



KEY KLIX



The Monthly Newsletter of the Meriden ARC September 2012

Build Your Own Vacuum Tubes

This month's activity meeting will focus on a long lost "art" and gives new meaning to "homebrew". How to build your own vacuum tube. Yes, you read that correctly. No, this isn't the April edition of Key Klix. In fact the author of the video, starts with the raw materials and ends up with a completely hand fabricated receiver using of course, his own home made tubes.

If you have never seen this video before, you are going to be amazed and beguiled as a two tube radio is constructed starting with the building of the tubes themselves from the raw stock of metal, wire and glass. (Yes, he even makes the glass part of the tubes himself)

Don't miss this one. September 27, 2012. 7:30 PM

Fishbein / YMCA Community Day Road Race

Once again we will be providing communications for the Wallingford Community Day Race. We need 8 or 9 people to work this event. We will meet at the Wallingford YMCA around 6:30 to 7 AM. We are usually done around noon time.



This is an easy and fun event to work. We really need your help this year as some of our regular volunteers are going to be out of town (vacations etc.) Please help and volunteer.

In This Issue

Activity Meeting

Home brewing to the extreme - home made vacuum tubes !!

Wallingford Community Day Race

Sweepstakes Changes

The Grid Dipper

MARC Meeting Minutes for August

Station Activities

From the Editor

Club Information page

It is with a heavy heart that we report to the club the death of Audrey Jane Denison, XYL of MARC life member Nelson, W1VCU. Our prayers and condolences go out to Nelson and his family.

announced revisions to accommodate this change. Check with your logging provider, read the revision notes and download the updated program now. Don't wait for the starting bell in November and pepper the airwaves with repeat requests or "Again, Again" verbiage. Good luck with your new broom.

de W1DMM

Sweepstakes Change

During two weekends in November, contesters and non-contesters shackle themselves to their operation tables trying for a clean sweep. November Sweepstakes may be the most active endeavor for many operators. But are you ready for the 2012 challenge? Is your logging program current? Is your broom up to the task?

Earlier this year the ARRL and its Canadian counterpart, the RAC, made an administrative change. The province of Ontario (ON) was deleted from the section lists and replaced with four new sections; Ontario-North (ONN), Ontario-South (ONS), Ontario-East (ONE), and the Greater Toronto Area (GTA). This will increase the number of RAC sections from nine to twelve. Normally administrative changes in the ARRL or RAC have little or no impact on operating hams; unless you participate in Sweepstakes. You will now need a wider broom to log a clean sweep. Your target is now seventy-one (71) US sections and twelve (12) Canadian sections for a total of eighty-three (83) sections for a clean sweep. Interestingly, where each of the fifty US states have at least one section (California has nine) the fourteen Canadian provinces and territories are grouped into only twelve sections (Yukon, Northwest, and Nunavut Territories are grouped as the Northern Territories section and the provinces of New Brunswick, Nova Scotia and Prince Edward Island are grouped into the Maritime section).

Many logging program developers have



Legally Exposed?

The FCC mandated RF exposure limits and compliance rules on members of the amateur community more than a decade ago. Many claimed at the time that hams were being unduly persecuted and forced to do evaluations beyond the capability of most operators. What ever happened to this intrusion by the US governing body? Are the rules specified in FCC-OET Bulletin 65 still in force? Do you realize that you attest to your compliance each time you renew or upgrade your license? Do you really need to conform? In a simple answer, YES the rules are still in force and you as hams must comply. But the good news is that compliance is not the death knell of amateur operations or require the need for a Cray computer to complete the evaluation.

Bulletin 65 is overwhelming in detail and mathematics needed to determine the Maximum Permitted Exposure (MPE). In general, the MPE is determined as a function of frequency, antenna feed point power (lossy feed lines are a benefit here), distance, antenna gain, and exposure (key-down) time. Most ham stations only require a simple table look-up and some simple calculations. On the unpleasant side, multi-transmitter or multi-antenna station locations may have an additive affect and need to be

evaluated collectively. Also, the operator or people aware of the RF exposure conditions (such as your family members), and the general public have different MPE limits which may have a consideration in designing your antenna farm.

