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Author: John H. Dilks III, K2TQN

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OLD RADIO

1932: A Portable Transmitter Mystery

This month's radio is a beautiful example of the early use of aluminum in building ham radios. It is also somewhat of a mystery to me, one that I hope you can enlighten me about.

Sometime during the late summer of

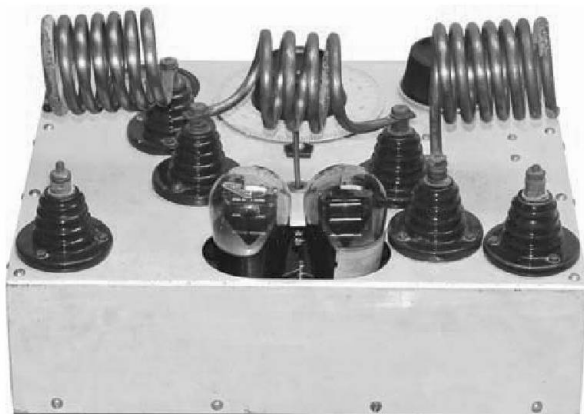
2001 this beauty showed up on the Internet auction place and I was lucky to have bid the highest amount. As I always do, I asked the seller what they knew about the radio. The Texas seller knew nothing about the radio or its past, having picked it up years

earlier and stored it in his garage. In the auction photo I thought it looked like it might be an expedition set, and hoped that it would turn out to be one.

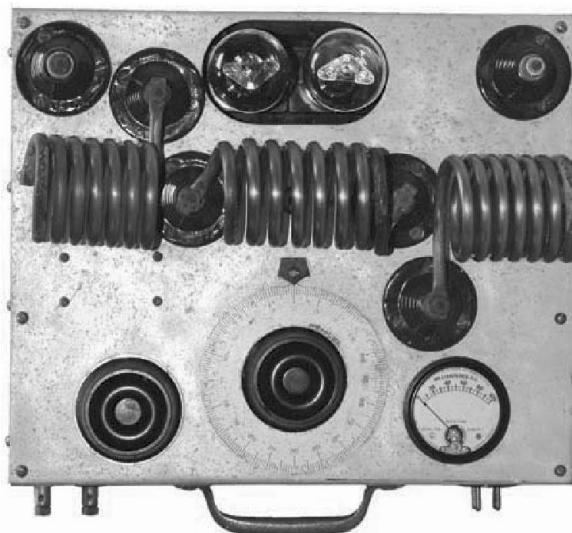
When it arrived I was thrilled. It was near perfect on the inside. The outside



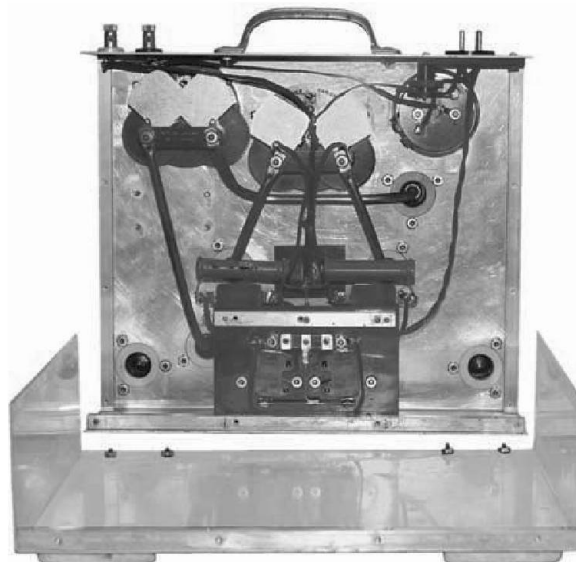
Front view showing the 80 meter coil mounted in the center, the two antenna coupling coils on each end. In the front are the extra 40 and 20 meter coils. From the left on the front edge are the key connections, the carry handle, and the 4-pin power connector. The controls from the left are antenna tuning and the plate tuning controls. The meter is a 0-100 milliammeter.



Rear view showing the 20 meter coil mounted in the center and the two 71-A tubes in their protected mounting.



Top view showing the 40 meter coil mounted in the center. The two insulators at the extreme rear are for connecting the antenna leads. They are then alligator clipped to the antenna coupling coils for the best match.



Details of the well constructed transmitter. The two Remler capacitors are the black and gold devices, left and center top. At the bottom, the tube-mounting panel shows the keying circuitry.

John Dilks, K2TQN ♦ 125 Wharf Rd, Egg Harbor Township, NJ 08234-8501 ♦ k2tqn@arrl.org

was pitted and showed some oxidation on the top panel from the elements. I cleaned up the loose dirt and some of the pitting with soap and water, and a soft brush. The two antenna coils had some green patina on the ends, probably from scratches the alligator clips made when they were attached there years ago.

It came with three sets of coils, one each for 80, 40 and 20 meters. It also came with the matching four-pin power connector. Because of the heavy-duty handle, my guess is that it was a portable set, used with batteries.

