The Original

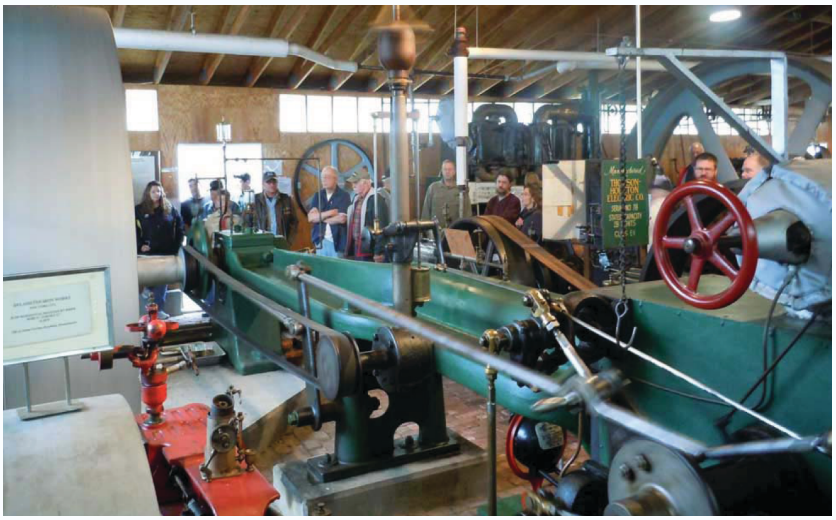
52nd Annual Old Fashioned YANKEE STEAM-UP

New England's Oldest Engine Show

Saturday, October 1st, 2016 9AM - 4PM

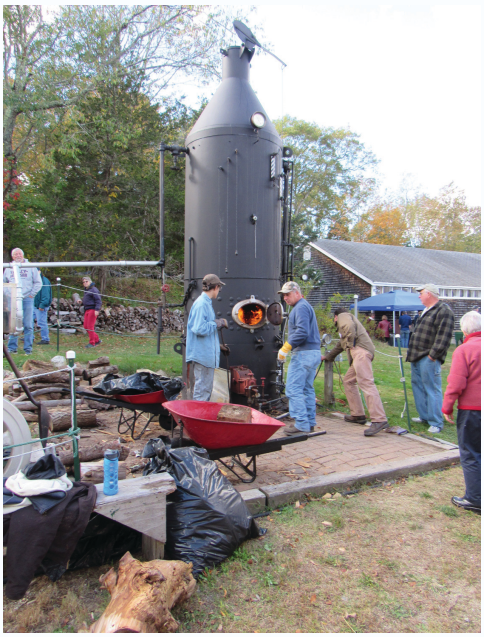
Admission: $15, $7 students
Plenty of free parking
Refreshments will be available

- Huge historic Rhode Island steam engines restored to running condition and operating on live steam!
- Many of these engines represent Rhode Island's legacy as an industrial power in manufacturing.
- Model and small engines running on steam, gasoline and compressed air.
- Antique autos, launches, even a popcorn machine.
- A Morse code demonstration.
- The Massie 'PJ' Station and the museum's extensive wireless collection.

