



Mecklenburg  
Amateur Radio  
Society™

#### Inside this issue:

Public Service	3
Committee News	
MARS Meeting Minutes	9
Board Meeting Minutes	10
Ask Your Elmer	10
Net Information	11
Ham Happenings	12
Club Repeater Frequencies	13

#### Upcoming Events

- ♦ Bike MS: Breakaway to the Beach: September 21st & 22nd
- ♦ Cystic Fibrosis Cycling Event: Saturday, October 26th
- ♦ Jamboree on the Air (JOTA): October 19th & 20th

See [www.ridemaps.com](http://www.ridemaps.com) for more information on the cycling events!

# MARS News

September 2013

Volume 64, Issue 9

## PREZ SEZ - A LETTER FROM THE PRESIDENT



Andy Hawkins (K4GKK), President

Hi fellow Hams,

Yet another month sneaks by and ham wise, I did manage to program my new Baofeng UV-5R+ via the very temperamental programming cable. I am now ready for the MS Bike Ride and all the excitement that will bring. (It will probably be completed by the time I get this epistle to Stefanie, our esteemed editor.)

I did announce at the last meeting that the 2014 Hamfest preparations have started and we had a very well-attended first meeting with a lot of ideas flowing to make the next event a huge success. If you have any ideas that you think would work to bring in the customers, please come along and share with the committee. This event is crucial to the club in that it provides nearly all the income to keep us ahead of the curve in providing equipment to keep the repeaters running, paying for the meeting place, renting space to keep the antenna trailer and generators, plus numerous other items that incur costs to the club.

The nominating committee has been

busy over the last month or so polling the eligible membership for participation as either a Director or Officer on the board of the Mecklenburg Amateur Radio Society. To keep the club vibrant, we elect two new board members one year and the next year we elect 3 new board members. A director has a two year term. We have 5 directors on the board. The officers each run on one year terms. Any director or officer can run again proving they maintain their eligibility. To sum up, if you are called about a position on the Board of Directors, please give it some serious thought about serving your fellow club members.

The September club meeting will start with a run-down of the MS Bike ride and then Mitch has some other surprises up his sleeve.

That is it for this month, here's hoping you all have a good October.

73,

Andy Hawkins / K4GKK

## GET OFF MY LAWN... !

If you've listened to HF for any length of time, you will have run into the ham equivalent of the crusty old guy complaining that the kids are playing on his lawn. These are the folks that are convinced that the Internet is destroying, or has destroyed, ham radio. They seem to be of a certain age and would not have a computer in their shack. They proudly keep paper logs of all their contacts.

On the contrary, the computer has become an integral part of ham radio, adding tools that make it much more fun. Worked that DXpedition and want to know if you are in the log? There are several online log programs that will tell you. One example is [dx.qsl.net](http://dx.qsl.net) that has a search engine for finding your contacts. Many DXpeditions upload their logs daily, so within 24 hours, you will know if you are in the log. The expedition website will most likely have a tab to their on-line log. Another searchable site is [www.clublog.org](http://www.clublog.org).

Want to know how your signal sounds on the air? One way is to work CN2R in Morocco during a DX contest. They record all their contacts during a contest and have a searchable website of the recordings. Their website is <http://cn2r.net/cn2r/index.aspx>, where they have a tab marked Audio. If you've ever worked them in a contest, enter your call in their audio search engine and listen to your signal as received in Morocco! This also gives you a clear picture of how the other side of a pile up sounds!

Want to know what DX is on the air now? DX Summit is one cluster that is updated with DX stations that have been spotted in real time at <http://www.dxsummit.fi/>. I also recommend that you join CDXA and make use of their DX Cluster.

You are playing with a new antenna that you just built (you do build your own don't you?). How does this perform compared to the old antenna that is still up in the trees for comparison? Where is my signal being heard? While the PSK Reporter might sound like a digital gizmo, it does copy and report any mode you transmit. <http://pskreporter.info/pskmap.html> Transmit on each antenna 5 minutes apart and compare where you have been heard. This is also a great tool to convince yourself that QRP does work. Send out a 10w CW or SSB signal and see where it was heard on the map. Next, send out a 5w signal for comparison. The map shows when your signal was heard so it is possible to distinguish between the two transmissions.

