



Next Meeting:

Tuesday, April 3

Bullock's BBQ 6:00pm

Program: The Cuban Numbers Stations

Nick Gessler will give a talk on the Cuban Numbers Stations. The talk will include a short introduction to cryptology, its history from cipher disks to one-time-pads and the enigmatic "numbers stations." Nick will bring some examples of cryptographs from his own collection, dating from the late 1600s to the present and then will move the spotlight to the strange transmissions picked up internationally and cataloged by hundreds of listeners. These are the "numbers stations," used by clandestine organizations throughout the world, lists of "random" numbers and "random" sounds which encode instructions from espionage handlers to their agents in foreign lands. Nick will finally focus on Cuban spies and Cuban "numbers stations" which you can hear most every evening on your shortwave receivers.

Nick Gessler received his Ph.D. in Computational Anthropology from UCLA developing "Artificial Culture," simulating interacting individuals in societies. He continues this research, focusing on the role of networks of trust, secrecy and deception in human cultural evolution at Duke University in the Information Science & Information Studies Program. Bridging these interests, he offers one course in theory building: "Espionage, Cryptology and Psychological Operations" and one in multiagent modeling: "Artificial Life, Artificial Culture and Evolutionary Computation." During breaks, he hunts and collects meteorites.

Touch-A-Truck

We will be supporting the Boy Scout fund raiser Touch-A-Truck with the MCU on Sunday, 4/15 from noon to 4pm at the University Mall in Chapel Hill. OCRA members Bruce, N1LN, and Derek, W4DTB (brother of one of the scouts involved), agreed to help staff the MCU. Bruce has acquired the special event call N4T for the event and Dee volunteered to make up some QSL cards if that is needed or desired. We will have a DFMA driver and could use a couple of additional volunteers. Admission to the fund-raiser is \$5.

<http://www.troop39nc.org/troop-committee/touch-a-truck/>

Bill Richards, NC4TI, sk (formerly N4TDX)

Bill Richards, a former DFMA member, died Sunday night 18 March 2012. Bill is survived by Teresa Richards his wife of 30 years and his two children

Robert Theodore Richards (aged 23) and Natalie Ann Richards (aged 20) all of Durham County. Bill was the brother-in-law of Dave Love, N4UBH and Paul Van Doren, KE4OXN. The cause of death was a sudden heart attack that occurred at home.

Bill was a U.S. Army Veteran who served during the Vietnam Era as an electronic warfare/intelligence specialist. Later in life, Bill became an amateur radio operator and eventually advanced to the extra class operator license. Bill's interests in amateur radio included lighthouses and lightships on the air and IOTA.

Bill's professional pursuits and lifelong passion were photography and graphics. In recent years Bill had been employed by UNC as a digital archivist.

Bill's final wishes were that he be cremated and his ashes scattered near his beach house on Topsail Island. Bill had suffered from diabetes mellitus and the family has asked that donations be made to the American Diabetes Association in lieu of flowers.

-Dave, N4UBH

DFMA at the Creekside

Elementary School Science Fair

One Wednesday, March 14, the Durham FM Association provided an amateur radio presence, again this year, at the Creekside Elementary School Science Fair in Durham. There were many outstanding exhibits but it was hard to miss the DFMA Mobile Communications Unit (MCU) in the parking lot and two ham radio demo tables set up in the hall.

The MCU in the parking lot, staffed by Lowell, KK4PH, and Wilson, W4BOH, provided attendees a view of the DFMA's mobile equipment designed to be deployed in an emergency. With multiple radios, a Tarheel screwdriver antenna on the roof and a generator, it is set to handle most problems. It now also includes Winlink allowing email to be sent to the Internet over HF.

Inside, always popular, were the J-38 code keys, one hooked up to an audio oscillator and another hooked up to an LED light. There was also a printout of the Morse code. The real payoff was when a mother sounded out the name of her daughter on the key, using the Morse chart. And then, to everyone's surprise, Dick, WA2ROC, said "Hello Sophie". He was clearly able to copy the sometimes irregular Morse code spelling out the girl's name.

