Words From the Prez

I tell you — it has been a busy month for me and for the club. We had a good club meeting with Max Treece WG4Z giving a demo of “a hot spot In your hand.” It seems a lot of members asked, “How much?” and “Where can I get one?”

Mike W4DXL sure has been coming up with some good programs for our club meetings. This month’s (September) is no exception. Tim Slay N41B will be giving his famous “Grounding Your Shack” program. I’ve talked before about Tim’s experience on radios and grounding. You should see his station setup! Come and be mesmerized!

One of the projects that has been sitting on the back burner is replacing the rotor and adding an antenna control box, to dress up the rat’s nest in the club room. Well, everything is in, so now it’s time to get together and install them on our tower. Someone will climb the tower and will need some ground crew to help. Maybe this time we’ll get the coax corrected again.

Speaking of towers, we need to take down Bob’s (KD4IIN) tower. I need to contact Lib about when we can do this. I will need about eight to ten people to help do this safely. It’s a tilt-over tower, so it won’t be hard.

We just need to do it. Maybe the second Saturday in October, on the 12th. Remember we are moving the October club meeting because the Rock Hill Hamfest is the October 5th. We’ll just make October 12 our club meeting. Be on the look-out for more info. Maybe we’ll have something else that day!

Another project we’ve been talking about is cleaning a corner of the Salvation Army Warehouse. (Just some junk we have collected over twenty years.) So last Saturday, Mike W4DXL and I made our way over there. Many thanks to Mike KG4PDA and Peter (Salvation Army employees) who moved the pallets out for us to clean, separate, or throw away. And throw away we did! We were placed some old computers and equipment in the recycle bin. One thing we found is a Tektronix 543 Oscilloscope. Believe it or not, it still works. It has the probe and some cables with it. We’re taking a bunch of stuff to the Shelby Hamfest, in case someone is interested in it. I’m putting a price of $200.00 to start, but will entertain any offer. There were all kinds if electronic parts: caps, resisters, diodes, patch cables, etc. We found a HW-101 (in unknown condition) and a Yaesu FT600, 2 meter FM mobile radio (again, in unknown condition). If you think you’d like to see if any-
thing works, or may want something, let me know.

Speaking of the Shelby Hamfest, we have five spaces already paid for and ready for set up on Friday. It is beside the Medical Building, which is beside the bathrooms and Fire Department, at the top of the hill. Come by for a visit and a cold bottle of water and *bring your own chair* and sit a while. I’ll have a 10x10 canopy for a little shade. Buy your general admission ticket and come on by. Call me if you need something 704-577-3619 (cell).

Oh, my. That’s enough for now. Remember our club meeting this Saturday (September 7). See you soon! Luke’s enjoying the cool weather. 73, Jeff Blythe KA4WYC, W4CQ Club President

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**Upcoming Events!**

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**Mint Hill Historical Society SW Station**

Come to the Mint Hill Historical Society on the third Saturday of each month, from 8:30am to 1:00pm. We set up a HF short wave station in the Gold Assay office.

We have made contacts all over the world! Almost everywhere in Europe, Israel, Japan, Australia, New Zealand, Indonesia, Iceland, Greenland, Mexico, Costa Rica, Peru, and more. 73, Joe Ducar KJ4QFV

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**Skywarn Spotter Training Session**

When: Thursday, September 26, 2019

Where: Gaston County Citizen Resource Center, Dallas, NC

Time: 13:00-14:30 — National Weather Service Training for Basic SkyWarn Training

14:30-15:00 — 30-minute break

15:00-16:00 — Charlotte Regional SkyWarn presentation “Who We Are and What We Do”

*Session being sponsored by Gaston County Emergency Management and Charlotte Regional Skywarn*

*To register:* Please RSVP to Greg Huffman W4GCH at w4gch1@gmail.com. In your email, please include your name, callsign and cell phone number.

73,

Gregory C Huffman  W4GCH  
EC CLT Regional SkyWarn  
Sat NCO Piedmont Spotter Group  
Mecklenburg County ARES AEC Weather  
Southcars # 10934  
980.255.8181 (h), 704.564.7380 (c)  
w4gch1@gmail.com
**Thoughts & Prayers**

Let’s remember to pray for protection and safety for those in the way of Hurricane Dorian, and for the first responders. Keep all those in uniform in your prayers, too, for safety.
So, Do You Know What Your Repeaters Look Like??