OK, now you know where you are being heard, but what is your signal strength? This will really show what your station can do if you are set up for digital modes like JT65-HF or WSJT-X JT65 or JT9 modes. Hamspots.net monitors around the world capture your signal and report it, including signal strength heard at the monitor. These modes are typically run below 20 watts, so the signal reports will be in dB below the receiver noise level, -20 being typical.

0227Z [W4WNT](#) 14079 -17 JT9 NC United States K7EK

This is a typical report, W4WNT being received using JT9 digital mode at -17 dB in Oregon. This was a 10w transmitted signal.

These are just a few of the ways that the computer and the Internet have made ham radio much more fun than in the old days. There seems to be a new mode popping up every month, so have fun and I'll see you on the air!

Bill Turner, W4WNT

*Example of JT9 signal report using PSK Reporter.*



## PUBLIC SERVICE COMMITTEE NEWS - MARY HUNT, N4MH



Mary Hunt (N4MH),  
Chairperson

On September 10, we supported the last **CCTA Cycling Event** for 2013. We had a smaller turn out of riders at this event. Due to a conflict, I was unable to support this event, but special thanks to Earl, K4KAY who filled in for me. The radio operators who supported this last event were: Auford Neal, KU4PF; Charles Comerford, KK4HOK; Stefanie Comerford, KK4LZR; Bryan Ferdinand, K4NET; Tom Hunt, KA3VVJ; Dave Holbrook, KC4YPB; Perry Garris, KF4UVL; Earl Fortner, K4KAY and Stan Bagwell, AJ4ZL. Everyone did a great job this year of supporting the six cycling events held at Charlotte Motor Speedway.



Here is a picture of the group that worked on Tuesday night.

Listed below are the upcoming Public Services Events for 2013 that are on our calendar. If anyone has an event that we need to put on the calendar, please let me know.

September 21 and 22, 2013 will be the **MS Breakaway to the Beach**. This is the largest Public Service event that we support each year. We leave from Monroe, NC on Saturday morning and the finish point on Saturday is Francis Marion University in Florence, SC. On Sunday, we have two start sites - Florence, SC and Green Seas, SC - finishing up at Sunset Beach, SC. We also have a start line on Saturday in Columbia, SC that is supported by the Columbia Amateur Radio Club. So mark your calendars early and plan to join us for this great event. To volunteer for this event, go out to [www.ms150maps.com](http://www.ms150maps.com) and scroll down to the event. If you can only work one day of the event, that is GREAT – we would love to have you. If you have never worked this event before and are interested in helping one or both days we would love to have you.

October 26, 2013 is the **Cystic Fibrosis Cycling Event**. Tim Slay, N4IB coordinates the volunteers for this event. This event takes place in the Waxhaw, NC area. There will be about 200 cyclists participating in the event. Tim will be looking for SAG Vehicles and Rest Stop Hams. He will be recruiting at the September Club Meeting. If you are interested, you can also email Tim at [N4IB@arrl.org](mailto:N4IB@arrl.org).



## JAMBOREE ON THE AIR

This October 19 and 20, 2013 marks the 56th annual Jamboree On-The-Air (JOTA)! This event is officially the largest event in scouting with 750,000 participants. JOTA is a global event and allows participants to get a good taste of what amateur radio is all about. This event is one of the very few joint events between Boy Scouts, Cub Scouts and Girl Scouts. Last year, local clubs helped to put 14 JOTA stations on the air in North Carolina. We hope to make this year's event another great success. For more information on this event, visit <http://www.scouting.org/jota.aspx> and <http://www.arrl.org/jamboree-on-the-air-jota>.

## AMATEUR RADIO LICENSE EXAM SESSION - DECEMBER

### Address:

YCARS Clubhouse  
2119 Squire Rd  
Rock Hill SC 29730-7593

There is an upcoming license exam session in Rock Hill, SC on Saturday, December 21, 2013. This event will be sponsored by the YCARS club. Testing will begin at 9:30am and walk-ins are allowed.

