ARC builds repeater; Community college's DIY spirit shines for ARISS contact; Amateur radio club helps Boy Scouts earn radio merit badge; Education and Technology Program news; Getting new Hams on the air: the evolution of a licensing class; Ham radio instruction for people with disabilities; Amateur Extra question pool being revised for 2016; Licensing statistics; and, Upcoming events, opportunities, and deadlines. To read the current issue, or to access archive issues, see [www.arrl.org/radio-waves](http://www.arrl.org/radio-waves) Thanks to Debra Johnson, K1DMJ, ARRL Education Services Manager, and Steve Ewald, WV1X, ARRL Field Organization Team Supervisor, for providing this information!

WORLD RADIOCOMMUNICATIONS CONFERENCE APPROVES GLOBAL 60 METER ALLOCATION! - The frequencies, 5351.5 to 5366.5 kHz, with a power limit of 15W EIRP, were approved for allocation on a secondary basis to the Amateur Service at the 2015 World Radiocommunications Conference in Geneva. The new band will not be available until the FCC adopts the Acts of the Conference and sets up operating rules. For now, the "5 channel plan" on 60 meters will be observed. For further information, see <http://www.arrl.org/news/world-radiocommunication-conference-approves-global-60-meter-allocation> (from the ARRL website)

PUTTING CONTESTING TO WORK FOR YOUR PUBLIC SERVICE TEAM - For information on the value of contesting for Hams involved in public service, see <http://www.arrl.org/news/putting-contesting-to-work-for-your-public-service-team> (from the ARRL website)

UPCOMING DXPEDITIONS - Early January 2016: Antipodes Island (ZL9A), see <http://iotahunter.org/> Thanks to Bernie McClenny, W3UR and the Weekly DX for providing this information! January 11-26, 2016: Palmyra Atoll (K5P), see <http://palmyra2016.org/index.html> On island team members include Lou Dietrich, N2TU (Co-Team Leader) and Dick Williams, W3OA, both from Mooresville. January 17-25, February 1-9, 2016 (projected dates): South Sandwich Island (VP8STI) and South Georgia Island (VP8SGI), see <http://www.intrepid-dx.com/vp8/index.php> For information on other upcoming DXpeditions, see <http://www.cdxa.org/>, click on Coming Events, click on DXpeditions Listed On NG3K.

MARTTI LAINE, OH2BH, ARTICLE ON WORKING DX PILEUPS NOW AVAILABLE - An article on working DX pileups written by renowned DXer and DXpeditioner, Martti Laine, OH2BH, is now available. For further information, see <http://www.arrl.org/news/martti-laine-oh2bh-article-on-working-dx-pileups-now-available> (from the ARRL website)

LICENSING CLASSES - Gastonia (NC): Technician licensing class, February 13, 2016, sponsored by Greater Gaston Radio Society, contact Tony Jones, KK4TRL by phone at (704) 827-2138 or by email at [kk4trl@bellsouth.net](mailto:kk4trl@bellsouth.net) for further information. To find upcoming classes, go to [www.arrl.org/find-an-amateur-radio-license-class](http://www.arrl.org/find-an-amateur-radio-license-class) Please note that a licensing class sponsored by your club or organization will not be listed on the ARRL website unless you register your class. ARRL Registered Instructors may list upcoming classes on the ARRL website. For further information, see <http://www.arrl.org/License-instructor-registration> Also, please let me know if your club is sponsoring a licensing class. Thanks! (from the ARRL website)

UPCOMING HAMFESTS AND CONVENTIONS - January 9, 2016: Winston-Salem FirstFest, Forsyth Amateur Radio Club, Winston-Salem, NC, see <http://www.w4nc.com> It is not too early to apply for ARRL-affiliation of your club's 2016 hamfest! For more information, see <http://www.arrl.org/arrl-sanctioned-events> QUA\* - Since the end of October, I have participated in the Western Branch ARES - AUXCOMM Fall Meeting and attended the 27th Annual JARSfest 2015.

