



Next Meeting:

Tuesday, March 6

Bullock's BBQ 6:00pm

Program: Watching a Tower Grow

Wayne Estabrooks, KJ4GDW, will present an insider's view, documenting the construction of a very heavy duty 1,642 ft broadcast tower for television broadcast station WUND, Edenton / Columbia, NC. TV Station WUND is part of the UNC-TV statewide network. The tower was designed to survive hurricanes and up to 200 mph winds. Well over 1 million pounds of steel were used in the construction of the tower. The top guy wires are 3.5 inches in diameter and were tensioned to 139,000 lbs. The construction of the anchors to hold these guy wires and many other fascinating details of the tower construction will be presented.

During Wayne's more than 41 year career in broadcast engineering, one aspect of his job has been managing the construction of more than 11 large heavy duty broadcast towers and more than 25 smaller microwave, FM broadcast and low power TV translator towers.

Help out at the Creekside Elementary School Science Fair

DFMA has been invited to support the Science Fair at Creekside Elementary School, again this year, on **Wednesday, March 14, 2012**. The goal is to have six to eight hams present to demonstrate and inform students and their parents about radio communications and ham radio. The DFMA's MCU will be there and there will be tables available.

The building will be available for display set up at 1800, the Fair opens at 1830 and runs to 2000. Please contact Rhett, KE4HIH, if you can help out.

Catch him on the Possum Trot Net, or, more privately, rtg@ee.duke.edu or 919-732-8492 at home.



K00UX at last year's Science Fair
(Photo courtesy of Melanie Duhon)

DFMA Amateur Radio Licensing Course Starts on March 24th

Amateur radio can be enjoyed in many ways: in talking with friends on the way to work, by making friends around the world, by designing and building radio equipment or bouncing signals off satellites or the moon. While this hobby can be great fun, when emergencies strike, Amateur radio can also be the only way to communicate. Participation in this hobby requires an FCC issued license that tests one's knowledge of the rules, radio wave propagation, elementary electronics and safety.

DFMA will be sponsoring a ham radio license course that is designed to enable you to pass the FCC exam and give you a general understanding of basic electronics, radios, and how radio waves travel. The classes will be a mix of interesting lectures, discussions and demonstrations.

The eight classes will be held each Saturday afternoon from March 24, until May 19, with no class Easter weekend, April 7. The student will be prepared for the license examination which will be given at the Durham FM Association hamfest May 26. The course is free, the textbook is \$30, and the exam is \$15. Please contact Lowell Tieszen if you might be interested.

Textbook: The ARRL Ham Radio License Manual, Second Edition

Where: Durham Mennonite Church
603 Lynn Rd
Durham, NC

When: March 24, 2012, 3 to 6pm

Contact: Lowell Tieszen
email: kk4ph@arrl.net
cell: 919-452-5348

MCU Work Day: Results!

Although there was a brisk wind when we started at 10am there were four of us working inside, outside, and on top, of the MCU. Good improvements were made by the time we finished at noon.

Working on the outside, Wilson-W4BOH and Rhett-KE4HIH applied their electrical engineering skills to install a new electric fuel pump on the gas line of the generator. This is active only when the choke button is pressed and will help pull fuel from the tank to the carburetor. When the engine starts and the choke is

released, then the mechanical fuel pump on the generator takes over.

Ken-KI4QXY has been working to bring together the hardware and software to be able send emails from the MCU. Saturday was the day to install the pc with Winlink software and connect it to the existing Yaesu FT-897. There were a few glitches but the day was a success when Ken came back in the afternoon and was able to send an email to Wilson, going through an HF station 1,000 miles away. This is an important capability! This means that wherever on the face of the planet the MCU is located, we can send email. It's slow and messages need to be short but if the local Internet were to be down, then this capability would be critical.

Lowell-KK4PH has had the new lift / lay motor for the Tarheel antenna for a few months. The original motor failed to lower the Tarheel following the Halloween Bike ride. It was replaced under warranty by the manufacturer and the new motor was mounted, and the switches were re-mounted to the wall inside the MCU and labeled, this time, to indicate which switch is which and which direction the Tarheel is moved.



