

MARA W1⚡GaZette



February 2017

MONTACHUSETT AMATEUR RADIO ASSOCIATION

Vol 58, No 5

February Meeting

At our February meeting, Gordon, N1MGO will describe his latest venture into remote operating and contesting. Remote operating has been growing rapidly and is taking on different forms. The new club T-shirts will be available for \$12.00 each. Stop by and enjoy the gathering. We could use a volunteer or two for bringing in treats. See you then.

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Contributors To This Issue:

AB1GF, KB1LRL, KD1YH, NZ1D, W1HFN

The President's Corner

de Ray KB1LRL

The State of the Club Address. Hello friends, as 2017 is winding up anew and we are all starting to get anxious for spring and the warm weather to arrive, I have used January to reflect on things with myself and the club and what the future brings to them.

For more than 65 years the club has endured it's share of triumphs and challenges. I think the members who have been around for a while will attest to that. I look back at my time and can certainly point those particular times out. I will admit there have been times I look deep to find a way to keep the motivation going short of using jumper cables and a strong battery. I can say I can look back and be proud of some of the things that we have accomplished while I was at the helm. Just to name a few -- our bank account is certainly doing well and is investing on improvements to the repeater to keep it up to date and functioning. Our last field day results found us actually first in our category for WMA and well up there with the rest of the country. We have had some great cookouts (NOT patting myself on the back!) and even better Christmas parties. We have also taken part in WRTC 2014, which for a lot of us will be a lasting memory and one I was proud to participate in and lead.

The future has some good prospects and this can be achieved by putting forth the time and energy to make it happen. As I have often said in the past, don't assume someone else will do it! What happens then is that the crickets take over. We need to continue to promote the club and hobby, we need new people who join the club and participate and not show up because it's stagnant and boring. We need new and interesting things to keep them coming back for more. We now are becoming affiliated with the Boy Scouts and will be doing the JOTA event which looks to be a bigger event this fall. We are looking to ramp up merit badge classes and license classes which can be a catalyst for growth. This is something I have been working on and I have now AV equipment that can be used for such things.

As for myself I have taken a hard look at my future as well. I will admit that I have not been as focused on the club as I should have been. Part of this is due my family situation with the loss of my Dad and making trips to AZ as well as my Mother's health and well being. 3000 plus miles do not help it for sure. I have also realized that I am feeling burned out. I don't like using that phrase but it is appropriate. Therefore this will be my last term as your president. I need to step away. I am telling you this now because I want each of you to consider taking on the role of president or maybe another office come June. You have plenty of notice to think and decide. It's not rocket science, but creativity will be your strength to see the club move forward in the success it deserves. This decision is not reversible (as I did the last time). To those of you who have supported me and worked with me, I say a heartfelt thank you. I won't list names at the risk missing someone, but I am sure you know who you are.

Fear not! I am not out of the picture totally. Call it ambition (or call it insanity), I know I am probably nuts, but I have been talking to some people and am looking to run for Section Manager when the time comes, which I believe is July. I see a need there and I feel I can represent the section and give it the representation it deserves. If I do succeed I can visit other clubs and see what they are doing and get some ideas. This can also be the cure for me to do something different and get a fresh outlook on things. I just want to say in ending, it has been a honor and privilege to have been your club leader for the last 10 years and I thank you from the bottom of my heart.

73, Ray

State of the Treasury (Treasurer's Report)

No report

The Old Timers' Lunch

de Tom K1JHC

The Old Timers' meet at noon on the first Wednesday of each month at Gene & Steve's new Airport Restaurant on 192 Hamilton St, Leominster. Come in and have some good food and camaraderie. Being "old" is not a requirement!

State of the Repeaters

de AB1GF, KDIYH

As reported last month (and as most listeners are painfully aware) the W1GZ 145.45 repeater at Burbank Campus occasionally makes a "howling" noise. It appears to go away if you press DTMF a1* (transmitter PL "off") on your microphone keypad, but the fix is temporary. Paul and Tom are not sure of the reason for the noise. The output power was also down, so a trip was planned to troubleshoot the noise and swap out the PA.