The Link

The star of the show was Dick's "luggable" HF station which he set up with a light-bulb as a dummy load. This Collins KWM-2A HF 17 tube transceiver is like one he had used in the service. Children were able to talk into the mike and see the light-bulb blink in response to their voices. But wait: There's more! The HF rig in the MCU outside of the building was able to copy and talk back.



Parents & daughter captivated by Dick - WA2ROC and his HF station

Other DFMA participants were Rhett, KE4HIH; Joanna, KE4QOZ; Rich, KD6VK; Dee, KU4GC; MK, W4MKR; Paul, KE4OXN
-Dee, KU4GC

DFMA Amateur Radio Licensing Course Started on March 24th

Lowell, KK4PH, reports:

Our first Ham radio class met this afternoon with eight students, as well as Kevin-KB4WFV, the father of one of the students, Rhett-KE4HIH, and Dee-KU4GC.



Lowell, KK4PH, leading the Technician License class at the Durham Mennonite Church

I think one student was elementary school age, two were middle-school aged, and one is in high school and there were four adults.

There were a few technical glitches with the projector, and I forgot my power cord for my Kenwood TS-50 - but I improvised and the powerpoint slides and the

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demos went well. Things were kept on schedule and ended a few minutes early. I was impressed how well the students picked up the material and there were absolutely no disruptions and no inappropriate students.

Lowell feels that if you know anyone interested, he or she can still join the class and do a bit of catch up reading. Have potential students contact Lowell (details below).

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

Wilson's BOH Corner

(Editor's Note: In February, Wilson, W4BOH, sent me material for the LINK relating to Field Day and under the heading of **VP CORNER**. He wrote:

"Well, I was deposed from my lofty President's perch, but maybe I can still use some Link space to irritate some of our members. I can't irritate them all because TWO have told me they enjoyed my stories and philosophical advice! SO for both of them and whomever else might be interested here's a little something for February."

Although I promptly misplaced it, thus this late March debut, I was thrilled that he wanted to write something. And, since I would like him to continue, even if he escapes the VP office next time around, I decided to give his "corner" a different name, not tied to his office. (Of course if he yells loud enough, I may go back to his original wishes.) Meanwhile, he can count at least THREE people who enjoy his stories and advice. Now, back to **Wilson's BOH Corner**
- Dee, KU4GC)

Radio Fun

Are you enjoying ham radio? It's a hobby after all, so it should be fun. Have you set up an HF station, or visited someone who operates HF? Yes, it's great to BS with buddies and budettes on the repeaters, but does it teach us anything about propagation, electronics, or other people? Getting on HF can do all those, IF one puts some effort into understanding the function of all the black boxes one is using! Remember Terry's great program on antenna matching? Does your antenna "load right up", or do you need an external or internal matching network (tuner) to make it play nicely with your transceiver? Have you tried trimming it to see if

you can improve its performance? Have you tried running your transceiver from your car battery, to see if you could use it in times of power outage? Learning about all this stuff is fun, especially since you don't "have" to do it!

And then you get it on the air. Sure, most contacts these days are "hello, rig here, weather, and 73", but they don't have to be and not all are. There are plenty of people on the HF bands who are just as friendly and talkative as those on your familiar repeaters! You just have to be patient and look for them. If you hear a casual sounding CQ when the band is not crowded and conditions are stable, there's a good chance the caller will take some time to chat about equipment, operating, propagation, their grandkids, or their airplane (sailboat, antique car, antique equipment, tower, or volunteer fire department). It's no problem at all to have 15+ minute chats with people on any band. 10m is often open now and has many people willing to chat, especially in the afternoons, and signals are often spectacularly strong and clear.

And what about building? You can get your feet wet with a small accessory kit, receiver, or QRP transmitter easily, especially with one of the many modern kits available these days. Yes, it will be a while before you are ready to build a rig from scratch, but reading a diagram and buying parts are not difficult and the manual skills involved can be taught in a few minutes. We've had lots of homebrewed stuff at Show and Tell, so you know about what things look like. There are many members with the experience and knowledge to see you through rough spots, so tap into that valuable resource and get started on something before summer hits!

