

The Link

Newsletter of the Durham FM Association

June 2020



President's Corner

How many of you have more projects that you'd like to work on than you have time? I know that I do! I hope that this time of reduced social engagements has given you the opportunity to catch up on some of those projects even if they are just spending more time with your family and catching up on sleep.

The DFMA has also been working on some projects as well. Charlie, NC4CD, continues to lead efforts to maintain and improve our repeaters. Recently, the maintenance has included Internet issues, first at TV Hill and now at the Hillsborough site. Linking to other repeaters is currently unavailable from Hillsborough. We hope the replacement VDSL modem arrives in time to restore access before our Tuesday meeting, but be prepared to check in to the club meeting net only on the 145.45 or via SVXLink/Echolink.

For improvements, work continues on the 6m repeater. At our last board meeting, Charlie said that the receiver sounds great and is very sensitive, so we can look forward to a great performing repeater. On 1.25m, we are working on changing the Internet linking for the 224.260 repeater from IRLP to AllStarLink. This change will keep us in line with the linking used for the Virginia 220 network, offer more friendly repeater control, and let us use standard Internet audio routing that is developed by both non-ham and hams alike.

For more information on AllStarLink, see <https://www.allstarlink.org/>.

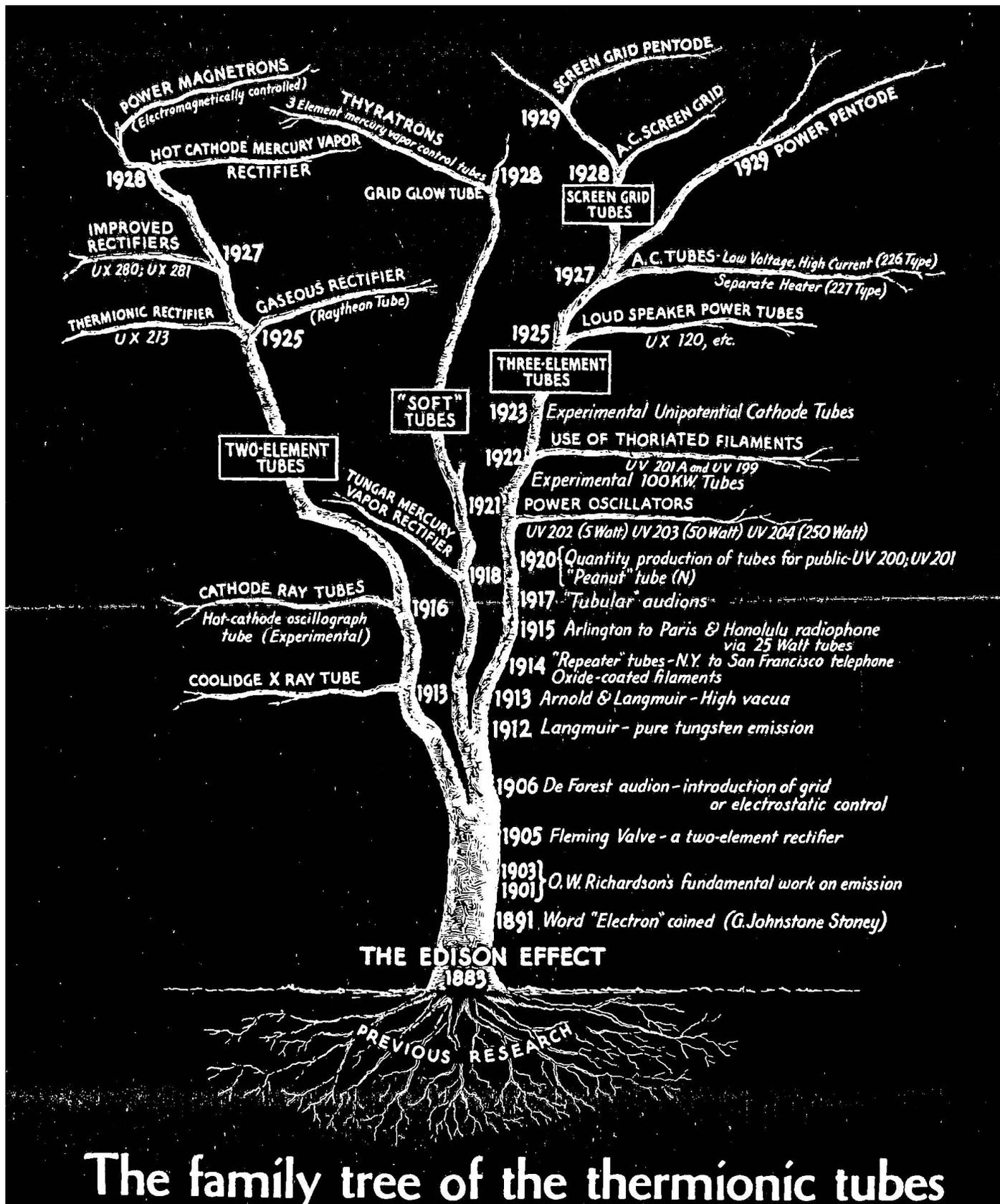
On the administrative side, we are working to revise the club's bylaws. Their last structural revision was in 1993, twenty-seven years ago, and they are showing their age. We hope that the revision will allow us to follow written procedures that make sense in our current era. The revised bylaws will give us a framework for writing additional documentation about our policies and procedures. The board will draft a proposal for the new bylaws and circulate it to the membership for comment sometime this fall. We will convene a meeting to ratify the new bylaws early in 2021. At the end of this process, we should have a set of documents that will allow us, the board, to run the club in a clear and efficient manner, and so that all of you know how we operate, what the club can do for you, and how you can become more involved.