Please do not hesitate to contact me if you have any questions or want to provide input on our Section. I can be reached via email at [w4chx@arrl.org](mailto:w4chx@arrl.org) or via cell phone. As always, thank you for sending your emails, photos, and club newsletters - they keep me informed about your activities and programs! I look forward to seeing you at an upcoming hamfest or club meeting. Thanks for everything you are doing for amateur radio and your community. Finally, have a happy and safe holiday season! 73, Karl Bowman, W4CHX, ARRL North Carolina Section Manager, (919) 669-6068 (cell)



## MARS Club Officers for 2015



President	Andy Hawkins, K4GKK
Vice President:	Mitch Barbato, KX4MB
Secretary:	Stefanie Comerford, KK4LZR
Treasurer:	Tom Hunt, KA3VVJ
Director (2016):	Charles Comerford, KK4HOK
Director (2015):	Patrick Fink, W4PFI
Director (2015):	Paul Jones, K4VCF
Director (2015):	John White, WB2NHQ
Director (2016):	Eric Webner, K4FAN

## Mecklenburg Amateur Radio Society

Repeaters on \* 146.94-(118.8) \* 145.29-(118.8) \* 145.23-(118.8) \* 224.40- \* 444.60+(118.8)

Packet on \* 145.010 \* 145.090 \* 224.400 \* 446.500 \* All 1200 baud FM simplex

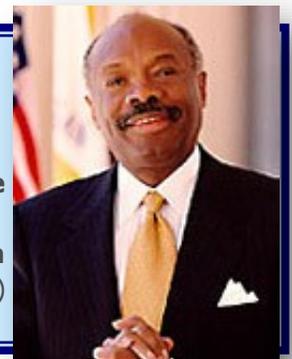
Metrolina 2m Emergency Net™: 9:00 PM Local Time on 146.94-(118.8)

Mecklenburg ARES Net: Wednesdays, 7:30 PM Local Time on 146.94-(118.8)



**"I have been frankly fascinated with that unpaid group of people with those ham radios, the Auxiliary Communications Service" [ACS]. [The ACS makes available] "a wireless system that seldom if ever can be totally disrupted by a disaster...ham radio operators are the heart and the soul and the life blood of that system."**

**The Hon. Mayor Willie Brown**  
Mayor of San Francisco (1996-2004)



# Club Meeting Minutes

**November 24, 2015**

The meeting was called to order at 7:35pm.

Visitor(s): Linda Schoeni (John's KM4FMA mom ), Brian (Stan's AJ4ZL grandson), Todd Byrum (Thomas Byrum's N3TCB dad)

George Hohas announced that on November 14, 2015, the Board selected the slate of officers and directors who were eligible to run for office, and presented the slate to the club membership.



New members: David Moore KM4NJK, Thomas Byrum N3TCB, Ted Hand W4SOC

The upcoming workday was announced: November 28 — with breakfast first at the Toast Café at 9am.

George Hohas W4GES announced that 45% of the membership had voted for the 2016 officers with 61 ballots cast. He then assisted members who were present at the meeting and had not voted as yet.

Mary Hunt N4MH thanks all who had participated in the Concord Christmas Parade which was held on Saturday, November 21. She also announced the New Year's Party which is coming up on January 9. Tickets are \$10 each. There will be door prizes.



Andy Hawkins K4GKK thanked the club members for their support over the last four years.

Mitch Barbato KX4MB announced that the planned speaker from the Explorers had not arrived, so he did a presentation himself. Mitch provided an abbreviated version of what he shared:

*At our last MARS Club meeting, I gave a presentation on the Picoscope 2204a. The Pico 2204a is a 10MHz, dual-channel, PC-based Digital Storage Oscilloscope (DSO). This is a very good, affordable, and easily portable hobbyist oscilloscope, manufactured by Pico Technology, a premier manufacturer of this type of oscilloscope. In fact, while the 2204a can be purchased for about \$150, the Pico 9341, for example, a 20GHz model, sells for about \$22,000. I'd say that Pico Tech. knows something about oscilloscopes!*

*You can run the software on a desktop PC, but for portability, a laptop is of course recommended. For you Mac folks, there is Beta software on their website, so they are obviously moving in that direction, as well as good old Windows PC's.*