The DFMA MCU at Night at Field Day (Did you know it has reflective lettering?)

The MCU will be at two events in the near future. It will return for the second year at the Creekside Elementary School Science Fair March 14. Let Rhett know if you can help. The MCU will make its first appearance at the Touch-a-Truck event at University Mall in Chapel on April 15.

If you are a DFMA member, then the MCU belongs to you and you are encouraged to learn its operations and capabilities. Contact a board member if you would like to learn more about the MCU.

Lowell, KK4PH

Club Meeting Minutes

Durham FM Association (DFMA)

DFMA Meeting - 2/7/12 - KU4GC Secretary

Location: Bullock's BBQ, Durham

Attending:

Dan, KD4AGQ; Dewey, WA4AHR; Wilson, W4BOH; Mike, KK4BPH; Terry, WA4BVY; Dick, KK4CCX;

Terry, WD4CEE; Charlie, NC4CD; Charles, WD4CLT; Justin, KD4CPM; Adriano, KV7D; Dan, KK4DMS; Michael, KK4EIB; Dee, KU4GC; MK, W4MKR; Bob, K4HA; Rhett, KE4HIH; Joanna, KE4QOZ; Joe, K4JRA; Jim, WA4OPI; Gail; Lad, W4ORD; Vic, K0OUX; Lowell, KK4PH; Ken, KI4QXJ; Bill, KI4RAN; Pres; Kitty; Bob, W4RWC; Dave, W4SAR; Karen, KD4YJZ; Derek, KO4T; Dan, KR4UB; Don, KE4UVJ; Rich, KD6VK; Dave, NA4VY; Sam, KJ4VWG; Jim, WB4YYY; Sue, KA4AVM
A total of 39 attending, including 36 hams.

President - Bob, W4RWC, called the meeting to order at 7:00 pm and started with a round of self-introductions.

REPORTS

Vice President - Wilson, W4BOH

Nothing to report. (He delivered coax to some of those who had purchased it.)

Repeater Manager - Charlie, NC4CD

Nothing to report.

MCU - Lowell, KK4PH

The the lift mechanism for screwdriver antenna on the top of the MCU should be fixed soon.

Treasurer - MK, W4MKR

Financial balances.

Members: 48 (2012 dues paid by the end of the meeting)

Secretary - Dee, KU4GC

Several announcements:

- VE Session: Saturday 2/11, 10:00am OC EOC.

- OCRA Meeting, Monday 2/12, 7:20pm OC EOC.

Terry, WA4BVY, will present a program on Antenna Tuners.

- Request from Ian, KK4CXA, for help with his Boy Scout group. He was hoping someone could demonstrate PSK31. The meeting is 7:00pm 2/21.

- JR, KG4NNT, is restarting the 6m net, using the 53.45 repeater (PL 107.2) at 8:00pm Thursdays.

Field Day - Dave, W4SAR

Dave reported that the Blackwood Farms site used for the past few years will be available this year but not after that. We need to locate a new site. The first question is if we want to change to a new site this year. The sentiment that was expressed suggested that we use the same site again this year. An alternate location at Blackwood Farms is a possibility. Other suggestions are welcome. (Details on the DFMA web page.)

Anyone interested in being a Band Captain this year should contact Dave.

Wilson, W4BOH, reiterated the need for a tower and beam for 15 Meters. (An article he wrote on this was included in the last Link and is on the DFMA web page.).

ANNOUNCEMENTS

Lowell, KK4PH - He is trying to organize license classes for the Tech exam, starting in late March. They should be timed so that students could take their exam at DurHamFest.

Rich, KD6VK - He reported that the Creekside Elementary Science Fair will be 6-8pm, March 14. (The DFMA has agreed to support this event and to bring the MCU.)

Awarding of the Lid

Charlie, NC4CD, awarded the Lid to Dee, KU4GC, and MK, W4MKR, for many years of service to the DFMA. They have held or are holding many offices including Secretary and Treasurer at this time and Treasurer, Vice President, and President previously.

