

X-Ray Radios, Mignon and More...

By Bart Lee, K6VK, CHRS Archivist and Fellow, AWA Fellow

The Mignon* radios of the early 20th Century to this day retain the reputation of the best of the best.

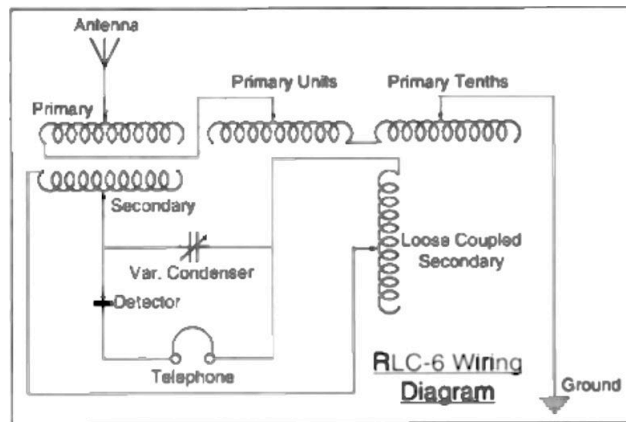
"Ernest C. Mignon began his activity in the wireless business around 1910. By 1913 his building in Elmira, New York, was turning out receivers for radio amateurs. Chartered in 1915, the Mignon Wireless Corp. then published a 16-page catalog featuring six tuners."[†]

Mignon advertised in the first *QST* magazine from the then-new ARRL, in December 1915:

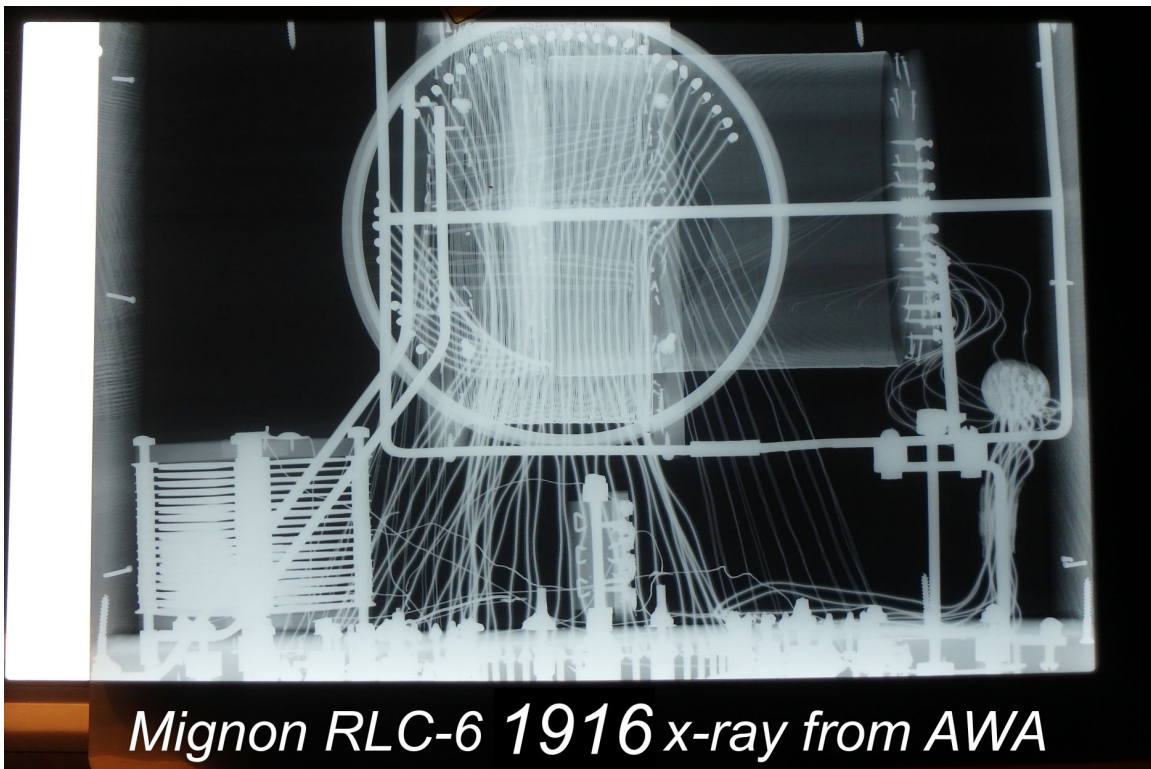
* Mignon in French means something like nice, attractive, favored; Mr. Mignon, as will appear, had the misfortune to be German at the beginning of the Great