Speaking of getting involved, board elections are coming up in August.

Please consider running.

73,
Jack — KM4MBG

Interesting Graphic



The family tree of the thermionic tubes

What's more dangerous?

10,000 volts at 1000 amps or 30,000 volts at 300 amps

Electricity doesn't work that way.

You have to be either a voltage source with a current limit, or a current source with a voltage limit. Most of the time, it'll be a voltage source.

Your body has some resistance to it. The current you'll see specified somewhere is usually the maximum current a voltage source can provide, but the actual current you'll see is voltage/resistance, which will be way less than what you're proposing here. 10kV is never going to put 1000 amps through you unless you're made of copper, nor will 30kV put 300 amps through you.

But either 10kV or 30kV will kill you quite dead. It only takes a fraction of an amp to stop your heart, and these voltages are enough to cook you pretty thoroughly and quickly.

Jim Reich, Long time Silicon Valley engineer and entrepreneur in many industries

The Link Classified

If you have items to buy or sell, send your ad to: **Martin, KA5JUU**

martin@brody1.com 919-260-0632

Only one club member has ever submitted an ad and it was successful! I find it hard to believe that none of our members have anything they would like to sell, give away or purchase

There are no conventions or hamfests in our area, in the near future

This is a sparse issue due to no content submitted by club members.

It has been somewhat difficult to find interesting items from other sources and often spend time adapting them and/or get permission to fit in our newsletter.

Minutes of Last Club Meeting

Durham FM Association (DFMA)

DFMA Over-the-Air Meeting – 05/05/2020 – Dan, KR4UB, Secretary

Location: 147.225MHz & 145.450MHz PL 82.15 DFMA Repeaters

Attending: KM4MBG, Jack; KR3AM, Mark; NC4CD, Charlie; KU4GC, Dee; KN4EEO, Rick; KK4PH, Lowell; N4JQR, J.R.; KF4PAB, Lenore; W4OFZ, Banks; KG4QOF, Dan; K0OUX, Vic; N2XZF, Paul; KR4UB, Dan; K4VO, Bob; KN4SVO, John; KN4DRN, Mike; NA4VY, Dave; KW4KZ, Chuck & Mary; W4UJM, Wally; N8VNR, Kevin; WD4CEE, Terry

A total of 22 attending, with 21 of them currently licensed hams.

President - Jack, KM4MBG opened the DFMA Club over-the-air membership meeting at 7 pm with check-ins, followed by announcements, officer reports, and then a rag chew round table discussion.

ANNOUNCEMENTS

Jack, KM4MBG report no new announcements as the most recent items of interest were reported on in the recently published Link Newsletter.

Mark, KR3AM announced there is a very good podcast panel discussion (Episode 300) on QSOToday.com. This episode focuses on building a virtual ham radio convention on the topic of what they were doing before the Covid-19 pandemic and what they are doing now.

REPORTS

Vice President – Jimmy, KF4KHU was not present.

Treasurer – Lenore, KF4PAB provided the treasurer's report. 90 members' dues are current.

Secretary – Dan, KR4UB requested feedback & comments from the membership on the last board and club meeting minutes included in the recently published DFMA Link Newsletter. Nothing heard.

Repeater Manager – Charlie, NC4CD reported Paul has completed the 6M repeater and Charlie has mounted the repeater in a cabinet with all the associated equipment. The remaining items to get it on the air are to tune the duplexer and mount the new antenna which will be fed by 7/8" heliax. Lowell helped out getting the repeaters linked up for the net.

AuxComm EC – Shawn, K4CTD not present; No new report.

