

# MARA W1⚡GaZette



March 2018

MONTACHUSETT AMATEUR RADIO ASSOCIATION

Vol 59, No 7

## Next Meeting

Wednesday, March 14, 7:30 pm, Lunenburg Library. Program: Joe Dzekevich K1YOW will present a talk on propagation.

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Contributors To This Issue:

AB1GF, K1JHC, KD1SM, NZ1D, W1HFN

## The President's Corner

*de Tom, AB1GF*

The technical team did a lot of successful repeater work recently (see State of the Repeaters). I can now work the 224.34 repeater from Iorio Arena in Ashburnham almost half scale. The repeater output is about 7 watts out of the cans. The 145.45 repeater from same location is about 3/4 scale. It is about 16 watts out of the cans. Interesting enough if I switch from 145.45 to 145.37 (Gahdnah) it is 3/4 scale and the audio is very low. Before I do anything about the 224.34 output I will raise that antenna first.

## February Meeting Report

*de Barry Fox W1HFN, MARA Secretary*

The meeting was called to order at 1930 by Tom, AB1GF. Introductions were made, those in attendance were: W1QED-Eric, KT1I-Charlie, KD1YH-Paul, K1YTS-Gary, W0TJP-Tim, N1MGO-Gordon, K1JHC-Tom, KB1LRL-Ray, ex-W9MO (sorry, name not noted) and Barry, W1HFN.

Treasurer's report: \$2924.93 in the account, same as last report.

Technical Committee report: the 2m repeater is still operating in fits and starts. A work party is in the works for the week of 18-24 Feb to look at the antenna and its connections [*for update, see State of the Repeaters infra, Ed.*] The new repeater controller is running at KD1YHs QTH in the "beacon mode", it may be brought to the site during the work party for trial installation.

A short coffee break was held at 2000, after the break, KD1YH-Paul, gave a talk on IRLP. The differences between IRLP and EchoLink were discussed. Next month our speaker will discuss propagation.

K1YTS-Gary stated that there will be no Townsend Canoe Race this year due to some Lions Club situation. A much larger one is planned for next year.

AB1GF mentioned we might want to consider running QRP at this year's Field Day. This was followed by a "spirited" discussion; more on this later.

The meeting was adjourned at 2035L.

Respectfully submitted, Barry-W1HFN, Secretary

## ***State of the Repeaters***

*de Tom AB1GF, Paul KD1YH*

As reported last month, the 2 meter repeater has been experiencing some undetermined interference including random "snap, crackle and pop" noises. After investigation by the breakfast...er...technical committee, it was discovered that the antenna was significantly damaged. The top element had been split into pieces (see photos at the end of this issue). New parts for the repeater antenna were ordered and received a few weeks ago.

On Sunday, March 4 a work party spent a long day at the site. The temporary X50A antenna was removed and the repaired X700HNA re-installed. Gary K1YTS and Tom AB1GF worked on the antenna and feedline outside. They removed all the old feedlines and installed three new hardlines, 65 ft of LDG 4-50A hardline for the 2m/70cm antenna, 55 ft for 220mhz and 55 ft for 900mhz.

Tom AB1GF removed the 2m/70 diplexer and replaced it with a new one and installed strain reliefs for the feedlines and power cord.

Paul KD1YH worked inside on the repeater while Barry W1HFN tested the old feedlines with his TDR. The new hardline tested great.

## ***Section Manager's Report-Feb 2018***

*de Ray, KB1LRL*

Hello everyone! I hope you are doing well and looking forward to the warmer weather once again. I know I am. It has been a quiet month section-wise. I do apologize as I have been a bit preoccupied in the midst of moving by mother back home from Arizona. I have been doing real estate stuff on both ends. I will be doing some travelling, but I am an email or phone call away.

I visited the CMARA club meeting recently and after witnessing their first attempt at conducting the business meeting under Roberts Rules, which we will conclude is a work in progress, there were some entertaining moments. They had a kit building session that night which was interesting. They also had an impressive turnout of members and they said it was a "light night." This club is a fine example of a group that actively participates for ham radio and their club. They will continue to sustain themselves for many years. Great job!