73 for now, Wilson, W4BOH, Ex President

Just over the Horizon

Both the DFMA and OCRA have agreed to support the **Strawberry Festival** at the **Central Park School for Children**. (The clubs have been supporting Meg, KI4LLL, who teaches an elementary school class which has a very nice HF station – W4CPS and also an APRS digipeater and I-gate. Meg is a member of both clubs.) While details are not fully in place, it looks like we'll have the MCU there. The event will be on Saturday, May 5th, from 11am-4pm, so mark your calendars.

You can't escape the Lid!

At the last DFMA meeting, Dee and MK awarded the Lid to Dave, W4SAR, for his Field Day Leadership which had raised the OCRA and DFMA Field Day to a new level. Unfortunately, Dave was not present at the

last meeting so Dee promised to present it at the next OCRA meeting.

So, on Monday, 3/12, Dee presented the DFMA Lid to Dave at the OCRA Meeting at the Orange County EOC.



Dave, W4SAR, receives the Lid from Dee, KU4GC, as Karen, KD4YJZ, looks on. Dave is also the OCRA Secretary and Karen is the OCRA Vice President. (Photo by W4MKR)

LRCC Annual Carnival

The Little River Community Complex is running its Annual Carnival at the Durham County Memorial Stadium from Thursday March 29 through Sunday, April 8. There will be rides, games and diverse eating establishments. Starting times are T-F 5pm, Sat.-Sun. 1pm. The contact number is (919) 730-3663. The address is 750 Stadium Drive. This is across from the Armory where we held our hamfest for several years.

Go to dfma.org and look at the related story. You can click on a link there for ride discount coupons.

The Little River Community Complex rents us the space for DurHamFest each year at reasonable rates. This is their annual fundraiser. Give them your support.

Club Meeting Minutes

Durham FM Association (DFMA)

DFMA Meeting - 3/6/12 - KU4GC Secretary

Location: Bullock's BBQ, Durham

Attending:

Attending: Dewey, WA4AHR; Wilson, W4BOH; Terry, WA4BVY; Dick, KK4CCX; Terry, WD4CEE; Charlie, NC4CD; Herman, N4CH; Donna, N4RXL; Charles, WD4CLT; Justin, KD4CPM; Dan, KK4DMS; Michael, KK4EIB; Dee, KU4GC; MK, W4MKR; Wayne, KJ4GDW; Bob, K4HA; Rhett, KE4HIH; Joanna, KE4QOZ; Chris, N2JFP; Linda, KF4LJZ; Bob, NN4I; Charlene; Lad, W4ORD; Jim, KB4OT; Vic, K0OUX;

Paul, KE4OXN; Gabriel; Lowell, KK4PH; Ken, KI4QXJ; Bill, KI4RAN; Pres; Bob, W4RWC; Dick, WA2ROC; Derek, KO4T; Thomas, N4TMD; Rich, KD6VK; Dave, NA4VY; Sam, KJ4VWG; Jim, WB4YYY; Sue, KA4AVM; Elmo
A total of 38 attended, including 34 hams.

President - Bob, W4RWC, called the meeting to order at 7:05 pm and started with a round of self-introductions.

REPORTS

Treasurer - MK, W4MKR

Members: 55 members in good standing (2012 dues paid by the end of the meeting)

Repeater Manager - Charlie, NC4CD
The remote receiver project is moving along.

Hamfest Chair - Paul, KE4OXN
Paul reported that everything was on track for another great DurHamFest on Saturday, May 26.

Creekside Science Fair - Rhett, KE4HIH
Rhett first reported that he had a great time in, again, providing communications support at the Odyssey of the Mind event in Chapel Hill. Rhett circulated a sign-up sheet for volunteers to help put on a ham radio presence at the annual Creekside Elementary School Science Fair. A few more hams are needed. The MCU will be there. Rich, KD6VK, reminded us that the event will be 6-8pm, March 14.

MCU - Lowell, KK4PH
The replacement lift mechanism for the screwdriver antenna on top of the MCU has been installed and is working. Also, Ken, KI4QXJ, has WINLINK working from the MCU -- a great achievement! This allows email to be sent from the MCU.