### Contact Information:

Jason R. Starnes  
(803) 980-2342  
jrstarnes@gmail.com



Bill Ethridge - **KD4IHP**  
Rush Johnson - **W4QA**  
Bill Miller - **KT4YE**

George Siegrist - **N3BW**  
Ron Syrko - **K4BIT**  
Jodie Rowland - **KI4CXO**





## CDXA NEWS

Three regional area hams are heading for a once in a lifetime DXpedition to the Wake Atoll, a.k.a. Wake Island, in the Pacific Ocean. As the crow flies or radio waves travel, Wake Island is over 6,500 miles from Charlotte. The island was a military outpost overrun by the Japanese at the outbreak of World War II.

The DXpedition is dedicated to making as many DX contacts around the world as the time and conditions will allow. The hams involved are some of the world class DX'er and hope to add many more contacts to their logs. Those who are involved with the DXpedition hope they will have an opportunity to call attention to preserving the memory of the Forgotten 98 - civilian contractors who lost their lives on Wake Island, October 7, 1943.

The DXpedition will be led by Lou Dietrich, N2TU and will be joined by Dick Williams, W3OA and Joe Blackwell, AA4NN.

Most of the equipment needed for this operation has been received and is being pre-tested prior to shipment to the staging areas. The equipment will be pre-staged in California and Hawaii prior to transport to Wake. Staging, pre-testing, packing are essential to assure equipment arriving on time and safely on Wake.

The two-week "on-air" dates are anticipated to start the last week of September or first week of October. This is entirely dependent on the military flight schedule into and out of Wake Atoll and this has yet to be determined. Watch the CDXA website for updated information at <http://cdxa.org>. The operational band plan for the DXpedition can be found at <http://wake2013.org/pages/bandplan.html>.

The Mecklenburg Amateur Radio Society is one of the many club, corporate, and private sponsors of the DXpedition.



## ELECTION OF OFFICERS AND BOARD MEMBERS

The Board of Directors have named Dave Holbrook, KC4YPB and George Hohas, W4GEH to the Nominating and Elections Committee.

Both Dave and George are beginning the process of contacting eligible MARS members of good standing to fill two officer and two board member positions.

Please give careful consideration to becoming a nominee to any of the open board positions. Your involvement is crucial to the operations and success of the club.

73 -

KC4YPB and W4GEH

## CHARLIE CRAIG CRUISE-IN

Saturday, October 12, 2013, is the Fifth Annual Charlie Craig Cruise-In. This event takes place in Gastonia, NC. The event runs from 10:00am 'til dark, and admission is free. There will be food, fun, awesome autos - from hot rods to classics and even some race cars. The address is 4320 S New Hope Rd, Gastonia, NC 28056.

Mike Wentz, KE4EHC, is going to have a booth set up at this event to promote Amateur Radio and give visitors information on local area clubs. If you have any information that you feel could be useful to Mike, please get in touch with him or send the information to [w4bfbeditor@w4bfb.org](mailto:w4bfbeditor@w4bfb.org) and we will pass it along to him. Thank you for your help!



# Hamfest Meeting

Our first two Hamfest Committee meetings have gone very well! We are now down to 5 more meetings before the big day is finally here. Our next meeting will take place on Wednesday, October 16th at 6:30pm at the Red Cross building (2425 Park Rd, Charlotte, NC 28203). We welcome any and all comments/suggestions/ideas to help make this year's Hamfest another success. Sign-ups for volunteering at the hamfest will begin soon, so get your thinking caps on and figure out how/when you may be able to donate your time to the club. Thank you!



We are still looking for a few more volunteers to help out with the Multiple Sclerosis Society's "Bike MS: Breakaway to the Beach" in September. The event takes place on September 21st and 22nd. The route starts in Monroe, NC (close to home for many of you). If you can only participate one day, that is not a problem... we would still love to have you come out and join us! The more hams we have, the smoother this event will run, so we welcome as many volunteers as possible. Please contact Mary Hunt or go to [http://ms150maps.com/ham\\_signups.php](http://ms150maps.com/ham_signups.php) for more information.



## PIEDMONT SPOTTER GROUP

A new North Carolina public service net launched in August 2013 and is being hosted by the W4BFB repeater 145.230 (-118.8) with the Mecklenburg Amateur Radio Society club members taking the point. Backup repeater is the W4BFB 145.219 (-118.8).