[†] So writes Dick Desjarlais, in *Yard Sales -- Radio's Best Friend! Mignon and DeForest Finds* in *Antique Radio Classified*, February 2002. See: http://www.antiqueradio.com/Feb01_mignon.html. According to *RadioMuseum.org*, the U.S. Government interned Mignon through World War One as a German enemy alien. He re-established his company thereafter.

Some members of the Antique Wireless Association in New York (e.g., Lauren Peckham) collected the New York radios of Mignon (among others). A RLC-6 and also an x-ray of it appeared at an AWA Convention some years ago. As RLC-6 serial number 11, it seems to be exactly the same radio found in the yard sale footnoted nearby. It is a sophisticated passive receiver.



Mignon Company Schematic for the RLC-6





Mignon took pride in his work, as can be seen from his catalog entry for the RLC-6:

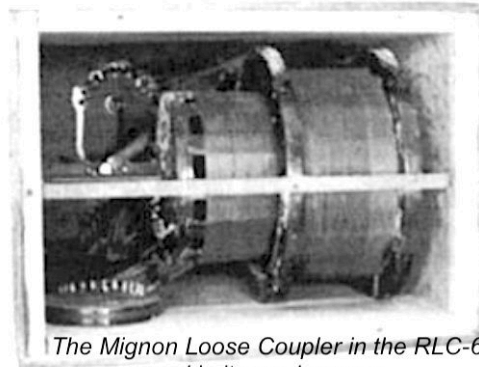
The RLC-6
From Catalog R7, ca. 1917
Mignon Wireless Corporation, Elmira, N. Y.
 CATALOG COURTESY OF LAUREN PECKHAM

The RLC-6 embraces all the good qualities known in the line of Mineral Detector Receiving Apparatus. This set contains a Mignon-Loose-Coupler Receiving Apparatus and Master Switch, (as described with RLC-5). In conjunction with the loose coupler is a specially constructed Rigid Vario Coupler of the Mignon ring type, giving this set a duplex tuning facility, which is plainly shown on the accompanying diagram, also giving condenser connection, when the switch [not shown in the diagram] indicates "L". The three wavelength capacities interlap each other considerably, and numerous signals can be received with all three circuits, which, however, will be strongest in their proper designations. The various circuit combinations afforded by its ingeniously devised switching arrange-

RLC-6 Wiring Diagram

ment, and the opposing positions of the variable inductances in the two couplers, have made the RLC-6 a marvel of efficiency in selectivity and sensitiveness, which is constantly commented upon by our satisfied customers.

The Mignon Loose Coupler offered five inductances, in an electro-mechanical work of art.