Many stations and operating environments can be excluded on power levels alone because they fall below the MPE without further consideration of the additional factors. Hand-helds, most mobile/portable stations (depending on antenna location), amateur repeaters under 500 watts ERP, and base stations operating in the power range of 50 to 500 watts PEP (this power range is based on the band in use). For example; there is a power exclusion point on the 40, 80 and 160 meter bands of 500 watts, an exclusion point on the 10 meter through 1.25 cm bands of only 50 watts, and increasing power exclusion points for the UHF and above bands. In summary, if you operate at 100 watts your concern is in the 15 meter through 70 cm bands, but if your power output is above that you may have to consider the other bands. Even that summary is qualified. MPE is a measurement of the impact of RF exposure on the human body. The output of the transmitter is only the starting point; it is reduced by feed line loss, SWR, distance from the antenna and operating cycle (key down time) as well as continuous time of exposure. On the other hand; amplifiers, longer operating mode cycles, multi-transmitter (contest) stations, antenna gain, antenna location, and antenna height all are parameters that may require a more complete station evaluation. For example; 100 watts SSB into a 3 element Yagi at 30 feet with a horizontal distance from the public of 13 feet may be OK on 10 meters, but may be out of compliance with a speech processor, operating CW, FM or RTTY.

While the above detail may seem intimidating, there is plenty of help for you in becoming compliant. The FCC Office of Engineering Technology web site (www.fcc.gov/oet/rfsafety) has all the official documentation including Bulletin 65. The ARRL web site (www.arrl.org) may be searched for a more complete list and includes

a link to the FCC web site. The FCC Bulletin 65 has step-by-step instructions for a worksheet that includes the various factors necessary to do your station evaluation and provides a handy way to maintain a record of your documented results. Tables can be found at both sites allowing you to figure out the exposure factors for your particular station set up.

There is an even easy-to-use software application available that will eliminate all the calculations and table lookups. A convenient freeware application has been developed by Jon Crisman W0JECat (www.paulbunyan.net/users/jcrisman/mpe1.htm) to make your station a painless task. Just plug in your antenna type or gain, the feed line type and length, your transmitter power, and your operating center frequency for each band. The resultant is the minimum safe distance in feet to meet the FCC power distance limits for MPE. If you are planning some changes to your shack or antenna farm, this is a great tool to check the changes out beforehand.

Many consider this process an intrusion and a royal pain, but it is really a safety item that should make all hams happy to ascertain. If you pass, great. Just file the results away with your other station paperwork. The results are also useful to show that pesky neighbor that your on-the-air activities are safe. If your calculations fall short of the FCC criteria, you can use the calculator to evaluate your options. These options may include changes in your operating schedules, relocation of your antennas, reduction of power on some bands, or increasing antenna height. Evaluating Bulletin 65 requirements is an easy task and will give you a better understanding of your ham shack layout. *GD*

Secretary Report & Minutes of Meriden Amateur Radio Club August 2012

The business meeting opened at 1937 on August 8, 2012 with approximately 13 people in attendance. A quorum was present.

Announcements -

Introductions

Activity meeting – Internet/eBay selling by Mike K1MVM.

Secretary's Report -

Previous minutes accepted as presented and published.

Treasurer's Report -

Treasurer's report not available.

Contributions –

None

Correspondence –

Sympathy card sent to Denny W1VCU on the loss of his wife.

Scholarship – (KE1AY)

Letters out. \$300 scholarship planned. No applications received to date.

Discussion on future scholarship procedures followed. Increase amount? Expand focus schools? Etc. To be continued.

Club Station & Facilities - (WA1TRY-SAM)

WA1TRY and Emergency Management Director Ernie agreed, after the recent SET, that the operating positions should be in the rear garage area starting. This will allow for more leg room, reduce the ambient noise, allow easier multiple operating positions, et al. Rich

location WA1TRY and Haggie KB1HCC baptized the new location during the SET. The new worked well because of the height ASL and easily handled two-meter nets/simplex throughout the region. See Key Klix for a write up.