Since 2001 I have been looking for something like it in all my early magazines. Several times I have found articles and advertising that was somewhat related to this set, but never a close match. Perhaps one of you has seen this set before?

Here's What I Found

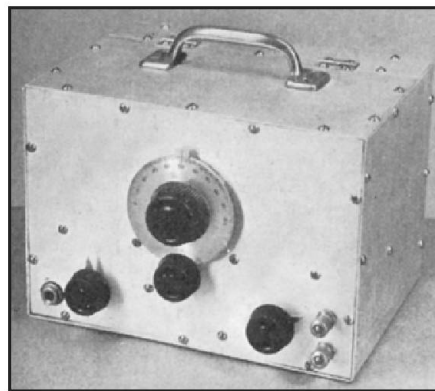
The two tubes that came with it are type 71-A. The tubes had stickers on them indicating they were purchased from "Wholesale Radio Service Company, New York." They were stamped: Date Purchased "June 1932." The 71-A is listed in the RCA tube manual as a power triode with filaments of 5 V at .250 amps. The plate voltage is listed at 180 maximum at 20 mA, making this an excellent candidate for battery power.

The bottom has four long rubber feet that look like they would fit into grooves, probably to keep it in place on a shelf if used in some sort of vehicle like a boat or airplane.

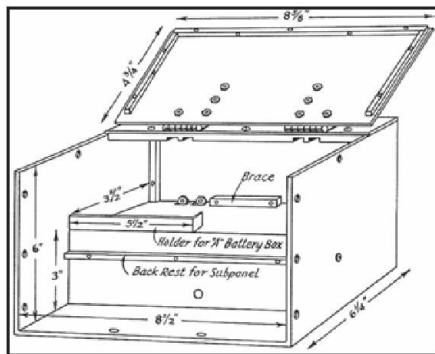
The Remler Radio Company, from San Francisco, made the two capacitors and the dials. As you can see the capacitors are an unusual design. The plates are shaped sort of square and they mesh together with an elaborate gear design.

There is a sub panel inside the chassis which supports the two tubes, the capacitive feedback circuitry to the grids, and provides a mounting for the keying circuit across the filaments. This panel mounted deep inside provides some protection for the tubes, while making it easy to replace them when necessary.

A very close match for the circuit was found in an article in the November 1930 *QST*, written by George Grammer. A photo of it is featured on the cover. It is obvious to me that this article was the basis for my transmitter. The component values and the coil dimensions are exactly the same as those on my transmitter. The circuit differs only in the grid circuit design. The 1930 transmitter was built on a wooden breadboard.



Portable receiver by George Grammer, W1DF, from May 1932 *QST*, page 9.



Details of the aluminum cabinet design by George Grammer, May 1932 *QST*, page 10.

In the May 1932 *QST*, George Grammer wrote an article called "A Compact Receiver." While the receiver's electronic design is ordinary, the cabinet design was not. It was completely enclosed in aluminum. Upon close examination I found the construction was exactly like my transmitter, aluminum panels fastened together with square

stock and machine screws. There is even an exact match with the carrying handle. I have included the article's sketch of the cabinet so you can see the construction details.

Grammer designed the receiver cabinet large enough to include the A and B batteries, a pair of earphones and the extra coils. This receiver was designed to cover 80, 40 and 20 meters, the same as the transmitter.

He mentions that he took the receiver on a trip "from the Atlantic to the Pacific and back," and that it performed well. It is easy to imagine that he also took a portable transmitter with him on that trip. I can't help but wonder if I have that transmitter.

In the August 1933 *QST* Grammer featured another push-pull transmitter, this one for 160 meters. The interesting thing about this design is, the grid circuit matches the one in my transmitter.

You probably noticed how well my transmitter is built. And notice that there are four screws perfectly spaced on the front panel near the antenna coil on the left, which looks as if they may have fastened a nameplate of some sort. (No evidence of a plate ever fastened there can be seen.) You might think, as I did, that it was a commercially built rig. I looked and looked for an ad in the magazines of that time and have not found any to match. I think the tube "Date Purchased" information and the Grammer *QST* articles date the radio to 1932.

So, did George Grammer design and build my transmitter, or is it just a near copy of his work by someone who read *QST*?

What Do You Think?

Take a good look at the transmitter photos and their captions, and the *QST* article information provided. If you know anything about this transmitter, or have a good guess, please let me know. My e-mail address is at the bottom of the page.

Future plans for this rig is a complete restoration. This means disassembling everything and buffing the aluminum panel to remove the pitting. I also have a problem with the Remler capacitors, which seem to be very stiff and don't want to move. I'll be rebuilding these as well. Then someday it will be great fun to put it back on the air.

Fall is in the Air

Remember to pick up antenna supplies at the next hamfest; winter is coming soon. Look for the call letters on my hat and say hello.—K2TQN **QST**