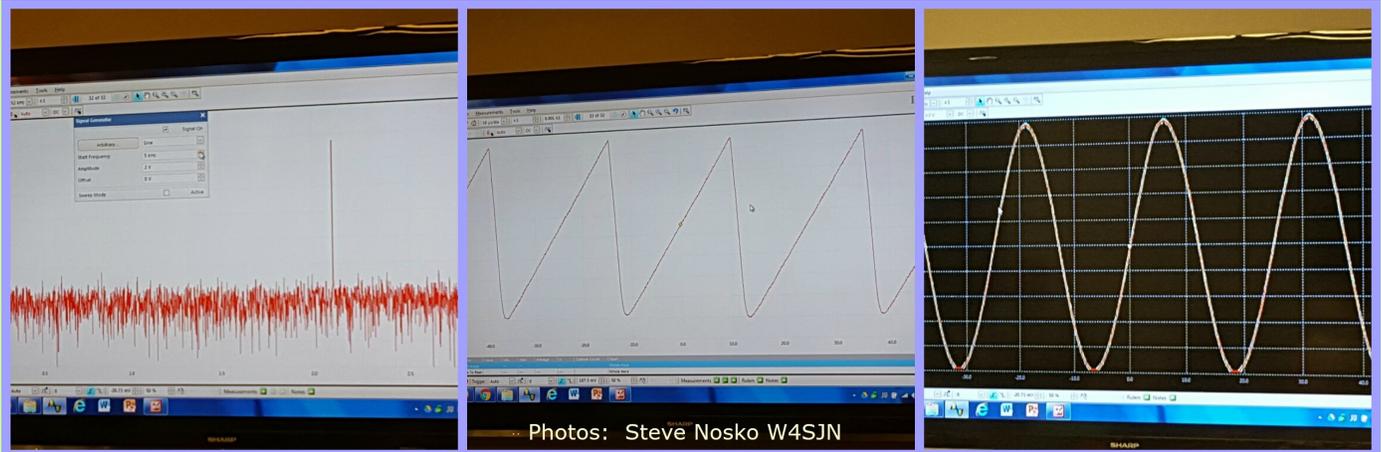
*The Picoscope connects to the PC with a single USB cable, and software is installed on the PC to use for data analysis*



Photo: Rodney Moore W2ROD

as the digitized signals are retrieved from the DSO unit. On the 2204a, up to two typical oscilloscope probes can be used at the same time to view two signals (or one at a time). Also, there is a signal generator output that can produce many kinds of signals (sine, square, triangle, etc.) that can be used for testing a circuit. For example you could generate a 1KHz sine wave and use that as an input to an audio circuit that you are troubleshooting. Then using one or both of the probes, you could follow that signal through the audio circuits and view the resulting waveforms on the PC.

Being a true DSO (remember, the "S" means "Storage"), you can freeze an image in real time. You



can also use a "persistent" mode that simulates the old phosphor storage 'scopes. In this mode, a signal is displayed but gradually disappears over time. This is handy for a slowly changing signal that you want to see, but would disappear before your eyes could see it on a typical CRT-type oscilloscope.

Another function that comes from being a Digital 'scope is that your PC can acquire and analyze the signal data in the "frequency domain". (The typical display on an oscilloscope is based on transpired time, aka, the "time domain".) In the frequency domain, a range of frequencies is displayed with the frequency increasing from left to right. If there is a signal at a given frequency, it will show as a vertical "spike" in the signal, with the height of that spike being its amplitude.

This is the typical display of a Spectrum Analyzer, which shows all frequency content in the display range. For example, you could be measuring a signal and there could be a vertical spike at 1MHz, and also a third harmonic spike displayed to its right. (At what frequency will that third harmonic be displayed?)

If you'd like to learn more about these really great devices, here's a glossary link for the Pico website: <https://www.picotech.com/library/a-to-z>. (Mitch also mentioned it would be a good Christmas gift for you to buy for yourself — like he did!)

The next Hamfest meeting will be on Wednesday, January 6 at 6:30pm at the Red Cross Building.

The meeting adjourned at 8:18pm.

Respectfully submitted,

P. Susan Nosko N4PSN

Secretary, Mecklenburg Amateur Radio Society



# November Board Meeting Minutes

November 3, 2015

The meeting was called to order at 7:13pm.

Absent: Paul, Stefanie

Tom made a motion to approve the minutes from the prior meeting(s); Mitch seconded it.

Eric made a motion to approve the Treasure's report; Patrick seconded it.

VP: Brian Sweeny (Explorers) will be at our next meeting, elections will take place, and we will have a Show & Tell presentation.

Secretary: 2 new applications

Pubic Service Committee: THE Geek Fest, November 12; Cabarrus Thanksgiving Parade November 21

Repeater: On Saturday, the time was updated on repeaters for Daylight Savings Time.

Packet: APRS Equipment ordered, Still waiting for Tim for Anderson Mountain.

Grants & Resources: Potential "grant-worthy" item would be a portable repeater system. Will see if Gary Chernega has experience in grant writing.

Equipment: Will lend club's quiet generator to Jim Crisco (WA4YIZ) Lincolnton ARES for parade float. Andy proposed, Eric seconded.

HF Go-Box prototype will be tested at THE Geek Fest to see how it works; potential design ideas for a permanent solution.

Elections: No one slated to run for President at this time. Eric will consider this role. Will send emails to those slated for bios to be sent to Susan for newsletter.

Discussed Clubroom work party

January 9 – Proposed Winter Party at St. Giles. \$10/per person.

Andy motioned to adjourn, Tom seconded it.

The meeting adjourned at 8:40pm.