Door Prizes

Dan, KK4DMS, won a power strip and; Dick, KK4CCX, won a multi-tool.

PROGRAM - Voice Interoperability Plan for Emergency Responders (VIPER)

Joe Allison, K4JRA, and Bob Lukaszewski, K4HA, presented an introduction to the NC VIPER system. Orange County uses this system and Durham "sort of" uses it. 911 was a real impetus to developing the interoperability that VIPER provides. North Carolina has 18 sites with local radio infrastructure and there are also mobile communications trailers that can provide communications at a disaster site. There are actually two systems. A tactical patch system allows various systems to be patched together as needed. This is not a trunking system but interconnects legacy equipment including VHF and UHF channels.

The other system is the 800 MHz trunking system. It is not fully P25 (digital) but is moving in that direction. The system allows up to 60 talk groups (virtual channels). These are supported by at least three actual radio frequencies. Orange County currently has eight frequencies. This trunking system is designed to provide 95% coverage but is not so good inside buildings. This means that it does not serve fire fighters going into structures.

Bob demonstrated the system's long-range capabilities by using his hand held to contact a colleague in Wilmington. Joe and Bob answered many questions. Joe also pointed out that some of the features, while not used all that frequently, are extremely valuable when needed.

Meeting adjourned.

Board Meeting Minutes

Durham FM Association (DFMA)

Board Meeting - 2/21/12 - KU4GC Secretary

Location: 2019 Front Street, Durham

Attending:

Charlie, NC4CD; Dee, KU4GC; Rhett, KE4HIH; Joanna, KE4QOZ; Bob, W4RWC; Ken, KI4QXJ; Paul, KE4OXN; Michael, KK4EIB; Lowell, KK4PH; Vic, K0OUX

President - Bob, W4RWC, called the meeting to order at 7:05pm.

REPORTS

Repeater Manager - Charlie, NC4CD

Charlie is continuing to work on the voter system which allows the 225 repeater to have multiple remote receivers.

MCU Manager - Lowell, KK4PH

He expects to have work session soon to re-install the Tar Heel antenna.

Ken, KI4QXJ, is also working on the final Winmor installation.

Treasurer - MK, W4MKR (forwarded by KU4GC in her absence)

Financial balances.

Current members: 48 are paid up so far for this year (compared to 89 at the end of last year).

Secretary - Dee, KU4GC

Minutes of the 1/17/12 Board Meeting and the 2/7/12 Club Meeting were accepted as distributed.

Hamfest Chair - Paul, KE4OXN

Paul reported that we are on the Little River Community Complex calendar. Fees at \$490 are very close to last year's. We may be able to use some of their tables and reduce our table rental costs. Paul will coordinate with Randy, K4XRM to get more tickets printed (just in case we need them -- we might have enough but it would be close). We missed the deadline for an ad in the SERA

Journal. Paul felt that this was not a very important source of publicity.

OLD BUSINESS

Creekside Elementary Science Fair

Rhett, KE4HIH, reported that date had been set for 3/14 and 6-8 hams would be needed to do a good job. (The Board gave its full support including MCU presence at the last Board Meeting.)

Technician License Classes

As reported at the Club meeting on 2/3/12, Lowell is organizing classes. The plan is to have 8 sessions with the last a week before DurHamFest so that students can test there. Current plans are that the classes would start late in March and would be held on Saturday afternoons. Lowell would not be able to attend the 4/7 class. Since this at the same time as RARSFest, there may be a problem getting an instructor. One possibility is to start a week earlier and to skip that Saturday. Various sites were discussed. Lowell's church is a possibility. Students would have to pay for the \$30 ARRL Technician License manual.

NEW BUSINESS

NC Maker Faire

Dee, KU4GC, reported that Woody, K3VSA, is working on getting ham radio participation in the NC Maker Faire which is being held in the Jim Graham Building at the State Fairgrounds on June 16 (weekend before Field Day). He proposed participation on two levels.