The Piedmont Spotter Group (PSG) formed in late 2012 to explore tracking and reporting severe weather through social media and amateur radio to the NWS and the communities where hams live and work. At the time of formation, the PSG resource was being followed through social media by local fire departments, EMS providers, and meteorologists.

The five hams from North and South Carolina who launched the PSG are trained NWS SKYWARN spotters and have experience in emergency communications. Above all, they have a passion for amateur radio and what it can do for their community. With over 12 net controllers and alternates already on the PSG roster at the end of August, the volunteers hit the ground running. The net is consistently averaging between 20 to 30 check-ins every night at 8:00. As to the strength of the repeater because of its location, one check-in reported from a spot 10 miles NW of Asheville and one check-in came from White Top in Virginia.

If hams can hit the repeater, they are encouraged to check-in, even if they cannot stay for the informal session and need to move on to other nets they might frequent. The objective is to develop a consistent and wide spread network of hams that can be invaluable during a time of extreme and dangerous weather conditions.

Congratulations to all those involved with the PSG for recognizing a need and a way to expand the role of amateur radio across the region.

## CAROLINA DX ASSOCIATION BONEYARD



Don't forget about our partnership with CDXA and their Boneyard. They have a page on their website ( <http://www.cdxa.org/boneyard.shtml> ) for CDXA and MARS members to list their equipment for sale or swap. A maximum of 5 pieces of equipment can be listed on the Boneyard, per person, at any one time. Pictures of equipment are welcome. Equipment will be listed for a maximum of 180 days unless notified by seller that equipment has been sold or traded. After the 180 days, items may be removed from the list. Members wishing to list equipment can send the information to [wb4bxw@gmail.com](mailto:wb4bxw@gmail.com).

## JOIN US FOR DINNER!

Come out and join us for dinner before the monthly club meetings and indulge in some great food and great conversations. We meet every month at Landmark Restaurant Diner around 5:00pm. The address of the restaurant is 4429 Central Ave, Charlotte, NC 28205.

See you there!



## METROLINA 2-METER EMERGENCY NET

### Report for August:

*Total Time: 15hrs 30min*

*Traffic: 16*



All articles for the October newsletter must be submitted to the newsletter editor at [w4bfbeditor@w4bfb.org](mailto:w4bfbeditor@w4bfb.org) by **Wednesday, October 9th!** Thanks for your cooperation.





## MARS MEETING MINUTES: AUGUST 26, 2013

**Visitors:** Greg Turner, KB8JH (Waxhaw); Jim Schmidt; Chris Gay, N1CRG

Prior to the meeting, Tony Lewis, KE4VVF, the Mecklenburg County EC, set up a 20m Delta Loop in the parking lot and was making HF contacts before and after the meeting.

Bill Turner announced that the SEDCO conference and the TenTec Hamfest in Tennessee will be held on September 27-28, which means it will not conflict with the Bike Tour for the first time in many years. SEDCO is a DX oriented conference and has had great comments in past years. The website is <http://www.w4dxcc.com/>.

George Hohas, W4GEH, reported that the Secretary and 2 Director positions are open for the election. 48 members are eligible to run for office this year, so you can expect a call from the committee. Please consider becoming a member of the board.

Jeff Blythe, KA4WYC, discussed the Piedmont Spotters Net which is being held on the 145.230 repeater nightly at 8:00PM.

Mitch Barbaro, KX4MB, is selling band plan sheets for \$1.00 each.

Mary Hunt announced that WCARS will be giving exams at Shelby and the VE examiners are still needed.

Jeff Viscount, KK4ONM, who used to be the MS Director but now is a ham volunteer supporting the ride, gave a presentation on the 2013 Bike MS ride which will be September 21-22. There are 750 riders signed up at this time, with 900-1000

volunteers. Starting Points Saturday: Kershaw, SC (100 miles) and Monroe, NC (80 miles). There will be a Lunch ride also from Kershaw to Francis Marion University in Florence. Sunday from Florence, SC for the 100 mile route and from Green Sea Elementary School for the 50 mile route. Finish line will be at the Villages at Sunset Beach. Both days, the last cyclist must be at Rest Stop 9 by 4:45PM. Any stragglers will be moved up to RS9 at that time. Sign up on [www.ridemaps.com](http://www.ridemaps.com). There are rest stop volunteers still needed on both Saturday and Sunday. As the date gets closer, secure maps will be posted to [MS150maps.com](http://MS150maps.com). These maps are secured to help eliminate personal SAGs that interfere with the riders on the route. MOTO (motorcycle) support is on the route and will check in at each rest stop.