Respectfully submitted,

Charles Comerford KK4HOK



# December Board Meeting Minutes



**Mecklenburg Amateur Radio Society**  
**Minutes of the December Board of Directors Meeting**  
American Red Cross, Charlotte, NC

December 1, 2015

The meeting was called to order at 7:10pm

**Present:** Mitch Barbato, Charles Comerford, Patrick Fink, Jon Greene, Andy Hawkins, Dave Holbrook, Tom Hunt, Marshal Lail, Susan Nosko, Eric Webner, John White

**Absent:** Stefanie Comerford, Paul Jones

**Visitor(s):** Steve Nosko W4SJM

**Welcome:** Andrew welcomed everyone to the meeting.

**Approval of minutes:** The minutes from November's meeting weren't published in the MARS newsletter. They will be published in the December newsletter.

## *BOARD MEMBER REPORTS*

**Treasurer's Report:** Tom gave his financial report. There was discussion about the CCTA account. Eric moved to accept the Treasurer's Report; Patrick seconded it. The report was approved.

**Vice-President's Report:** Mitch reported that our Explorer presenter for our November club meeting did not show nor did he respond when Mitch tried to contact him. Mitch stepped in and did a presentation of a picoscope instead.

**Secretary Report:** \_\_\_\_\_ regular members, 3 Honorary Club Members and 5 Life Members. Charles will get with Stefanie to have her give the Club Secretary laptop to Susan, and also train Susan on Access.

## *COMMITTEE REPORTS*

Membership Committee: No report.

Public Service Committee: Tom Hunt reported we have two public service events for 2016: the MS Challenge (Feb. 26-28) and The American Diabetes Association Tour De Cure (Feb.26-28).

Equipment Committee: Andy stated that we need a place to store our trailers. Jim Payne, Jr. had suggested previously that storage might be available at the Charlotte Rifle & Pistol Club's outdoor range. Susan Nosko will follow up with Jim Payne. John White has a lead on another location.

Andy said we need a new generator. He also said that during the clubroom workday, we pulled all the cables except for one. Andy's working on getting a hinge made which needs to be fitted. There's more work in the clubhouse which needs to be done.

John White stated that he had initially worked on a go-box and had spent \$100 on a pre-prototype.

Andy said to use the 570 and then progress to the 991. Cost of 991: \$1300. Patrick asked why not look for a good deal and buy it now? John suggested that we send a letter to Ham Radio Outlet on club letterhead and ask for a club quote; they'd give us a club price and we would then pay it with a club check. Which autotuner? LDG YT1200 (\$239 at Universal Radio). Andy made a motion for John to buy the equipment. Patrick seconded it. The motion passed.

Mitch stated that there is an old satellite dish which, he believes, is of no use to the Red Cross. He suggested we find out if we can disassemble it and put a plate on it.

Repeater Committee: No report.

Grants & Resources Committee: Andy encouraged all to think about writing grants. Charles suggested that a go-box would be a good reason to request a grant. John White offered that The Duke Foundation would be a good source.

Field Day Committee: Andy suggested we go back to the Wilgrove Mint Hill Park.

Entertainment Committee: No report.

Winter Party Committee: The New Year's Party will take place on January 9, 2016 at St. Giles. We discussed buying a \$50 gift card for a man's gift.

Website (Charles Comerford & Wayne Setzer): No report.

OLD BUSINESS: None

NEW BUSINESS

**Donation:** Andy stated that W4BFB will make a \$50 donation for Paul Jones' daughter's memorial.

**29 and 440 Upgrades:** Charles asked for the timetable for the completion of the upgrades for the 29 and 440 repeaters at the Wells Fargo building. Mitch asked Patrick to send an email to Brian Ferdinand K4NET asking him about the status the upgrade completion and to copy Mitch on it.

**NC QSO Party** - February 28, 2016. Charles said we need to make plans for operating it. The Red Cross building can be our operating location. Bill Fisher was really interested in it. Bill Turner (who is on the committee) can possibly do a club presentation about it in January.

**Future Clubroom Workday:** January 2, 2016 Rain date: January 16, 2016 (Dates will go in December newsletter)

Jon asked about **WeatherFest**.

**VE Test Sessions:** Charles asked how many do we want to do? 4/year?

**Website:** Marshall asked if we have anything on our website about the steps you need to take to become a ham? All agreed it was a great idea.

Andy thanked everyone for their support over the past four years while he was Club President.

The meeting was adjourned at 8:42pm.

Respectfully submitted,

P. Susan Nosko N4PSN  
Secretary-Elect, Mecklenburg Amateur Radio Society