1. Have hams participate by having demos including evidence of "making", i.e., kits and home-brew projects and demos of the art and practice of amateur radio, such as Morse code and actual communications.
2. Become a "Sidekick Sponsor" of the Faire. This is the lowest level of sponsorship and costs \$500. The ARRL has agreed to come up with \$250 if clubs will come up with another \$250. Woody suggests \$50 each for five clubs. He would like the DFMA to be one of these.

Dee felt that Ham's demonstrating at the Maker Faire was a good thing and had participated last year. He was not convinced that the sponsorship was as good. The benefits for the sponsor are (from their web page).

- Company name placed on the sponsors' page of MFNC website
- Company will receive a Vendor Booth
- Company name will be listed on promotional apparel and press release
- Two invitations to the pre-party on Friday evening
- Two 2012 Event T-Shirts

Which logo would be displayed? The ARRL's? There is no suggestion that they would include the ARRL and five other (club) logos. A "vendor booth" might be nice, but tables are free for participants. Paul, KE4OXN, felt that Woody was trying to get things going and deserved support. Vic, K0OUX, felt that our participation in things like the Creekwood Science Fair were much more important than the Maker Faire. No action was taken.

Touch a Truck (Boy Scouts fund raiser)

Dee reported that we had a request through Bruce, N1LN, to take the MCU to "Touch a Truck". This is an annual Boy Scouts fund raiser held in at University Mall in Chapel Hill. The web site: <http://www.troop39nc.org/troop-committee/touch-a-truck/> shows a tremendous range of "vehicles" including both UNC's and Duke's medical helicopters. Bruce has volunteered to help man the MCU. We'd need a DFMA driver plus a few more members.

The Board unanimously voted to support this event which is to be held on April 15th. Dee will notify Bruce to initiate whatever paperwork is needed for us to participate.

Meeting adjourned.

On the Internet: A Go Box

I thought this was a well done layout for a go box ... good enough for a home station, with quick transition to portable. You Tube link follows.

<http://www.youtube.com/watch?v=-95WEjoeA0&feature=related>

Gary, AK4IH, 73's

DFMA Dues:

Your DFMA *dues* were *due* in January. A PDF of the dues form(s) can always be found on our web page: [dfma.org](http://www.dfma.org) (click on Membership at the top to get to the right page). Mail them to the address on the form or, better yet, bring them to a meeting.

Thirty years ago dues were \$12 a year. They are still \$12 a year – now there's a real bargain!

Upcoming Events (dfma.org for details)

- 3/06 6pm DFMA Meeting, Bullocks BBQ
- 3/10,3/11 Charlotte Hamfest, Cabarrus Arena
- 3/12 7:30pm VE Testing, Orange County EOC
- 3/12 7:30pm OCRA Meeting, Orange County EOC
- 3/14 6pm Creekside Elementary Science Fair
- 3/20 7pm DFM Board Meeting, 1920 Front St
- 3/24 3pm First License Class, Mennonite Church
- 4/03 6pm DFMA Meeting, Bullocks BBQ

Buy – Sell – Trade

Items for sale:

MFJ-461 MORSE CODE READER, POCKET SIZE

This is a little beauty. It comes in the original package.

I would like \$50

Radio Shack LCD RF FREQUENCY COUNTER.

Features a detachable Telescoping antenna. Comes with original packaging, and is in like new condition.

I would like \$75

I have pictures of them and can e-mail them.

Larry – K1ZW lclarks@nc.rr.com

Group Coax Buy - prices up ;-(

We can get the LMR-400 equivalent for **80 cents/ft.**, delivered, in 1000' quantities.

http://moonblinkwifi.com/pd_lmr400_type.cfm

I don't need any more, but if we can get an order for 1000' or more, I'm willing to handle it. Contact:

Wilson – W4BOH infomet@embarqmail.com

Wanted: Dead Microwave Ovens

I can use dead/dying/unwanted microwave ovens. The power transformers can be used for power supply construction. Thanks.

Wilson – **W4BOH**

73 - Dee, KU4GC, editor

Send copy to ku4gc@amsat.org

Deadline: one week before the Club Meeting

(Photos KU4GC or as credited)

Web Page: dfma.org