Last Sunday after the net, Tom AB1GF, Paul KD1YH, and Erik W1QED went to the repeater site to troubleshoot the noise and run some tests. We found the 2m exciter output down to approx 1 watt to the PA (it's spec'd at 10 to 12 watts); after some tweaking it's now driving PA correctly with 12 watts output. Erik and Paul rebuilt the PA by replacing one of the variable caps and cleaning up other solder joints. The PA power is now 42 watts out to cans and approximately 18 watts to the antenna. The squelch/PL issue was not solved so Tom turned the squelch up to help suppress the howl but we still need to find root of the noises. Paul has to reprogram the hang time to zero. We need to rework PL wiring on next trip.

We also found and repaired a broken rf connection (broken solder joint) on the 70 cm backbone receiver's input.

The 224.34 MHz repeater was making a raspberry or buzzing noise on start up and that was repaired. The 900 MHz repeater still awaiting installation of the antenna (which we have). KD1YH continues his efforts offsite to set up the new multi-repeater controller.

An Alphabetic History of Ham Radio Gear...(Sadly All are Gone Now)

de W1HFN

As a long-time tube radio fanatic, I thought a series of articles on the past tube-type receivers and transmitters might be of interest to others. Starting with Allied Radios Knight Kits, future articles will feature the next manufacturer alphabetically in line.

Allied Radio

Allied produced their Knight Kits from 1935 until 1971. While most were general electronic "gadgets" (Hi-Fi/stereo, intercoms, photo-electric relays, test equipment, etc) there were several ham radio items. There were three transmitters, the T-50, T-60 and T-150(A), and two receivers, the R-55 and R-100(A).

The T-50, introduced around 1955 at \$43.75, was aimed at the Novice class licensee and ran 50 watts input CW only on the 80-10 meter bands. It was crystal controlled, but there was a VFO (VF-44 at \$29.95) available for when the Novice upgraded. Tube line up was 5U4G rectifier, 6AG7 oscillator and an 807 PA. Sort of rare today, hardly ever see any on that auction site or at QTH.com.

The T-60 replaced it in the early 60s, cost \$49.95, still aimed at the Novice, but with the addition of controlled-carrier AM, plus an additional 10W input. There was no rectifier tube, silicon diodes performing that function. Tube line up was 6HF8 osc-mult, 12AX7 speech amp, 6DR7 modulator and a 6DQ6B PA. This was a very popular transmitter in its day and many are still to be found in the usual on-line sites and at flea markets.

The T-150(A) at \$119.95, was covered in a previous issue of the MARA W1GaZette, so I will not go into it again at this time.

The R-55 at \$67.50, was a single-conversion general coverage receiver. There was no RF front end and no S-meter. Tube line up was 6BE6 converter/oscillator, 6BZ6 1st IF amp, 6AW8 2nd IF amp, 6AL5 detector/noise limiter, 6AW8 BFO/audio amp and EZ90 rectifier. This was the companion to the T-50/T-60 transmitters.

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The R-100(A) at \$99.95 was also single-conversion general coverage receiver, but much more sophisticated, having an RF amplifier, Q multiplier and an S-meter. Its tube line up was 6BZ6 RF amp, 6BH8 mixer/oscillator, 6AZ8 1st IF amp, 6AZ8 2nd IF amp, 6BC7 detector/AVC/noise limiter, 6AW8 BFO/audio amp, 12AX7 Q multiplier, 6X4 rectifier and an OB2 voltage regulator for the oscillator. A crystal calibrator was an option. The R-100 was the companion receiver for the T-150 transmitter.