The Marlboro hamfest was a fun and busy time. When I wasn't selling the treasures, I was meeting and talking to section members and dignitaries as well. I will be at the Mount Tom Hamfest coming up and am looking forward to meeting more of you. I am planning to not leave right away if anyone wishes to talk about things regarding section matters.

The Help Wanted sign is still out to fill some positions for a team to do some great things to make this section more ready and visible, to both the section and the League. Give it a think and consider joining the team.

I plan to put together a presentation to show what my job is and the structure I wish to form so that it will be balanced and efficient. I'll try to make it lively. I know what some of these can be like, Zzzzzz!

For those who see this, thank you! Please tell others about our Western Ma website at [wma.arrl.org](http://wma.arrl.org) so more of you can see what's going on.

Thanks again and 73. See you soon

## **The Old Timers' Lunch**

*de Tom K1JHC*

*[Oops! Last month your editor reported that "three members made it for lunch at our February gathering, Charlie KT1I, Barry W1HFN, and Tom K1JHC." That should have read "January gathering", since the February gathering was cancelled by the Winter King, Ed.]*

And, speaking of the Winter King, on Wednesday March 7, Tom pulled into the deserted parking lot of the Airport Diner with Barry W1HFN following right behind. They quickly confirmed that the Diner was closed due to the storm, so they continued on their ways.

Tom commented, "As an aside I wish the Weather persons on TV would get it straight! We didn't get the heavy wet snow as those inside the 495 beltway did. This is proven by the lack of power loss due to snow covered wires, trees and branches. Route 495 is about the limit of the Ocean Effect and we get lighter snow but more of it." *[Bring back a Don Kent, Ed.]*

Remember, young or old, all are welcome to join us. Come out and enjoy a good lunch and some friendly "eyeball" chatter. Let's hope the Old Timers have better luck in April.

## **Public Service**

*de Ralph, KDISM, Tim W0TJP*

## **Sunday Net Control operators needed**

*de Ray KB1LRL*

We still need more back-up Net Controls for the Sunday morning ARES net. This is great practice for operating in special events as well as emergency situations. Participation will be on an as needed basis but you will be guaranteed a slot so you can learn about this function. Just need one-half hour on Sunday. Give it a try! *[Please drop Ray an email if you're interested, Ed.]*

## **Operating**

*[The following is just a sampling of the upcoming contests. See the ARRL Contest Calendar at [www.arrl.org/contests](http://www.arrl.org/contests) for more contesting information. For in-depth reporting on Amateur Radio contesting, you can subscribe to The ARRL Contest Update via your ARRL member profile e-mail preferences, Ed.]*

## March 17, 18

LA QSO CW/Ph/Dig

VA QSO CW/Ph/Dig

## March 22

NAQCC Sprint CW

## March 24, 25

CQ WW WPX SSB

## March 28

SKCC Sprint CW

NA QSO, RTTY

## VE Sessions

*de Ralph, KD1SM*

The February 2018 VE Session had one new Tech, one lapsed Tech re-licensed, and one General upgraded to Extra. VE's in attendance: Tom, K1JHC, Stan, KD1LE, Ralph, KD1SM.

As a reminder, the MARA VE Team schedules license exam sessions monthly on the 4th Wednesday. Pre-registration is requested, contact Paul KD1YH [kd1yh@arrl.net](mailto:kd1yh@arrl.net). Sessions will be canceled if no one has registered by Sunday before the scheduled session. If the session is not canceled, walk-ins are welcome, so if you are interested in upgrading or know someone who is looking for an exam session, you may contact Paul at the last minute to see if the session is being held.