We talk on repeaters all the time and don’t even think about what it takes to keep them running. From time to time, we club members are asked to help provide funds to replace or repair something like: antennas, the repeater itself, feed lines, etc.

Well, last week, Mike W4DXL and I had the privilege of going up on the Wells Fargo II Bank building in Uptown Charlotte to take a look at the 147.060 WB4ETF and 444.675 W4WBT repeaters. It had been a real long time since I had been up there, and boy, have things changed. I had asked several club members who had knowledge about going up there. Thanks to Jim WA4YIZ and Wilford N4MD for their help. Also a Well2 contact by Jim, Haley Clark. I dropped her name when trying to access the loading dock, which helped. We were ushered to a parking spot, where they took our drivers licenses and made us sign our life away. Something about our first born, or dog. I was scared. Would they even take Luke? We got a card key and things were looking up. (Literally!) We were told to walk about two blocks up the street to access the lobby. Next came the security desk in the lobby. Again after a short explanation of what we’re doing, we were told a supervisor was coming to escort us to the 31st floor. Oh, nooo... A supervisor? So here came Mr. Bailey, who was a very nice man. He asked a few questions and there we went. Then up to the 31st floor where we got out to an air handling room. Just your regular run-of-the-mill penthouse. A few turns and there before us was the repeater room. As you look through the door, you can see the 6-foot tall cabinet the 7.06 repeater is home to.

In the pictures, you can see at the bottom of the cabinet, the power supply, then the repeater heat sink and the 7.06 repeater itself. This repeater is a GE Station Master II, cica 1978 + some. It has been around a while. Next you’ll see the controller. It makes the CW ID and voice prompts you hear on the repeater. Finally, there are the “cans,” or cavities by Phelps Dodge, to tune between the input and output of the repeater. If you used only one antenna, you’d need these. If you used two antennas, because of separation of the frequencies, then not so much. But the cans also help to reduce interference from outside noise.

In the antenna picture, ours is the antenna with the drip loop on the far right. I had Mike take a picture of the commercial antenna (because I thought that was ours) right beside the ladder. But ours is over to the right more. The roof is really the 32nd floor and there is a doghouse which houses the antennas from the repeater room. Mike took some pictures of the sky while we were up there. It was a nice day! Oh, did I say it’s three flights of steps up to the roof? Very narrow steps! Ask Mike. It’s a good thing he was behind me. I just know he’d catch me in case I tripped! (No, really. He would!)

So, back down to the repeater room. The next picture is of the 444.675 repeater. It’s the short
cabinet beside the 7.06. It’s a very nice Motorola MSF-5000 in UHF. These are almost “bullet proof.” I helped install a bunch for Tim N4IB with Duke Energy, then Duke Power. They were used in their 800 MHz trunking system. On top of the UHF cabinet, you’ll see the cans for the UHF repeater. There’s quite a bit of a difference compared to the 2 meter cans. Since we are using a dual band antenna, we use a duplexer to split between the VHF and UHF repeaters.

Going down for us was as much of an adventure. It seems neither Mike nor I paid much attention when we got off the elevator when we came up — because we couldn’t find the elevator! We walked all over the penthouse until we walked back to the repeater room. Oh, GREAT. So now we have to call the guards to come save us from the penthouse? But then, beside the repeater room was a set of double doors. Yep, inside those doors were elevator doors and a button! We’re SAVED! I swear we walked more coming up than going down.

We took the elevator to the loading dock. Loading the car with tools, we were glad we hadn’t walked a block to the car. We talked to the guard about coming back to replace the repeater. He said it’s going to get worse, as next year the RNC is coming to Charlotte. There will be SWAT people all over the building, and maybe access might be more difficult. I wonder if a sniper would be laying beside our antenna?

Until next time... 73, Jeff KA4WYC and Mike W4DXL

Growing up in Hillside, New Jersey

I was born at a very young age and grew up in Hillside, New Jersey, which was a small town nestled between Newark and Elizabeth. At the time I was growing up, Hillside could socio-economically be described as upper-lower class. The town was sparsely populated, and urban sprawl bypassed this small town, primarily inhabited by first and second-generation Italians, Hungarians and Poles. The town’s cultural centers were the Italian American Hall, the Hungarian American Hall and, you guessed it, the Polish American Hall.