Knight Kit T-50, a 3-tube, 80-10 meter, xtal controlled 50 watt CW transmitter aimed at the Novice licensee. (W1HFN photo)

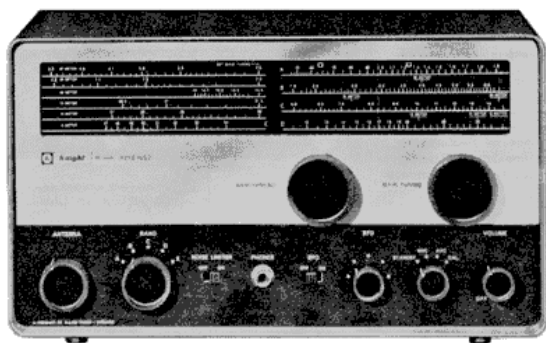


Knight-T60, a 4-tube, 80-10 meter, 60 watt AM/CW transmitter. (W1HFN photo)

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Knight V-44, VFO companion to the T-50, available for when the Novice upgraded. (W1HFN photo)



Knight R-55, a single-conversion general coverage receiver. This was the companion to the T-50/T-60 transmitters. (W1HFN photo)



Knight R-100(A), a more sophisticated, single-conversion general coverage receiver, featuring an RF amplifier, Q multiplier, S-meter and optional crystal calibrator. The R-100 was the companion receiver for the T-150 transmitter. (W1HFN photo)

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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Annual Dues: Regular \$25

Family \$30

Fixed income \$15

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

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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

VE Sessions

de Paul, KD1YH

The MARA VE Team schedules license exam sessions every month on the 4th Wednesday. Pre-registration is requested, contact Paul KD1YH kd1yh@arrrl.net. We will cancel the session if no one has registered by the weekend (Sunday) before the scheduled session. However, if the session is not canceled we are happy to take walk-ins, so if you are interested in upgrading or know someone else who is looking for an exam session, you may contact Paul at the last minute to see if the session is being held.

Antennas For Sale

The club has a new hex beam antenna for sale, a 5-band Hex Beam by K4KIO. It's about 10 years old but has never been assembled. It does not have the ice kit but that is just extra support ropes. According to the manufacturer [www.w4kio.com]: "This broad band beam is the answer to your dream of a directional antenna that can be mounted on an inexpensive push up mast and in a space no larger than a garden home backyard. Mount it on your roof as many do and work DX you never even heard with your vertical or dipole." NEW \$400 to club members.

AB1GF also has several other antennas for sale: Cushcraft A4S with 40m add-on \$250. Mosley TA 53 5-band with 40m add-on, 6 bands total \$300. Telrex tb5em Tribander \$200. Interested? Contact AB1GF.

Mohawk Amateur Radio Club Invite

The following invitation was received from Kevin, N1ERS, President of the Mohawk Amateur radio Club.

The Mohawk Amateur Radio Club is pleased to announce this month's guest speaker Greg Algieri, WA1JXR who will be giving a presentation on antenna modeling. Greg is well versed in this topic holding two degrees in electrical engineering from the University of Rhode Island and 39 years with Raytheon currently as a Senior Principal RF/Microwave Design Engineer. Greg's interest in amateur radio, first licensed in 1967, is what led his pursuit in his career. Please join us at this month's Mohawk Amateur Radio Club meeting Wednesday, February 22nd at 7:00 PM. Our meetings are held in the community room at the Gardner Police Headquarters, 200 Main St, Gardner, MA 01440. We look forward to seeing you there.