## The "MacGyver" Q'nD Antenna Revisited

*de Bill, NZ1D*

Last month I wrote about my latest fun project, the "MacGyver" Q'nD (quick & dirty) HF antenna, configured as a short vertical (11.5 ft) top loaded by an 11.5 ft flat-top "capacitance hat". I chose top loading for several reasons: It had to be made from my junk box but I only had 12 ft of PVC pipe available, I wasn't sure that a jury-rigged full-size 20m 1/4-wave antenna support of 16.5 ft would stand up in my windy yard, and I wanted it to be multiband. For multiband, a good rule of thumb is about 3/4 wavelength on the highest frequency (24 ft on 10m). I just happened to have a hunk of wire 22 ft long. Close enough.

An object of top loading is to increase the effective length of the radiator, and thus to raise the point of maximum current in the radiator as far as possible above ground. The current in a vertical tapers linearly from maximum at the bottom to zero at the top and has an effective height of half the physical height. Top-loading allows the current to flow into the flat top, increasing the current at the top of the vertical, which raises the effective height and radiation resistance, and thus the efficiency of the antenna.

"Yeah, it was quick and cheap," you say, "but it ain't resonant." Tests on 20 meters using an MFJ-941C antenna tuner showed a 1:1 SWR at the tuner end, with reactance settings almost identical to my G5RV Jr. I suspect the SWR at the feedpoint is fairly high, undoubtedly an unun will improve the match but it didn't smoke the coax! Conditions on 20m lately have been in the dumpster, but with about 60 watts I did manage several long-distant contacts in the recent SSB International DX contest:

Date	Time	Call	Country	Miles
03/03	1003	P40L	Aruba	1373

# Montachusett Amateur Radio Association

03/03	1009	HI3K	Dom Rep	1044
03/03	2053	KH6J	Hawaii	4581
03/03	2055	PJ4G	Bonaire	1476
03/03	2100	KH7XS	Hawaii	4581
03/04	1328	EA2RY	Spain	4372
03/04	1331	TM6M	France	4493
03/04	1348	TM4L	France	4493

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Not bad for a few pieces of PVC pipe and fittings, a couple of connectors, and 42 ft of scrap wire. As I said previously, you never know what might work until you try it. You will make contacts and you will have fun in the process.

## The MARA W1/GaZette

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The deadline for materials to appear in the W1/GaZette is noon on the Sunday before the first Wednesday of the month.

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### MEMBERSHIP INFORMATION:

Club Secretary: Barry Fox W1HFN

Annual Dues: Regular \$25

Family \$30

Fixed income \$15

Meetings: 2nd Wednesday, 7:30pm September to June

Mailing address: MARA

PO Box 95

Leominster, MA 01453

VE Team: [KD1YH@arrl.net](mailto:KD1YH@arrl.net)

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### OFFICERS:

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Erik Tkal, W1QED Vice President

Barry Fox W1HFN Secretary, [bwfox@comcast.net](mailto:bwfox@comcast.net)

Gordon LaPoint, N1MGO Treasurer, [n1mgo@arrl.net](mailto:n1mgo@arrl.net)

Charlie Cayen, KT1I Trustee, [kt1i@arrl.net](mailto:kt1i@arrl.net)

MARA owns and operates three FM repeaters co-located on Burbank Hospital in Fitchburg. W1GZ on 145.45 (CTCSS 74.4), AB1GF on 224.34 MHz (CTCSS 103.5) and W1HFN on 927.5625 (-25 MHz) (CTCSS 74.4). The 2m repeater is also reachable via IRLP node 8433 and Echolink node 688832.

## ***Watt's Happening***

### **Sundays, 0800 local 5330.5 (ch 1) USB**

Western Mass Emergency 60M Net

Alternate frequencies are 5346.5 (ch 2), 5366.5 (ch 3), 5371.5 (ch 4), and 5403.5 (ch 5).

### **Sundays, 0830 local 3944**

Western Mass Emergency Net. Alternate frequency is 3942 in case of QRN, QRM, or frequency in-use. Also a good idea to scan up and down 10kHz if you cannot find the net.