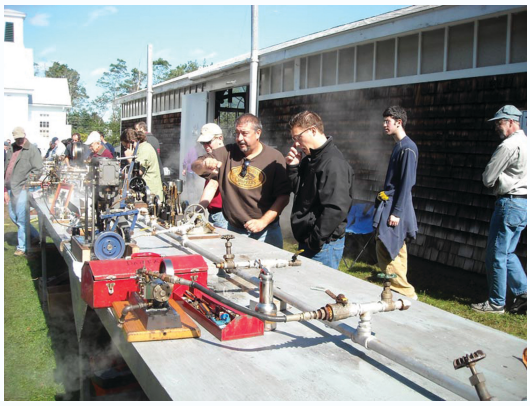


Exhibitors – free admission

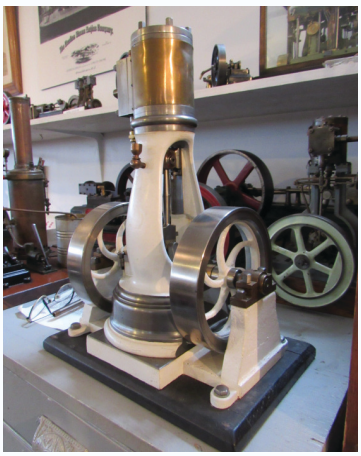
Your ingenious relics: steam, gas, diesel, hot air or electric – and your exquisite models: intriguing mechanical devices, antique autos & motorcycles, steam bicycles, launches, and cars make the show.
Help to make this a dynamic display with a wide variety of engineering models



Above: a panoramic view inside the steam engine building with many of the engines that will be running.
Left: the 100 horse-power 'Lookout' boiler being fired up to run the steam engines.



Left: the air and steam tables are always a busy attraction.
Right: An example of the large collection of model steam engines.



MY INTEREST IN AMATEUR (HAM) RADIO

By Colin Leath

To make sense of this for the non-ham, an explanation of the Federal Communication Commission's (FCC) licensing structure is in order. A Commercial license allows a holder to tune or repair broadcast AM, FM & TV, police, fire, maritime and aircraft transmitters or any radio equipment used in commercial or public service. An amateur license allows a holder to operate radio transmitters on assigned bands for two-way communications. No broadcasting or music or any activity that involves the transfer of money.

Although I made my living designing and building electronic equipment for industry and had a license that would allow me operate and service radio transmitters for broadcast and TV stations, I did not have a license to use an amateur transmitter. When early wireless appeared on the scene, amateurs began making their own equipment to receive and transmit messages to their friends. Soon their wireless league was formed and a large group of enthusiasts joined. When amateur radio was allowed back on the air after WWI, the wireless league, with the help of Hiram P. Maxim and Clarence Tuska, became the American Radio Relay League (ARRL).

I have always been interested in electricity and radio as long as I can remember and built electronic projects and listened to amateur radio on a home made receiver. During WWII when amateur (ham) radio was shut down I listened to war news and a radio station in Presque Isle ME, which was a jumping off point for military air craft being sent to England. In 1949 I started my first job in electronics but it was 1958 before I got my ham license. The main reason was a requirement that I would have to be able to send and copy Morse code at 13 words per minute.

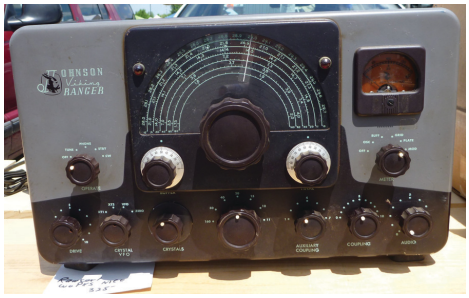
About 1956 the license requirements were changed and two more classes of licenses were added, novice, which required no code, and technician, which required 5 wpm code proficiency. It was easy to get my code speed up to 5 wpm so I took the tests and received two licenses. The novice was only good for one year and limited code on low low frequency bands. The Tech license allowed operation phone on VHF bands and could be renewed. I also received two station licenses KN1 IXU and K1IXU. The first year I operated code (CW) and got my speed up to 10 wpm. My first contacts were very exciting and somewhat stressful. It was a big change just copying for practice.

My code speed had increased to about 10 wpm when a friend gave me a 6-meter phone transmitter receiver he built but could not get to work. It was a mess inside, so I decided to disassemble it and start over. It worked and was my downfall. I abandoned CW, my novice license ran out and I failed to achieve 13 wpm on my code speed. I continued to operate on 6 meters with my Tech license, conditions were good and I worked stations all over the US, Canada and some in South America. I built another 6-meter rig and installed it in my VW Beetle and worked stations mobile. Beside phone I built more equipment and worked other modes of communication Radio Teletype (RTTY), Slow Scan TV (SSTV) sending and receiving pictures, also Packet, which is like texting using a cell phone.