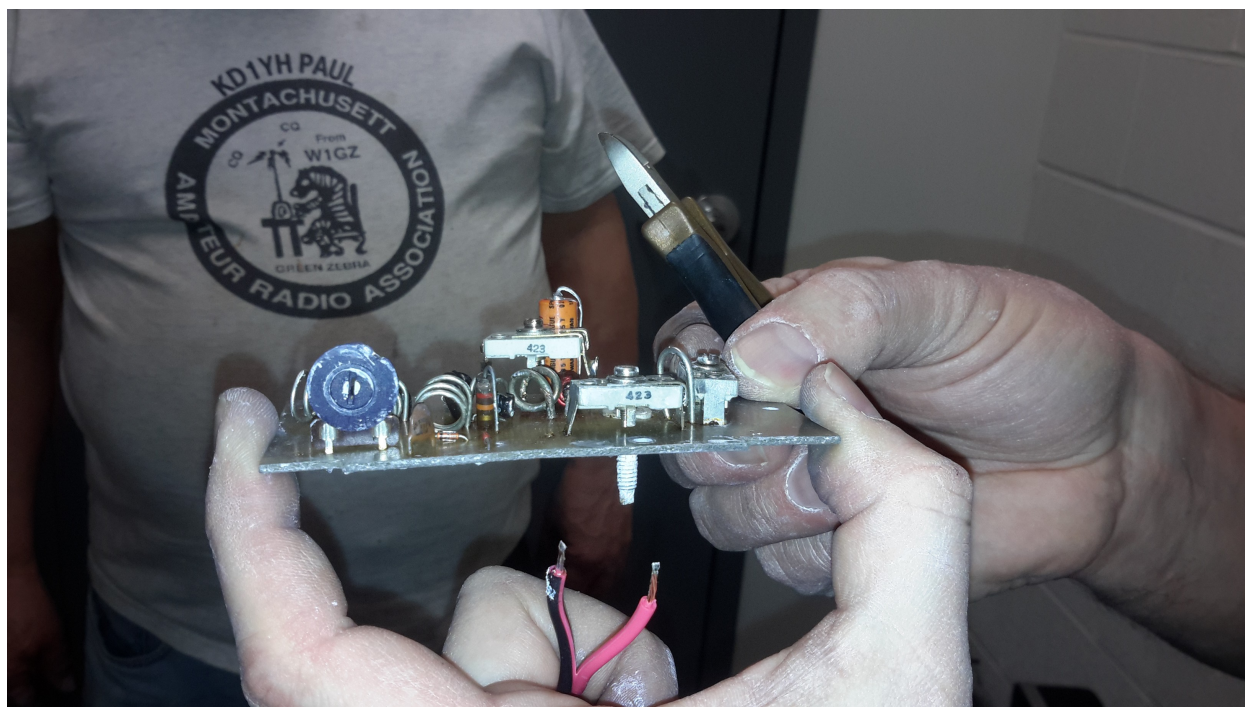
Repeater Photos



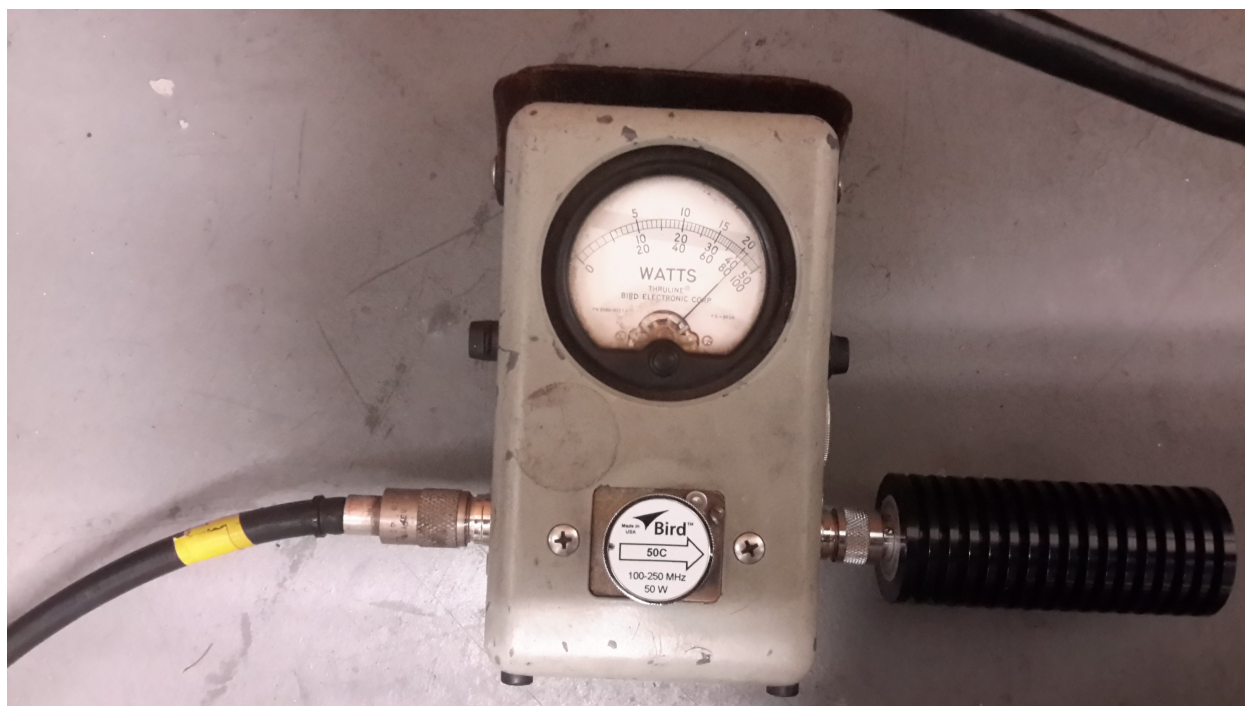
Repeater chassis top view showing exciter and PA boards