### **Sundays, 0900 local 145.45-**

Montachusett Emergency Net

### **Tuesdays, 1930 local 145.37-**

WMEN Templeton Emergency Net

### **Wednesdays, 1900 local 145.37-**

Gardner/Templeton Emergency Net

### **Nightly, 2100 local 146.97-**

Central Mass Traffic Net

### **First Monday, 1900 local 3943, 7245**

RACES Net

### **Tuesday, Thursday, Saturday, 1800 local 3978**

Western Mass/RI Phone Net

## ***For Sale/Ads***

de Tom AB1GF, [AB1GF@arrl.net](mailto:AB1GF@arrl.net) 978 467-6658 .

10 Rohn 25 ft sections	\$50 each
EZ Way HD40 40' Crank-up tower	\$200
Hygain TH-6 Tribander, complete	\$150
Tarheel 100A-HP continuous coverage HF Antenna, with MFJ Memory tuner	\$475
Mosley CL 33 WARC, needs insulator kit	\$175

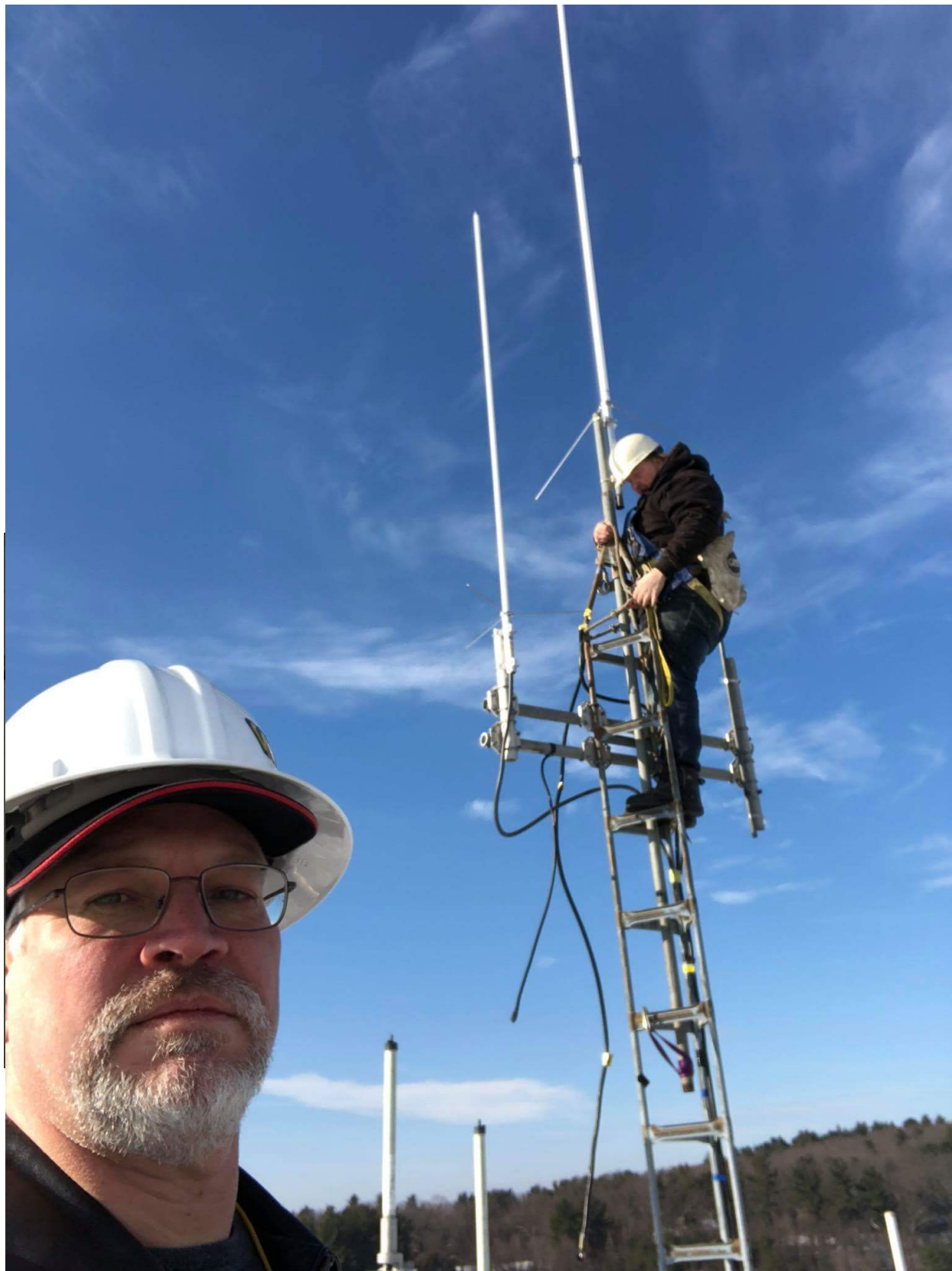
de Bill Leger, [NIUZ@ARRL.NET](mailto:NIUZ@ARRL.NET)