Club Activities & Program (KB1CIW & KB1FYL-P&E Co-Chair)

Upcoming activity meetings

Aug – Internet/eBay selling with K1MVM

Sep – Home brew a vacuum tube by hand.

Oct – Mars mission Curiosity.

Potential future activities: LOTW by ARRL, trip to W1AW, and Tune-Up Night by K1VDF

The July picnic activity in Hubbard Park was a huge success.

Upcoming contests

ARRL Sept VHF QSO party and the entire fall schedule.

Nets - All nets are doing well. Reports in Key Klix & MARC forum.

HF-SSB 28.375 Tuesdays at 8:00 PM, Primary NC John K1VDF.

VHF-FM 147.36R Tuesdays at 7:00 PM, Primary NC Todd K1TDO.
VHF-SSB 50.175 Mondays at 8 PM, Primary NC Jim N1ZN.

Castle Craig - (N1API-CM & CP)

10/10 QSO parties: SSB Aug 4-5, 2012; Digital Apr 28-29, 2012 & Nov 10-11, 2012; CW May 5-6, 2012 & Oct 20-21, 2012. AI N1API presented the committee's findings and early work on hosting a Ten-Ten convention locally in July 2013. Ten-Ten will be the official signatory, will garner about 75-80 (possible upwards of 100) attendees, 35 +/- chapter tables, a 10 meter station and an off location tour. A hardy FB to AI for his work. Motion by N1API second N1GNV for MARC to accept the challenge of being the Ten-Ten 2013 Convention host. Passed.

Discussion on some additional ideas. It seems all is well in hand and the Castle Craig chapter will be awarded the hosting chores. Member help will be needed during the event with the station, as greeters and as ombudsmen.

Membership - (KB1HCC)

Fifty-one (51) 2012 members more or less.

Interference and Technical - (WA1TRY)

The repeater has a virtual continuous desensing on the input (147.960), especially during afternoons and early evenings. Hard at work trying to identify and correct.

Instruction - (VE-KE1AY, Instruction Facilitator - Open)

Next VE session at Nutmeg Hamfest in October.
Additional testing and classes will be announced.

We need a training coordinator/facilitator. **Step up and help!!**

Candy Store - (N1ZN)

See Jim N1ZN for availability and details.

Key Klix - (WA1TRY & staff)

Back in business after problems with publishing software. See Key Klix article.

Field Day (June 23 & 24)

Logs submitted on time. Details not available.

A short discussion on 2013 class, location and other points. More sure to follow.

EmComm - (WA1VXH)

Next event is the Fishbien 5K/10K race in September 15th 6:30-7:00 AM start till about noon. We need a minimum of 8 to 9 people. Contact Chris WA1VXH to help.

There was a statewide SET – July 28 to 31 – sponsored by CT-DEMHS, CT ARES was active in the comms areas. At least three locations were manned during the exercise by MARC members. Wallingford ARES operated from the MARC location. The Meriden ARES operated from the Meriden FD/PD EOC. Durham operated from the Durham

EOC. Network operations, simplex operations and message handling were the ARES focus. See Key Klix article for some details.

Nutmeg Hamfest (October 7, 2012)

The venue is all set at Sheraton Four-Points in Meriden.

But the venue search has put the planning on a shortened schedule. ARRL approval obtained. Al N1API will head the club table. Contact Al with your gems and provide an asking and minimum price. Unsold goods must be retrieved or they will be disposed of. Bill has the door prizes. We will need volunteers, especially at the entrance points. See Jim N1ZN.

Miscellaneous

A deposit has been sent to Brother's of Wallingford for the Christmas Party in December. The facility is now a banquet only place but promise to be in business in December.