DurHamFest – Dee, KU4GC reminded all of his previous announcement that the 2020 DurHamFest is cancelled. A more detailed report is contained in the DFMA Link Newsletter.

Field Day Coordinator – Dan reported that Dave, W4SAR announced on a recent OCRA Net that 2020 Field Day is cancelled. Dee checked with Dave regarding VE testing and reported there are some remote VE testing experiments ongoing but no firm plans yet.

Door Prize - Dan used his random number generator to “draw” for the door prize winner which was Charlie, NC4CD winning a flashlight.

Rag Chew:

Charlie, NC4CD continues to work on his to-do list and got his home generator serviced.

Dee, KU4GG reported not very much radio wise and has been working on a long term project to clean out an accumulation of magazines out of he house.

Bob, K4VO QRT for dinner.

Rick, KN4EOO checked into 3 ARES/AuxComm nets and has been on the internet and watching TV. Rick asked Dee about DFMA directory distribution which normally occurs at DurHamFest. Dee responded the directories are not yet printed and he plans to wait until regular meetings can resume, as postage to mail the directory is quite expensive. The question will be brought up at the next board meeting. A follow up question was could the directory file be posted on the website and printed by members. Dee responded that could not be done as that would expose member contact information.

J.R., N4JQR enjoyed participation in the “Whole Foods” group video conference during the OCRA Saturday net. He reported having to use the 147.225 repeater tonight as linked audio levels were more muffled coming into the 145.450 machine. Jack reported having the same problem and moved to the .225 machine.

Lenore, KF4PAB is enjoying doing a lot of baking and the lack of must-do activity leaving time to do what she wants to do.

Banks, W4OFZ reported his past signals into the repeater had a lot of pops & crackles and has been working on improving his signal strength. Jack reported he is now loud and clear into the repeater.

Vic, K0OUX reported he had a cardiogram today to recheck on his high pulse rate after an “RF heart catheter” treatment. His heart rate went back up after a few days (1/3 of the Americans his age have the same fibrillation problem) and he is now taking beta blockers.

Paul, N2XZF reported not much activity other than completing the 6M RF deck and Charlie getting the new 6M repeater in the cabinet.

Dan, KR4UB reported most of his activity has been participation in local nets. On Saturday mornings, the whole foods breakfast gang has a video conference during the net, and Dan checked into the Monday night 28.450MHz 10M net. Dan has built an audio bridge that can connect together video conference audio and ham radio audio as was done back in the day of the ham radio/telephone “phone patch”. The first on the air test was with Bill, N8BR listening to and checking into the 10M net. Bill does not have HF capability at his home.

Mike, KN4DRN reported he is still new to ham radio and wished all well.

Dave, NA4VY is keeping busy with projects and was on the Monday night 10M net. With his marriage while in Bali, he now has a XYL and now busy cleaning up the house. He further reported on a very interesting series on BBC called “Shock & Awe, the story on electricity”.

Chuck, KW4KZ had a good week with gardening and an antenna project at Wally, WA4UJM's QTH with an Ed Fong tri-band antenna. Bob K4VO, Wilson W4BOH and others helped with on-the-air antenna testing.

Wally, WA4UJM enjoyed the antenna work with Chuck and is now on the air with his vintage Heathkit radio. He is working at home for the day job.

Kevin, N8VNR reported working at home and in the evening doing some DMR activity. He has also been doing some experimentation with AllStar which is built around a PBX (Private Branch eXchange) system.

Terry, WD4CEE is spending more time working on his radios and getting back on the air with all the stay-at-home time now available.

Jack thanked all who joined the net for taking time to participate and share a little about their activities.

Club Meeting adjourned at 8:00 pm.

Minutes of Last Board Meeting

Durham FM Association (DFMA)

DFMA Board Minutes – 05/19/2020 – Dan KR4UB, Secretary

Location: Video Conference set up by Jack, KM4MBG

Attending: (y) Jack, KM4MBG - president; (n) Jimmy, KF4KHU - vice president; (y) Lenore, KF4PAB - treasurer; (y) Dan, KR4UB - secretary; (y) Charlie, NC4CD - repeater mgr; (n) Shawn, K4CTD - AuxComm; (y) Dee, KU4GC - DurHamFest chair ; (n) Dave, W4SAR - Field Day; (n) Martin, KA5JUJ Link Editor; At-Large Board Members: (y) David, KW4XL; (y) Paul, N2XZF; (y) Chuck, KW4KZ; (n) Karen, KD4YJZ; Club Members: Lowell, KK4PH

President – Jack, KM4MBG called the meeting to order at 7 pm with the call for officer reports.