Mohawk ARC has a used MFJ-1798 HF vertical for sale. Operate 10 bands -- 75/80, 40, 30, 20, 17, 15, 12, 10, 6 and 2 Meters with this antenna and get full size performance with no ground or radials. All proceeds will go towards the DMR repeater project. \$100

## ***Repeater Technical Team at Work***

*de AB1GF*

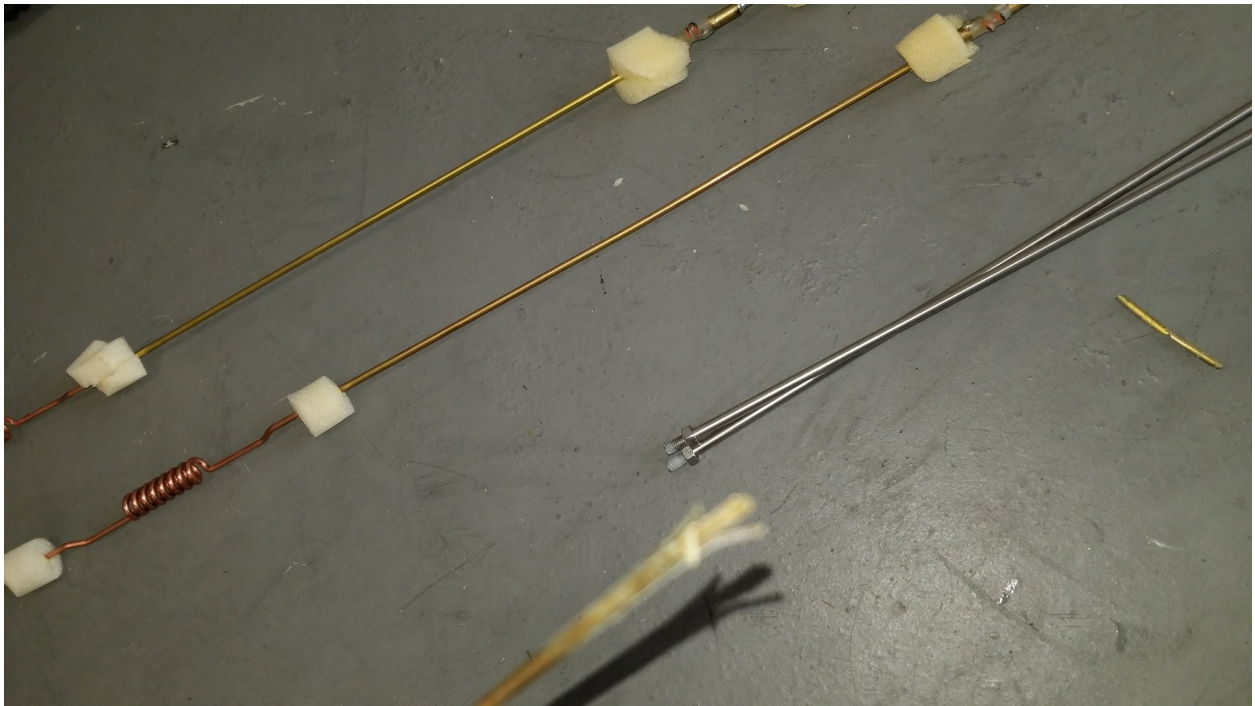
*The following photos of the recent repeater troubleshooting and repairs courtesy Tom, AB1GF*