Cruise In Car Show: Oct. 12 in Gastonia, 4320 S. New Hope Road. W4BFB will have a ham radio demo set up for this show.

Tim Slay, N4IB, demonstrated a remote IP radio that allowed him to run his Yaesu FT857 in Mooresville from the club meeting in Charlotte over the Internet.

Andy Hawkins, K4GKK, discussed a new Baofeng dualband HT that is available on Amazon for \$32. It is programmable with CHIRP software which is a free download from the Internet; the interface cable costs \$8.00 also from Amazon.

Packet has been re-established on Spencer Mountain on 145.05. An RMS Express node, KF4LLF-10 has also been set up.

*Submitted by:*

*Bill Turner, W4WNT*



## CLUB MEETING

The Mecklenburg Amateur Radio Society™ club meets on the last Tuesday of every month at 7:30pm. Our meetings are held at East Baptist Church (next to East Mecklenburg High School, near Conference Drive). The address is 6850 Monroe Road, Charlotte, NC 28212.

Everyone is welcome, even those who do not have their license yet! We love seeing new faces, so come out and join us and see what our club is all about!

**September Meeting Topic: "Virtual Tours" of 146.94 and 145.23 Repeater Sites**



## BOARD MEETING MINUTES: SEPTEMBER 3, 2013

**Present:** Andy Hawkins, K4GKK; Mitch Barbato, KX4MB; Tom Hunt, KA3VVJ; Charles Comerford, KK4HOK; Bryan Ferdinand, K4NET; George Hohas, W4GEH; Dave Holbrook, KC4YPB

**Not present:** Sandra Jones, KK4DAW; John White, WB2NHQ

**Visitors:** Stefanie Comerford, KK4LZR; Paul Jones, K4VCF; Tony Lewis, KE4VVF

**Treasurers Report:** Tom presented the Treasurer's report. George motioned to accept report for the month ending August 31, 2013. Bryan seconded and the board approved.

**VP Report:** Mitch reported August club meeting was successful. September's meeting will be a brief follow-up on the MS-150 Breakaway to the Beach bike ride, as well as a "virtual tour" PowerPoint program of pictures of the .94 repeater site and the Spencer Mountain site. October's meeting will be a recap of the Wake Atoll project and the November meeting will be the election of new board members. There will not be a meeting in December.

**Secretary Report:** Membership is holding steady.

### Committee Reports:

**Repeater Committee:** Bryan discussed linking radios during nets and practice exercises. Upgrades were made to the 146.94 and 145.23 repeater sites. New equipment was purchased for future repeater upgrades.

**Public Service:** The MS-150 Breakaway to the Beach bike ride is

September 21 & 22. The Cystic Fibrosis Cycling event is on October 26 in Waxhaw, NC. Tim will be looking for volunteers for this event. Mary is looking at the second week of January to have the club's winter party.

**Grants/Resources:** Andy discussed how Food Lion, Bi-Lo, and Harris Teeter gives money to groups whenever members use their customer shopping card. The board will look into seeing if our group qualifies as a viable organization to see if we can take advantage of these resources.

**ARES:** Tony informed the board that the Mecklenburg ARES website is currently down. He proposed the idea that the club pick up the website and fund it. He also proposed that we update the 2-Meter Emergency Net preamble and add a statement regarding how MARS supports Mecklenburg ARES. The board approved of this. Tony would like to pick back up the process of creating special events reports, which involves recording the hours of these public service events (such as CCTTA and MS bike rides). These reports are sent to state and national levels.

**New Business:** Andy informed the board that we have been approved for the status of "Special Service Club". Come October, Bryan will begin looking for Hamfest volunteers. Mitch suggested creating plastic name badges with the club logo on it, similar to the ARRL badges.