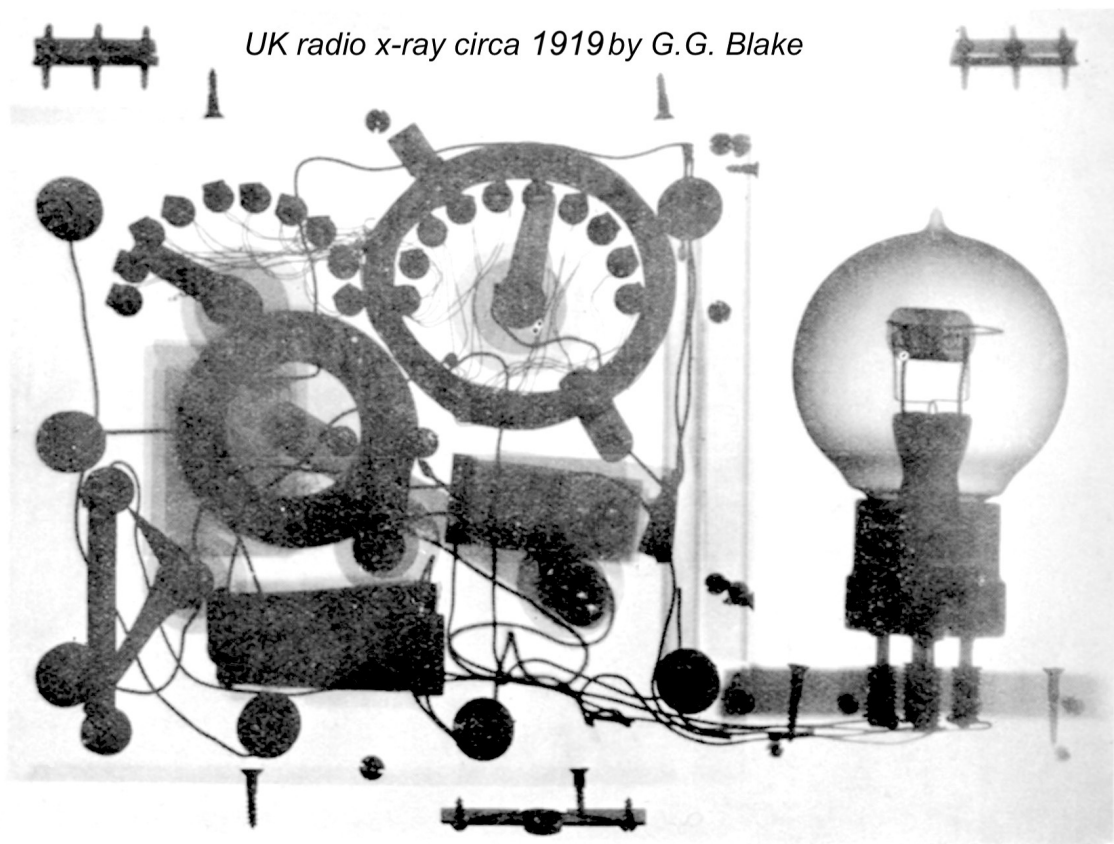
The Mignon Loose Coupler in the RLC-6 and in its predecessor



The lower radio is the Mignon RLC-6, s/n 11, as found.

From time to time other x-rays of radios have appeared. X-ray machines have not been so common in the past, and are always dangerous: “Clarence Dally (1865–1904) is thought to be the first to die as result of X-ray exposure. He died of metastatic carcinoma at only 39 years old.” (*Early victims of X-rays: a tribute and current perception*, K Sansare, V Khanna, and F Karjodkar). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3520298/>

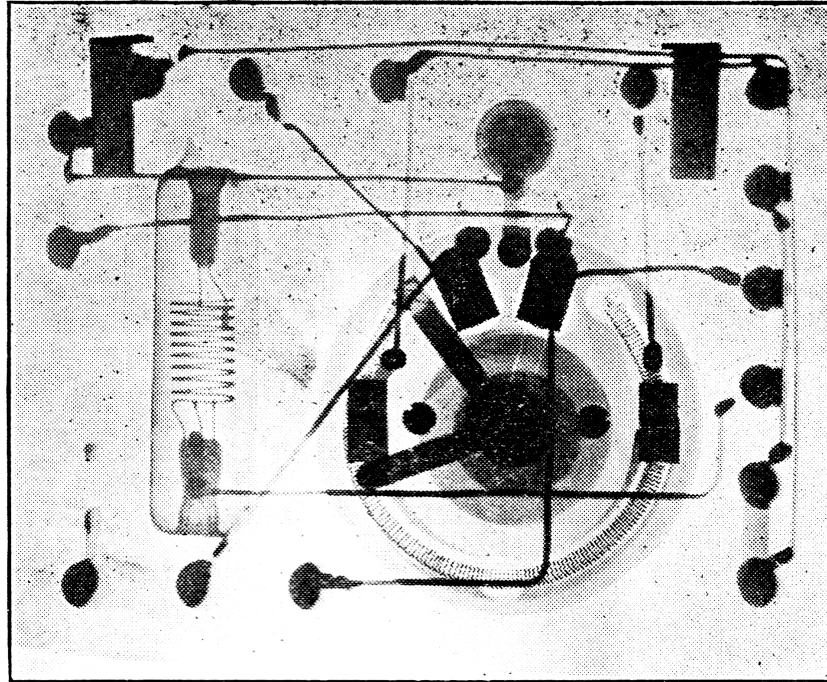
An English one-tube radio *circa* 1919 appears in G.G. Blake’s radio history.[‡] It is likely his construction. The tube (or “valve” in UK parlance) shows rather well.