Hillside’s claim-to-fame was Phil Rizzuto, the legendary New York Yankee Hall of Fame shortstop and Yankee broadcaster for forty years. “Holy cow,” was Phil’s favorite expression when something really exciting happened. Phil lived in the Westminster section of town, a small affluent enclave bordering on Elizabeth.

The Elks Lodge sponsored a baseball league; it was somewhat of a precursor of the little league with a major difference — anyone could play in the league if they were not on the high school varsity team. The Elks would kick off the season with a picnic where they served draft birch beer. What a treat! Phil would always come to the picnic and hang out with the kids for the entire picnic. One year, Phil brought Yogi Berra with him. I was not a Yankee fan, but I was a catcher. I thought I had died and gone to heaven being able to talk to arguably the best catcher in major league baseball.
At the end of the season, when the league gave out the trophies, Phil was there to distribute them with a kind word. The sure don’t make many major league players like that anymore.

The Polish hall had a 14-inch TV set on top of a high cabinet. This was decades before the advent of color TV. Milton Berle (“Uncle Miltie”) on Tuesday night and the fights on Friday filled the large room to standing-room-only capacity to watch the TV set. If Joe Louis was boxing, you had to arrive at the club at least two hours before the fight to get a seat.

I lived in a farmhouse at the very edge of town. In the back of the farm were humongous wetlands which was called a swamp in those days. One year my combination birthday and Christmas presents were a pair of binoculars (amplification factor of about two) and a *Peterson’s Bird Field Guide*. I spent many hours exploring the swamp and bird-watching, filling up several notebooks with sightings.

When not writing newsletter articles, Urb can usually be found working on his ham radio test preparation website, [http://ham-cram.com](http://ham-cram.com). The site has three distinguishing characteristics:

- We don’t study incorrect answers.
- We only study the questions most likely on the FCC test.
- It’s free.

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**BRING SCHOOL SUPPLIES TO OUR SEPTEMBER MEETING**

Hey everybody, Marge KI4JCK asked me to ask everyone to bring school supplies for the Center of Hope at the Salvation Army. Things like pencils, notebooks, notebook paper packs, pens, rulers, book bags, crayons, etc. Wouldn’t it be great to buy a back pack and fill it with school supplies? I’ll gather up the supplies and either give them to Marge or take them to Avis at the Salvation Army. Our Club Meeting is Sept., 7th., so I’ll make that the deadline, to turn in as a group. You’re always welcome to drop stuff off at the Salvation Army yourself. If you have any questions, give me or Marge a call.

— Jeff KA4WYC

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When you come to a fork in the road, take it. — Yogi Berra
So You’ve Got A Telegraph Key….  
But Which One??

Ford, Chevy, Dodge, Porsche, and BMW. We all have a car we love more than any other. Some we can afford, and some, we (I) can’t. Telegraph keys can be the same way. You may like a Vibroplex Bug, or a Begali key, or a Cootie key. But what are they? And how do they differ? I’ll take you on a little pictorial of the wide range of keys. Some are my favs!

Keys can be divided into different categories, like straight keys, paddles, bugs, sideswipers — and the list goes on.

A **straight key** is where you push and pull the knob up and down and make your own Dits and Dahs. This telegraph key is a *manual* operation. You have to manage to keep the spacing between characters uniform. Some are known as J-38’s, which are the oldest of telegraph keys. Speeds on a straight key can vary from 5 – 30 WPM.

A **bug** will make the Dits but you need to make the Dahs, and keep the spacing correct. Horace Martin made the Vibroplex famous by easing the pressure on operators’ wrists. Up until then, telegraphers suffered an ailment called “Glass Wrists” — now know as Carpal Tunnel Syndrome. Bugs are easier to operate by moving the finger piece left or right to form the characters. Typical speed on a bug can be 15 – 40 WPM.

**Paddles**, along with an electronic keyer, will produce Dits and Dahs by just touching the paddle to one side or the other. One side makes Dits and the other side makes your Dahs. Much less pressure on the hand. This key can move along at anywhere from 30 – 60 WPM.

