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Title: A 1927 Homebrew Receiver (The Shield Grid Tube)

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OLD RADIO

A 1927 Homebrew Receiver

Last January I went to the “all-indoor” Frostfest in Richmond, Virginia, to exhibit some of my early ham radios. Sherry, my XYL, went along to help. This usually means trouble for me if I try to purchase too many radios. She keeps telling me that I have enough. Sometimes I’m able to slip them into the car when she’s not looking. Today would not be one of those times.

After I set up my exhibit, with Sherry busy manning the display, I walked around to see what I could find. One of the first things I spotted was a table loaded with homebrew 1920s wooden-cabinet radios. I have been trying to avoid buying early broadcast radios lately, concentrating on ham equipment instead, but they were priced cheap, so I started lifting lids. The second radio I checked was very heavy and had extensive copper shielding installed. This was unusual I thought, for a broadcast radio, but then I recognized it. I remembered reading about this in one of my old *QST* magazines. It was the Shield Grid receiver.

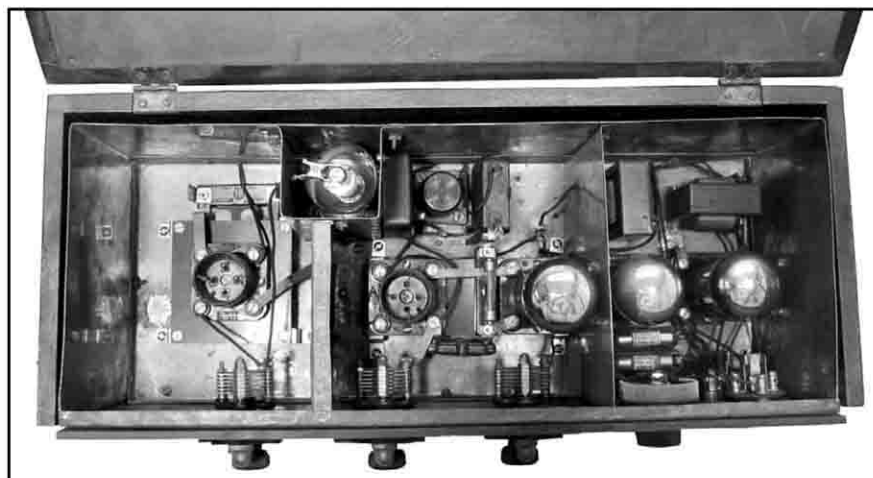
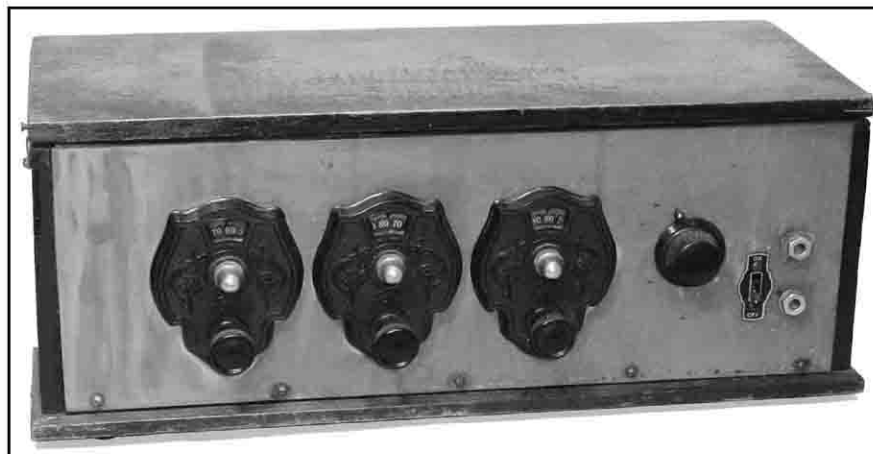
I quickly paid for it and headed for the door. I waited until Sherry was busy talking to a collector and scooted by her and put it under a blanket in the car parked outside. When I returned I found a couple of my friends laughing. They told me that I should have seen her face when she spotted me carrying the radio.

The Shield Grid Tube

The Shield Grid Tube was introduced in the December 1927 *QST*. That issue had several articles about the UX-222, complete with example schematics. The UX-222 tube would be the subject of

many articles and receiver designs in *QST* over the next few years. For the first time this new tube made real RF amplification possible at 15 meters. It was the first American-made two-grid tube.

Also in that *QST* was an article by R. B. Bourne, W1ANA, about the experimental radio I just found: “Getting the Most Out of the UX-222.” It used the



The UX-222 tube is at the top left, inside the small copper shield.

UX-222 as an RF amplifier in a distinctively designed square shielded compartment of copper. That compartment was in turn, inside the antenna coupler compartment. It was this square shield arrangement that I recognized at the hamfest.

Comparing the article to my radio I noticed mine has an extra shield for the regenerative detector stage, separating it from the audio amplifier stage. The shielding of each stage was a great idea and continues today. There are some additional differences, such as an added stage of audio and some missing battery filtering, but it is essentially the same radio. A 15-meter coil set came with it.

One of the lessons here is to get as

many old magazines as you can and read them over and over. If I had not recognized the unique shielding, I might have passed it up. Instead, I have a really interesting radio, one with some history attached to it. I asked the seller if he knew who built it. Unfortunately, he bought it at an auction, so the prior owner is unknown.

See it in my Museum

If my new job and the weather permit, my mobile “Old Radio Museum” will be at the Connecticut ARRL State Convention and Nutmeg Hamfest on Sunday, October 7, 2001 in Wallingford. I’ll bring this radio along so you can see it. Look for my call letters on my hat and say hello.—K2TQN

QST