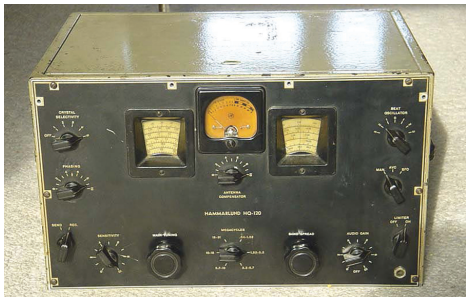
Some time about the year 2000 the rules changed again and made it easier to pass the code test. I took and passed the test and became extra class and was allowed to operate any band at max power. Most contacts were in a mode called single side band (SSB), a more effective use of the radio spectrum.

The part of ham radio I most enjoyed was building equipment. So when I discovered the Grey hair net, a group of hams restoring old AM equipment, it was right down my alley. I bought a Johnson Ranger Transmitter and a Hammarlund HQ 129X receiver, vintage 1950s. The receiver worked but was in bad shape physically, I cleaned it up and repainted it. It looked like new. The transmitter was a different story. It was in a little better shape than the receiver but had several electrical problems. It also was missing several tubes. After a few trips to ham flea markets I located the necessary parts, and the transmitter was ready to go. I put my first vintage AM station on the air. I have had several vintage pieces of equipment since then. All of them I restored and put on the air but these old units are very heavy starting at 100 lb. and I have trouble handling them. I have had and sold a Johnson Viking 2, a Heathkit DX100, several Hallicrafters receivers, another Johnson Ranger and probably several other pieces I have forgotten about. The joy for me is in restoring and making it work like new, sometimes better than new. I will only sell to some one that will use it, and for what it cost me. I have had lots of other adventures in ham radio but will wrap it up for now. Typical sign off is: 73 OM K1IXU Colin

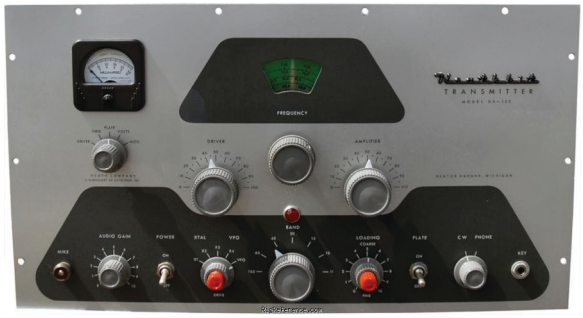
HAM TALK: 73 = Best wishes, 88 = Love & Kisses,
OM = Old Man YL=Young Lady XYL= Married Young Lady



JOHNSON RANGER TRANSMITTER



HAMMARLUND HQ 129X RECEIVER



HEATHKIT DX100

WORTH READING - TUBES

The Internet began with the first transmission of ARPANET in 1969 and really took off in 1983 when all the competing data transmission companies adopted the same protocol. Ever since any computer is capable of talking to any other. From the beginning, the physical network needed to carry these electronic messages were required to expand exponentially, sometimes planned more often than not jury-rigged. The US government provided seed money for data centers but most investment was by private industry. Andrew Blum tells us physical infrastructure needed to make the system happen and how it came to be.

"TUBES" Harper-Collins 1989

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The Fessenden Oscillator – a Lifesaver for Ships

In 1912, the *Titanic* disaster signaled the need for better underwater ship communications and better detection of ice bergs when visibility is low. This need inspired one of the great inventors of the time, Professor Reginald Fessenden, to invent a superior underwater sound projector and receiver. Initial tests were quite successful allowing Morse code transmission of 2 words per minute at distances of 30 miles between two ships.

Fessenden combined the transmitter and receiver into a single unit and invented the first 'echo ranging' device which proved quite satisfactory in detecting ice bergs during tests on the Grand Banks when installed on the US Revenue Cutter *Miami* .