[‡] G.G. Blake, HISTORY OF RADIO TELEGRAPHY AND TELEPHONY (UK, 1928).

Blake asserts that he was the first to X-ray a wireless apparatus, and presented the image in a 1920 lecture to the Wireless Society of London. He thought such X-rays could be useful for “fault-searching purposes.”

In 1921 *QST* joined the enthusiasm; writing as below:



QST X-ray DUT Jan 1921 p 26 cropped ADJ

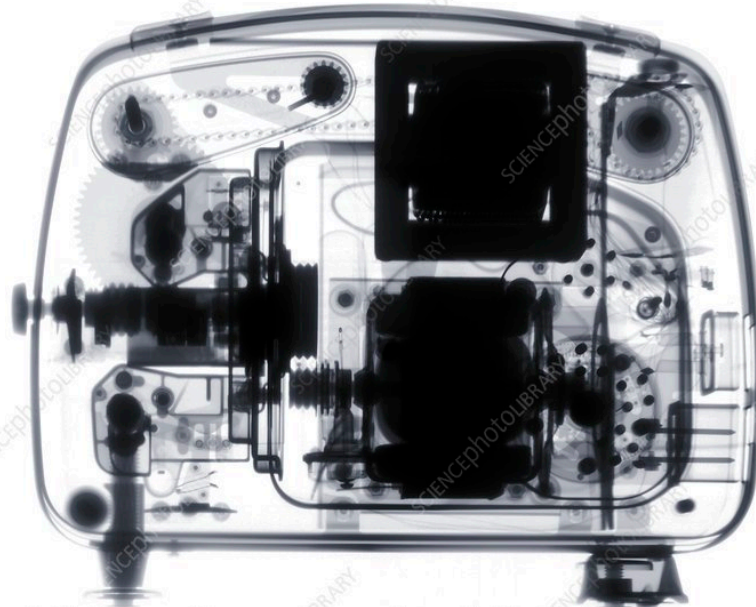
“THIS is an X-ray photograph of an AudioTron panel of 1/4" Formica, and was sent us by Mr. P. C. Rauls, of Menominee, Mich. Mr Rauls sent us several others also, of his Eaton Circuit Driver, but the one illustrated is typical of them all.

“English magazines have been using such radiographs in their descriptive articles for some time. They serve to convey an excellent idea of the interior arrangement of a piece of apparatus, in some cases much better than can be done by either drawing or photograph. And they certainly show up anything in the way of inferior workmanship! Screws driven in cattawampus, bungled soldering, or untidy wiring, will stand out like the nose on your face. What the Editor is c. to k. [curious to know] about the view reproduced here is how the effect of "high lights" was produced and why certain parts of

the wiring, apparently at the same distance as the balance, were barely visible.”

[The Eaton Circuit Driver is, according to RadioMuseum.com, a one-tube oscillator for testing purposes.]

Occasionally an X-ray of a more modern radio appears. They do illuminate the innards, but would hardly serve for “fault-searching purposes.” This one comes from the UK Science Photo Laboratory.[§]



UK radio x-ray by Nick Veasey

Still, it’s always nice to know what’s inside.

(28 XII '21 v3 de K6VK) ##

[§] A UK Home Portable Radio: Credit NICK VEASEY / SCIENCE PHOTO LIBRARY F0298176-Old_fashioned_radio,_X-ray.