**Sideswipers** are just a different version of a set of paddles. Same with a **cootie key**.

In my opinion, the Begali would be the Porsche of keys. But I read an article where the Begali was compared to the N3ZN Key. It wound up being a matter of preference. Bengalis are very smooth to operate and the price tag is staggering. Check out their website [www.i2rtf.com](http://www.i2rtf.com). Pietro Begali has some of the finest keys around and they always have a crowd at the Dayton Hamvention. I did get to sample several they had on display. The Contour is a small, but very nice, set of paddles at 260.00 Euros, that’s $292.00 USD, plus different costs for finishes. Go for the gold! It’s nice. You can also have your call sign engraved on it, too. Oh, my! Check out the Intrepid.

As stated on the website, this style of key is similar to that which Horace Martin, the Father of the Vibroplex, made over a hundred years ago. **But** it uses magnets instead of steel bearings for a very smooth operation.

Next we’ll stroll over to the Vibroplex website; [www.vibroplex.com](http://www.vibroplex.com). Now owned by Scott Robbins W4PA, since 2009. Their best bug would be the Gold Presentation, coming in at $322.95 — plus, if you buy the glass case and extra finger pieces. You’d be well into $450.00. But these are fairly
I found a set of paddles on eBay that raised the roof to $1,500.00 for a used key! Oh, good grief!

Next, another fine key manufacturer is N3ZN. I met Tony Baleno at HamCation in Orlando. Actually, I was strolling around and I happened to have stopped at his booth. I just had to play with a set of paddles. As I was clumsily playing, I heard a voice say, “It’s a nice key, isn’t it!” I looked up to see, Tony himself, smiling at me. I stopped playing with his key, and said, “Why, yes, YES, it is!” It was one of the top of the line paddles, ZN-9, at $325.00. Well, one can dream, can’t one? If you want to run around 40-60 WPM, this is your key.

There are as many different keys as there are cars. So pick one you like and stick with it.

As a side note, if you want to get your code speed up, check out www.CW Academy.com. You register for a “seat” in the class and go for sixteen weeks. Everyone gathers on Skype on the Internet and uses a set of paddles to send and receive CW. Waiting times to enter a class is about 6 months, so be patient.

73 — Jeff Blythe KA4WYC
Club Purchases (Jeff Blythe KA4WYC): The new products (rotor, antenna, and cable) were delivered to the Salvation Army. Mike Patterson KG4PDA is out of town so Jeff is unable to locate them.

NEW BUSINESS

Malicious Inference on 450 Repeater (Jeff Blythe KA4WYC): We discussed the malicious interference taking place. Jeff has a certified letter ready to be mailed to the offender’s known address.

ADJOURNMENT

Joe Ducar KJ4QFV moved the meeting be adjourned. Mike Miranda W4DXL seconded it. The motion passed.

The meeting adjourned at 10:07am.

PROGRAM

Max Treece WG4Z: “A HotSpot In Your Hand.” Max gave a fascinating presentation about DMR. Max has taken a TYT HT, a ZumSpot, and a Pi3 and a cellphone external battery pack and his IPhone, to make a DMR HotSpot. With this connected to his phone, he is able to talk around the world. So come by and see just another way you can talk around the world. He made a contact in the United Kingdom!

Max’s Presentation Notes

Max has been a ham since 1963.

What is ham radio? It’s a place to meet people and make friends -- both local and around the world. Just like when you call CQ.

DMR is a little like fishing. You never know who you will catch. Just like your normal ham set-up.

Ham radio is experimental; there’s always a lot to learn. You can meet folks with similar interests, starting with an amateur radio license.

Some people keep logbooks of contacts even though it’s no longer required by the FCC.

DMR stands for digital mobile radio. DMR works with digital repeaters on the ham bands. DMR radios also work with connections on internet networks such as NCPRN (North Carolina Private Area Network). Most anywhere in NC, there is a digital repeater that hams can connect to on the PRN network. Another connection channel is to the internet via wifi or cellular radios.

How would you like to do ham radio without having to string up antennas? What if there was a way to make contacts that would be clear without QSB, static, or signals fading away? What if there was a way to make ham radio contacts where distance is not an issue? In other words, contacts could be made anywhere in the world?

Max’s station consists of: A radio (can talk directly to digital repeaters) Coverage is pretty good anywhere in NC. Radio can talk to the hotspot. A computer (Raspberry Pi). A modem (to connect to my radio and wifi or cellphone to get to an internet connection.