ANNOUNCEMENTS

Lowell, KK4PH - Technician License Classes are starting on Saturday, 3pm - 6pm, 3/24, at the Durham Menonite Church. They will continue for a total of eight classes (skipping Easter weekend which is also on the day of RARSFest). The Saturday after the last class will be DurHamFest when students can take their test. Students will have to spend \$30 for the ARRL license manual. People who can help teach the class should contact Lowell. Prospective students should also contact Lowell.

Dee, KU4GC - announced that the Board had agreed to send the MCU to the Touch-a -Truck event. This is a Boy Scouts fund raiser being held at University Mall in Chapel Hill on Sunday, April 15.

He also reported that the Board had discussed the Maker Faire, both the possibility of encouraging exhibits and providing partial financial sponsorship but had taken no action.

Wilson, W4BOH, discussed the NC QSO Party. He mentioned his participation in this NC sponsored HF contest and solicited a show of participation from others present.

Awarding of the Lid

Dee and MK, W4MKR announced the awarding of the Lid to Dave, W4SAR, for his Field Day Leadership. He helped bring the DFMA's involvement in Field Day to new heights and helped generate a great success for the joint OCRA/DFMA event. (Since Dave was not at the meeting, Dee promised to award it at the OCRA meeting the next Monday. You can't escape the Lid!).

Door Prizes

Charlene, xyl of NN4I, won a vise grip style clamp and Justin, KD4CPM, won an in-line Ground Fault Interrupter to put between an outlet and an extension cord.

PROGRAM - Construction of the WUND TV Tower
Wayne, KJ4GDW, provided a fascinating insider's view of the construction of the 1642' WUND TV tower in eastern North Carolina. The tower cost \$4 million and required one million pounds in materials. The guy wires were 3.5" thick. Well illustrated in his pictures were the tremendous quantities of rebar and concrete required to hold the tower and guys in what is essentially a sand foundation. The raising of the tower with the help of a gin pole was also well documented. (The slides should eventually be available on the DFMA web site - dfma.org)

Meeting adjourned

Board Meeting Minutes

Durham FM Association (DFMA)

Board Meeting - 3/20/12 - KU4GC Secretary

Location: 2019 Front Street, Durham

Attending:

Charlie, NC4CD; Dee, KU4GC; MK, W4MKR; Rhett, KE4HIH; Joanna, KE4QOZ; Bob, W4RWC; Ken, KI4QXJ; Paul, KE4OXN; Wilson, W4BOH; Michael, KK4EIB; Don, KE4UVJ; Vic, K0OUX

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

REPORTS

Vice President - Wilson, W4BOH

The Link

Newsletter of the Durham FM Association

The next program will be about the Cuban Numbers Stations. Nick Gessler will speak about these and some historical aspects of cryptography.

Treasurer - MK, W4MKR

Current members: 61 are paid up so far for this year.

MCU Manager - Lowell, KK4PH

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

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

Secretary - Dee, KU4GC

Minutes of the 2/21/12 Board Meeting and the 3/6/12 Club Meeting were accepted as distributed.

Dee also reported he'd received an email query via the OCRA mailing list from Ed Best, AK4W:

"I wanted to put an Amateur Radio Help Directory brochure out and put it up at local public libraries and possibly schools to get the word out on amateur radio. I wanted to list both NCOORA & DFMA as clubs in the area. I also wanted to put in the directory a listing of volunteer Radio Amateurs that would agree to answer questions from the public concerning Amateur "Ham" Radio. The volunteers could have email and/or phone number listed. The brochure would explain what's amateur radio and what hams do and also list ARRL as a resource. Let me know what you think and if you would be interested in being listed in the directory. Thanks. Ed Best-AK4W"

There was no objection to having the Club listed in the brochure. Individuals would have to decide if they wanted to be listed as a resource and what information about them was to be included.

There were also the following reminders/announcements
- We will be supporting the Boy Scout fundraiser Touch-A-Truck with the MCU on Sunday, 4/15 from noon to 4pm at the University Mall in Chapel Hill. OCRA members Bruce, N1LN, and Derek, W4DTB (brother of one of the scouts involved), agreed to help staff the MCU. Bruce has acquired the special event call N4T for the event and Dee volunteered to make up some QSL cards if that is needed or desired. We will have a DFMA driver and could use a couple of additional volunteers. Admission to the fundraiser is \$5.