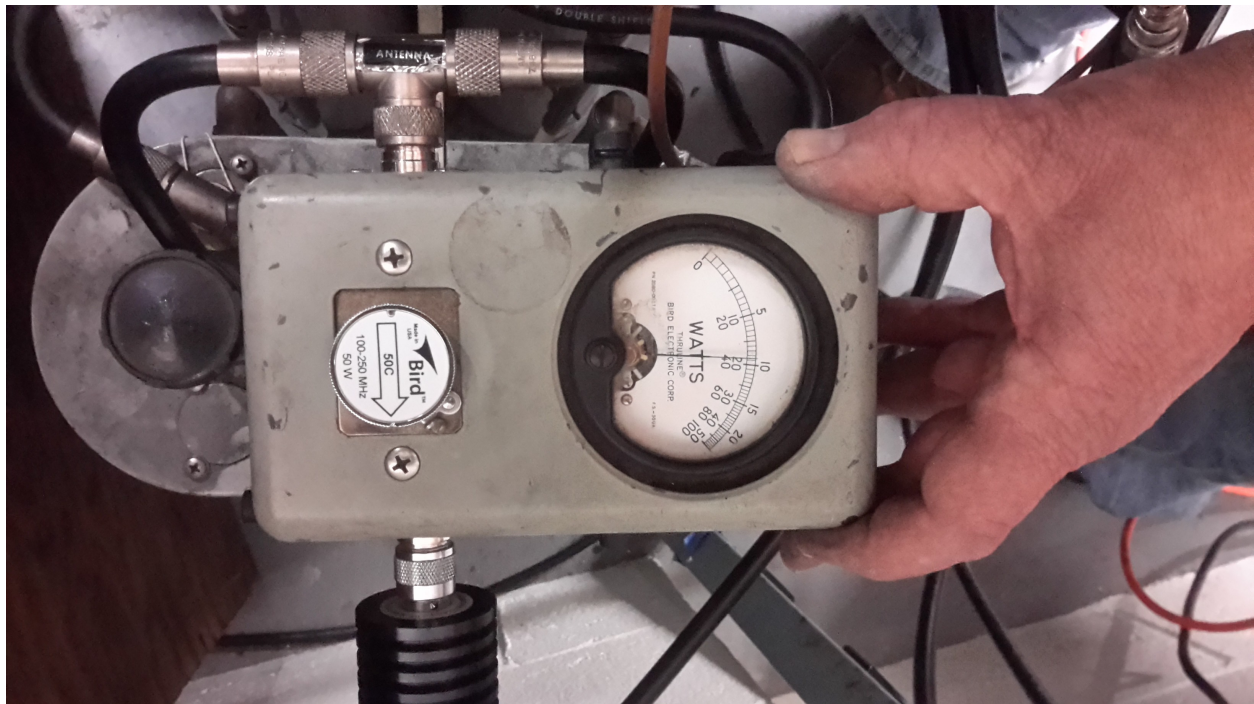
Erik WIQED removing the BA-10 PA board



PA board removed to replace a tuning capacitor and general “clean-up” of solder joints



Bird wattmeter showing 42 watts output from PA after repairs and tune-up



Eighteen watts up to the antenna!



WIGZ repeater front panel showing relative power of final at 42 watts (left-hand meter) and final current at approximately 7.5A (right-hand meter)