REPORTS:

Vice President – Jimmy, KF4KHU unable to attend.

Treasurer – Lenore, KF4PAB provided the treasurer's report. 90 members' dues are current.

Secretary – Dan, KR4UB - With a sufficient quorum of board members present, the 05/05/20 Over-the-Air Club Meeting minutes were approved.

Repeater Manager – Charlie, NC4CD gave a progress report on the 6m repeater build. The new receiver board donated by Herman, N4CH has excellent sensitivity. The power supply, RF deck and controller have been mounted in the cabinet. There is some concern with the duplexer as it was originally built for 2 frequency splits away from the planned use. Another duplexer is available from Danny, K4ITL if needed. A tower crew delay due to Covid-19 may hold up 6m antenna installation.

The 220 repeater PA is still intermittently cutting out due to a possible relay problem. Power measurements will be made soon so a compatible replacement PA can be placed on order.

Charlie further reported the possibility that the new ARRL section manager might be available to give a presentation at the June or July club meeting by video conference.

Auxcomm – Shawn, K4CTD was absent.

Field Day Coordinator - Dave, W4SAR was absent. Dan, KR4UB summarized the respective club's plans and discussions for 2020 Field Day. In the OCRA & DFMA meetings held in March & April, the Field Day plans indicated that the 100 watt power levels would require purchase of suitable higher power bandpass filters. The detailed Field Day planning sessions beginning at the March OCRA club meeting and continuing at the April meeting determined that 13 bandpass filters would be required at an approximate cost of \$1300. With five DFMA board members also present at the meetings, Steve W3AHL was authorized to place the order, with DFMA splitting the filter cost with OCRA. Dan reported receiving the order invoice with the final cost including shipping coming to \$1642.77. A motion was made and approved authorizing the DFMA treasurer upon receipt of the order invoice, to write a check covering DFMA's portion of the cost.

NEW Business:

The first topic of new business introduced by Jack, KM4MBG was a presentation on AllStar followed by a discussion on the merits of converting the DFMA 220mHz repeater linking into the Virginia repeater network to AllStar. Lowell, KK4PH attending the board meeting by video conference led the presentation. The discussion continued making a number of points as follows:

- Converting the DFMA 220mHz repeater to AllStar for the Virginia link, is a desirable change having considerable merit as a phase 1 first step.
- Leaving the current 220 repeater linking hardware in place would make for an easy fall back plan if problems emerged.
- After gaining experience from the 220 repeater phase 1 change, a series of steps could be taken to convert other DFMA repeater links to the AllStar linking architecture.
- The current DFMA repeater linking method using IRLP at the TV Hill & Hillsborough repeater sites with RLC controller and IRLP computer scripts for activating and deactivating repeater links, is a rather fragile and difficult methodology to manage, maintain and operate. Would converting to AllStar be a better, more reliable method?
- AllStar provides a remote web interface for much easier maintenance, configuration and even the ability to remotely set audio levels to balance the audio throughout the system. Something the current IRLP linking method needs and is lacking.
- Charlie, NC4CD reported the hardware side of this conversion would be easy and cost effective by the use of the AllStar RA-35 interface boards available at nominal cost.
- Will having IRLP and AllStar on the same DSL internet connection during the conversion phase present any bandwidth issues?
- Expertise already exists within the club with Kevin, N8VNR already running an AllStar system, Jack & others already possessing Linux skills.
- With discussion complete, Charlie reported he will schedule a virtual meeting with Kevin, Lowell & others to develop the initial phase 1 plan, requiring a less than \$200 expenditure to begin conversion of the 220 repeater/Virginia link to AllStar.

The second topic raised by David, KW4XL was what to do about the 2020 DFMA Directory distribution. Directory distribution is normally done at DurHamFest to members as a means of not incurring a significant postal expenses by mailing the directory. The question was asked if it could be distributed electronically. Dee, KU4G indicated the concern that any form of internet email distribution of the directory could place member's contact information at risk. His position is to hold off on directory distribution until social gathering restrictions permit distribution at a club meeting.

The last topic was continuation of club bylaws discussion regarding statements that today are antiquated and unworkable. The plan will be to write a statement of the proposed by-laws changes, to be distributed by email to members of record and calling for a vote on the proposed change. Following the same protocol used by corporate stock holder meetings, it is common for shareholders to voice their vote by [proxy](#) by mailing in their response or by relinquishing their vote to a third party. Club members will be able to return their vote in the affirmative or negative within an allotted amount of time on the proposed change. Members not responding within the allotted time with their vote would be taken as a proxy vote in the affirmative, or for board members to make a vote on their behalf for the change.

The meeting was adjourned at 8:30 pm.