- RARSFest is on 4/7.

- Bill Richards, NC4TI, brother-in-law of Paul, KE4OXN, and Dave, N4UBH passed away last week.

Repeater Manager - Charlie, NC4CD

Charlie is continuing to make progress on the voter system which allows the 225 repeater to have multiple remote receivers. He also reported that the controller

code would be modified so that the auto-patch will continue to function when the local calling plan will require 919 (but no 1) for all calls at the end of March..

Hamfest Chair - Paul, KE4OXN

Paul distributed copies of this year's DurHamFest flyer. As in past years we expect to receive an ARRL packet which includes gift certificates which can supplement the door prizes. It was agreed that the DFMA prizes would be handled in the same manner as last year with a purchase from dBj Electronics for radio(s).

Michael, KK4EIB, mentioned that a free copy of the logging software N3JFP could be gotten for a hamfest door prize. (N1LN purchased it from N3JFP for logging support of Field Day last year.)

Paul also asked if we could provide some publicity for the Durham County Fair. This is a fundraiser for the Little River Community Complex which is the site for DurHamFest. Dee said he would put something on the web but asked for some text from the LRCC.

MCU - Wilson, W4BOH

The MCU work party was a success. An electric fuel pump was added to the generator to improve starting. The Tarheel Antenna lift mechanism was re-installed and is working. Best of all, Ken, KI4QXJ, has gotten Winlink (WINMOR) working and email can now be sent from the MCU.

Wilson **moved that we purchase a laptop for approximately \$500** to support Winlink. It would be more powerful than the existing donated computer and would have the added advantage of working from the batteries with the appropriate mobile adaptor. **This was approved unanimously.**

OLD BUSINESS

Creekside Elementary Science Fair

Rhett, KE4HIH, reported that there was good support from the membership and the MCU and displays were well received. The stars were Dick's, WA2ROC, Collins KWM-2A HF transceiver and the J-38 Morse keys.

Technician License Classes

Lowell was not be able to attend but sent a written report. Everything is set to start on Saturday, 3/24, from 3 to 6pm at the Durham Mennonite Church. He has received promises from KE4HIH, KU4GC, and K3VSA to help out. More assistants are solicited.

NEW BUSINESS

Table at RARSFest

Wilson asked if we were going to have a Club Table at RARS. Dee reported that there were no present plans,

but that OCRA had ordered three tables and that joint members certainly could sell stuff there and that even non-OCRA-members could probably arrange to use the tables (and of course, give OCRA a reasonable cut. In the early days of the DFMA, money was raised at other hamfests in this way and the Club got 10%.) Paul said he would have tables at RARS (selling batteries, among other things) and that people could work with him to sell things.

It was suggested that next year we look into getting (a) DFMA table(s), possibly next to OCRA's so that staffing might be shared.

Meeting adjourned.

On the Internet:

Making Microphone Connections

Every now and then you just need a resource to help you with the microphone connector you're trying to attach. Maybe the original manual is not readily available at your fingertips.....

This site lists the info in a couple of different formats: diagram, pin listing, photo of the connector with pins labeled, etc.

<http://www.qsl.net/g4wpw/date.html>

Thanks to Vic, K0OUX

(also now under the Links section of dfma.org)

Upcoming Events (dfma.org for details)

- 3/31 3pm Tech License Class, Mennonite Church
- 4/3 6pm DFMA Meeting, Bullocks BBQ
- 4/7 8am RARSFest, Fair Grounds, Raleigh
- 4/9 7:30pm OCRA Meeting, Orange County EOC
- 4/14 10am VE Testing, Orange County EOC
- 4/14 3pm Tech License Class, Mennonite Church
- 4/15 12n Touch-A-Truck, Univ. Mall, Chapel Hill
- 4/17 7pm DFM Board Meeting, 1920 Front St
- 4/21 3pm Tech License Class, Mennonite Church
- 4/28 3pm Tech License Class, Mennonite Church
- 5/1 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