*Illustration 1: Erik WIQED watches for birds of prey while Tom ABIGF removes the suspected defective 2m antenna*



*Illustration 2: Disassembly of the antenna reveals the source of "Snap, Crackle..."*



*Illustration 3: "...and Pop!"*



*Illustration 4: Tom AB1GF applying that age-old amateur radio antenna rule, “What comes down must go back up!”*



*Illustration 5: Barry W1HFN uses TDR application to check the condition of the feedlines*



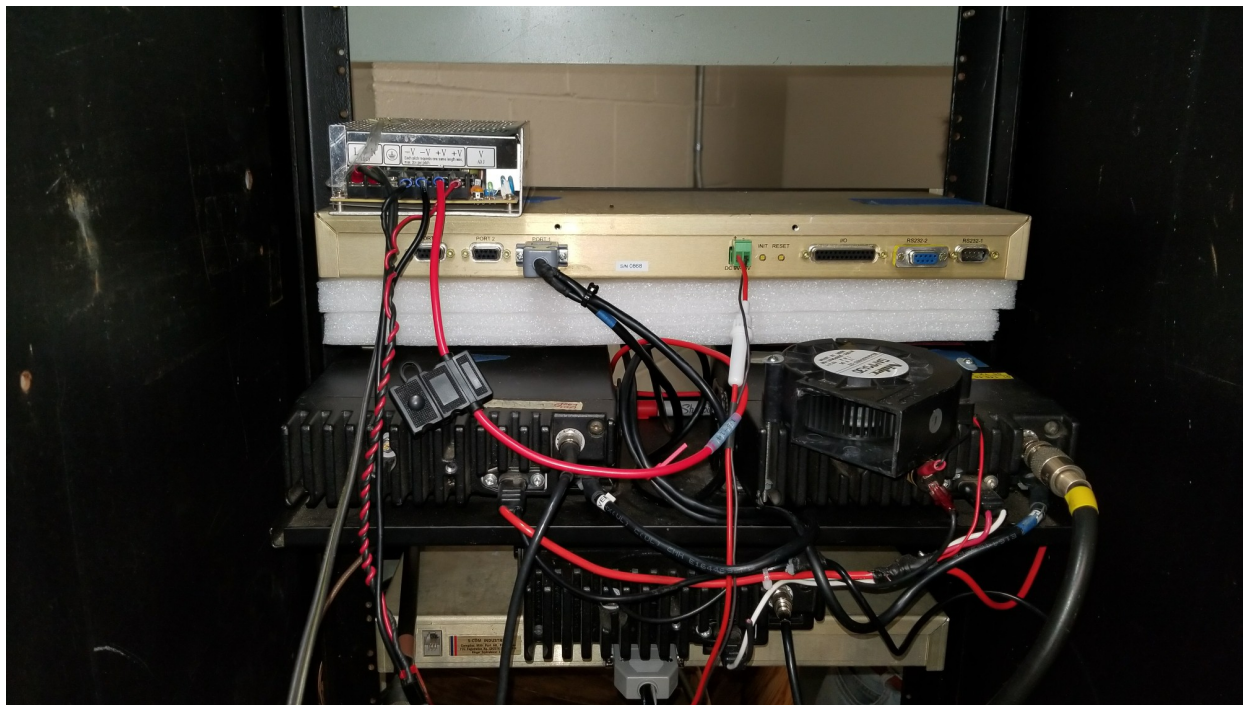
*Illustration 6: A nice, clean equipment layout for our repeaters' installation*



*Illustration 7: Some of the technical team's feedline handiwork*



*Illustration 8: More dressing the feedline*



*Illustration 9: A little bit of what's inside the rack from the rear*



*Illustration 10: Repeater equipment rack front view, Motorola transmitter, 2 Motorola receivers and SCOM controller (top)*