It can be a portable or fixed station.

DMR has talk groups. DStar has reflectors. Once on a talk group, DMR can talk to anyone else lis-
tending to the same talk group. You never know who else might be listening. You don’t have to call CQ. Just say, “Is there anyone who can give me a signal report?” Somebody will most likely come back to you.

There’s no static. Error-checking is built in. Distance is not an issue.

The cost of a DMR radio? (Less than $100 for many radios, up to $800 or more for commercial equipment.) His Anytone 878 is just shy of $200 at HRO. The hotspot that he’s using is a Zumspot kit with an OLED display (on sale now for $129 at HRO). Add his case for $17.00 and a power supply with a switch-in cable for $17.00.

Respectfully submitted, P. Susan Nosko N4PSN, Club Secretary
# Gary Whitt’s KN4ICY Weekly Net List

<table>
<thead>
<tr>
<th>Net Name</th>
<th>Frequency</th>
<th>Off-set</th>
<th>Tone</th>
<th>Time</th>
<th>When</th>
<th>Location</th>
<th>Backup/ Link</th>
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<tbody>
<tr>
<td>Piedmont Spotter Group</td>
<td>145.230</td>
<td>-</td>
<td>118.8</td>
<td>2000</td>
<td>Nightly</td>
<td>Spencer Mtn.</td>
<td>145.290</td>
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<tr>
<td>Charlotte Regional Skywarn</td>
<td>145.230</td>
<td>-</td>
<td>118.8</td>
<td>As Needed</td>
<td>Nightly</td>
<td>Spencer Mtn.</td>
<td>145.230</td>
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<td>Metrolina 2 Meter Emergency</td>
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<td>-</td>
<td>118.8</td>
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<td>Spencer Mtn.</td>
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<td>York Co. Amateur Radio Society</td>
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<td>-</td>
<td>88.5</td>
<td>2030</td>
<td>Nightly</td>
<td>Rock Hill</td>
<td>444.450</td>
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<td>94.8</td>
<td>2130</td>
<td>Nightly</td>
<td>N. Wilkesboro</td>
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<td>Monday</td>
<td>Anderson Mtn.</td>
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<td>York County Ares</td>
<td>147.225</td>
<td>+</td>
<td>110.9</td>
<td>2100</td>
<td>Monday</td>
<td>Rock Hill</td>
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<tr>
<td>Carolina Amateur Radio Club</td>
<td>145.350</td>
<td>-</td>
<td>82.5</td>
<td>1915</td>
<td>Tuesday</td>
<td>Dallas</td>
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<td>Jabbernet</td>
<td>224.400</td>
<td>-</td>
<td>no tone</td>
<td>1930</td>
<td>Tuesday</td>
<td>Charlotte</td>
<td>146.940</td>
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<td>+</td>
<td>141.3</td>
<td>1930</td>
<td>Tuesday</td>
<td>Lincolnton</td>
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<td>East Coast IRLP Net</td>
<td>443.250</td>
<td>+</td>
<td>136.5</td>
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<td>Tuesday</td>
<td>China Grove</td>
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<td>2045</td>
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<td>-</td>
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<td>Saturday</td>
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<td>-</td>
<td>136.5</td>
<td>2030</td>
<td>Saturday</td>
<td>China Grove</td>
<td></td>
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<tr>
<td>Dixie Pirates Net</td>
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<td>136.5</td>
<td>2100</td>
<td>Saturday</td>
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<td>10 Meter Net</td>
<td>28.340 USB</td>
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<td>Piedmont Simplex Net</td>
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<td></td>
<td>2030</td>
<td>Sunday</td>
<td>Harrisburg</td>
<td>147.525</td>
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**The Connector** is the official newsletter of the Charlotte Amateur Radio Club. It’s published monthly.

As Editor of *The Connector*, I welcome pictures (.jpeg), articles (Word doc), and any other member contributions. Please send your submission to W4CQ.Susan@gmail.com. As Editor, I reserve the right to edit any and all pieces.

The submission deadline for each month’s newsletter is the third Friday of that month. Anything received later may be held for the next month’s publication.

As *The Connector* Editor, I am honored to serve the good people of the Charlotte Amateur Radio Club.

73,

P. Susan Nosko N4PSN

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[Image of Gary Whitt]