**Submitted by:**  
Stefanie Comerford, KK4LZR

## 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!



Antennas	Bob Ferdinand, K9TMU; Bill Miller, KT4YE; Mike Wentz, KE4EHC
Digital Modes	Stan Bagwell, AJ4ZL
D-STAR	Eric Webner, K4FAN
ICOM Radios	<b>We're still looking for someone to put here... let us know if it can be you!</b>
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

## METROLINA 2-METER EMERGENCY NET™

### Net Controllers

Sunday: Tim, N4IB  
 Monday: Bryan, K4NET  
 Tuesday: Stan, AJ4ZL  
 Wednesday: Dave, KJ4SJJ  
 Thursday: Charles, KK4HOK  
 Friday: Don, KJ4ATJ  
 Saturday: John, WB2NHQ

Join us for the Metrolina 2-meter Emergency Net™ every night at 9:00 P.M.! The primary frequency is our 146.94 repeater and the alternate backups are our 145.29 repeater or 146.52 simplex. The tone is turned off during this net.

### Alternate Net Controllers

Dave, KC4YPB  
 Jerry, N4MIU  
 John, WB2NHQ  
 Mike, KK4JFM  
 Paul, K4VCF  
 Stefanie, KK4LZR

\*If you are interested in becoming an alternate net controller, please contact our Net Manager (Stan Bagwell) through email at [M2MENetManager@W4BFB.org](mailto:M2MENetManager@W4BFB.org).



JOIN US ON  
 THE AIR...  
 WE'D LOVE  
 TO HEAR  
 FROM YOU!

## OTHER LOCAL NETS

### Sunday

Mecklenburg Simplex Net,  
 8:30pm (147.505)

### Wednesday

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

### 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)

### 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/PACKET RADIO NODES

**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)

More info: <http://www.w4bfb.org/packet.htm>



EchoLink application on a smartphone.



# Ham Happenings

## September 2013

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3 MARS Board Meeting 6:30pm	4	5	6	7
8	9	10 CCTTA Time Trials 6:00pm	11	12	13	14 <a href="#">Gastonia VE Test Session</a> 9:30am
15	16	17	18 Hamfest Meeting 6:30pm	19	20	21 Bike MS: Breakaway to the Beach
22 Bike MS: Breakaway to the Beach	23	24 MARS Club Meeting 7:30pm	25	26	27	28
29	30					

See more at <http://w4bfb.org/calendar>



## Mecklenburg Amateur Radio Society™

Mecklenburg Amateur Radio Society  
ATTN: Stefanie Comerford  
2425 Park Rd, Room 023  
Charlotte, NC 28203

Phone (Call or Text): (704) 750-9QSO  
Email: [w4bfbeditor@w4bfb.org](mailto:w4bfbeditor@w4bfb.org)



**Stefanie Comerford**  
**Newsletter Editor**  
**KK4LZR**



Visit us on the Web!  
[www.w4bfb.org](http://www.w4bfb.org)

### Club Repeaters

Input	Output	Offset (KHz)	Tone
146.34	146.94	-600	118.8
144.69	145.29	-600	118.8
144.63	145.23	-600	118.8
222.8	224.4	-1600	None
449.6	444.6	+5000	118.8

### Club Officers & Board of Directors

#### President

Andy Hawkins, K4GKK  
[k4gkk@w4bfb.org](mailto:k4gkk@w4bfb.org)

#### Vice President

Mitch Barbato, KX4MB  
[kx4mb@w4bfb.org](mailto:kx4mb@w4bfb.org)

#### Secretary

Sandra Jones, KK4DAW  
[kk4daw@w4bfb.org](mailto:kk4daw@w4bfb.org)

#### Treasurer

Tom Hunt, KA3VVJ  
[ka3vvj@w4bfb.org](mailto:ka3vvj@w4bfb.org)

#### Directors

Charles Comerford, KK4HOK  
[kk4hok@w4bfb.org](mailto:kk4hok@w4bfb.org)

Bryan Ferdinand, K4NET  
[k4net@w4bfb.org](mailto:k4net@w4bfb.org)

George Hohas, W4GEH  
[w4geh@w4bfb.org](mailto:w4geh@w4bfb.org)

Dave Holbrook, KC4YPB  
[kc4ypb@w4bfb.org](mailto:kc4ypb@w4bfb.org)

John White, WB2NHQ  
[wb2nhq@w4bfb.org](mailto:wb2nhq@w4bfb.org)