50/50 – None

Meeting Adjourned about 20:37

Submitted: Dan Murphy W1DMM, Secretary

Station Activities

The good news is that the interference we had on the club repeater (W1KKF/R) has gone. I guess the offending transmitter was fixed. We had a receiver de-sense problem for over a year and had a hard time finding the intermittent culprit. So far it has been non-existent for a couple months.

We are now totally removed from the old meeting place. Nothing is left except the log periodic antenna that is currently stored in the old garage. Later this week, I will completely disassemble it for storage at the new place. The console is all set and ready to have it's radios and equipment installed. We had to loose one of the six positions as the only place we could set it up was blocking the outside back entrance. The acoustics are actually better where the station is now set up, in the garage bay. The area is cool in the Summer and has heat. There are movable, temporary walls that can be put in place to further isolate it from the rest of the garage if needed. The extra console is up for grabs for anyone who wants it.

73, Rich WA1TRY - SAM

From the editor

I had to cut this issue short this month. As usual I had a weekend of disasters. It all started Friday when I developed a nasty head cold. Haven't had a cold since forever so it was sorta new territory for me. Spent most of the weekend laying down and sneezing my head off.

I finally got well enough Monday morning to get to work on the Key Klix. And found the club forum / BBS was down! Of course I use the forum to blast a notice that the current month's issue is ready to download or view. Plus all the email addresses and some of the KK files were on that server. And there was no way I could even send the finished KK to the site. This happened a few months ago. At that time I contacted my ISP and they looked into it. They reported back that the coding was all messed up but their server was fine. I would have to re-program the web site and forum or hire someone else to fix it. Then two days later, it magically fixed itself. I never got around to even trying to fix it. Well, we have the same problem again. The print version of KK will go out OK. But without the forum .. I'll have to come up with something else. ???
de, WA1TRY editor Key Klix

Club Information Page

Meriden ARC PO Box 583 Meriden, CT 06450

MARC 2011 Officers

President - John Bee	N1GNV	N1GNV@arrl.net
Vice President - Jim Savage	N1ZN	james.savage@snet.net
Secretary - Dan Murphy	W1DMM	w1dmm@arrl.net
Treasurer - Jonathan Winslow	KB1HCC	
Station Activities Manager - Rich Aubin	WA1TRY	wa1try@cox.net

Committees

Key Klix Editor - Rich Aubin - WA1TRY WA1TRY@COX.NET
Key Klix Staff - Dan Murphy - W1DMM, John Bee - N1GNV
Program & Entertainment - Bob Carruthers -KB1FYL Bob Stephens- KB1CIW
Club QSL Manager - Bob Kaczor - KE1AU
VE/Education - Volunteer needed
Membership - "Haggie" Winslow - KB1HCC
Castle Craig - Al Kaiser - N1API
Interference & Technical - Rich Aubin WA1TRY

Club Nets

50.175 mhz	VHF SSB	Mondays	8:00 pm	(NC N1ZN & W1SKP)
28.375mhz	HF SSB	Tuesdays	8:00 pm	(NC K1VDF)
147.36 R	FM	Tuesdays	7:00 8:00 pm	(NC K1TDO)

Membership/ Dues: regular \$15 Senior \$10 Family Member \$5.00
Business Meetings - 2nd Thursday Activity Meetings - 4th Thursday of the month.
All meetings start at 7:30 PM

Location of meetings: Wallingford Office of Emergency Management
284 Washington Street, Wallingford, Connecticut
(next to the Wallingford Senior Citizen Center)

Web site: <http://www.meridenarc.org/> BBS/Forum: <http://www.w1nrg.com/forum/>

Rogus Electronics

**New & Used
Ham Radio Gear
Service / Repairs**

**250 Meriden Waterbury Road
Southington, CT 06489
Phone: 860-621-2252**

Business Meeting

September 13th

Activity Meeting

September 27th

**Home Brewing a Radio
Including Hand made
Vacuum Tubes**

**Meriden Amateur Radio Club
Post Office Box 583
Meriden, CT 06450**

First Class