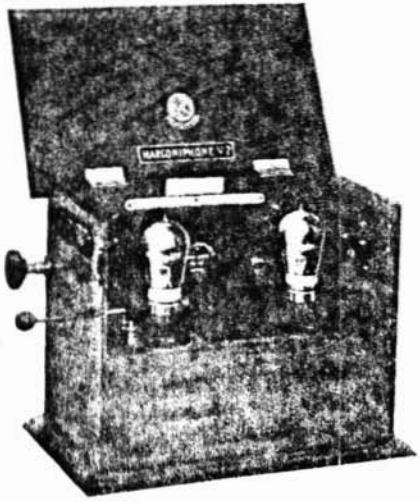
RADIO LOG

SEPTEMBER, 1979

Vol. 2 ROCKY MOUNTAIN ANTIQUE WIRELESS ASSOCIATION Log 3

The Marconiphone



V.2

The
FAMOUS
TWO-VALVE
LONG RANGE
MODEL

ROCKY MOUNTAIN ANTIQUE WIRELESS ASSOCIATION
P.O. BOX 17311 Denver, CO 80217

SEPTEMBER, 1979

Next Meeting...

The next meeting of the RMAWA will be held Friday, September 21, 1979 at 7:30 P.M. at the Southwest State Bank, 1380 S. Federal Blvd., Denver, Colorado.

Mr. Emil Berndt will present to us his experiences acquired thru his many years of exposure to early radio. It's always fascinating to hear from these knowledgeable individuals because they have so much to offer.

If any member has a PA system that is portable enough for this meeting, its use would be greatly appreciated.

Last meeting...

Many restoration tips were discussed and demonstrated. One such commercial product's versaeility is discussed elsewhere in this issue.

Future meeting...

The October meeting will be Victoreen night by Ray Windrix. He will play an interview with Mr. Victoreen and also display some Victoreen equipment.

Address changes...

Mr. William Miller
1270 Brantner Road
Greeley, CO 80631

Mr. Keith Simmons
86 Patterson
Bedford, Mass. 01730

Wanted...

1 pair of Baldwin headphones in good working condition. Ray Windrix, 915 Potter Place, Colorado Springs, CO 80909.

RESTORATION TIP

by Richard Ray*

Here's a tip that is so simple it's hard to believe, for restoring a nice shiney surface to a dull radio panel.

After throughly cleaning the bakelite panel, simply rub household paraffin wax onto the panel. Paraffin wax can be found in the grocery store and is generally used for canning. It comes in large sticks or chunks. This application alone will make a big improvement in the panels appearance.

To make the shine deeper and darker, apply Future brand liquid acrylic floor finish over the paraffin. This will deepen the shine and harden the paraffin suface. The paraffin alone is fine, but use the Future for a little better result, if desired. Note, this works beautifully on some bakelite panels, not all.

*Richard Ray is one of our members in Canon City, Colorado.

OUR STAFF

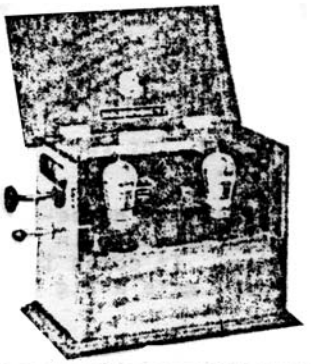
PRESIDENT: Ray Windrix

SEC. OF TREASURER: Ron and Sherry Harmon

EDITORS: Bob and Margie Slagle

R.M.A.W.A. is a non-profit organization with the intent of preserving early radio.

Radio Log will be printed quarterly and distributed at no charge to members of the club.



The Marconiphone

LONG RANGE MODEL V2

Compiled from information from our archives with additional material from Gordon Bussey

JUNE 10th 1922 SAW ANNOUNCEMENTS in the popular radio press (*Amateur Wireless*) that *Marconiphone* would be the name given to a series of receiving instruments shortly to be placed on the market by the Marconi Wireless Telegraph Co., Limited. The series would comprise the following instruments: (1) *Crystal Junior* — an "inexpensive instrument which has been designed to meet the requirements of the young experimenter, the whole being enclosed in a small box fitted with an adjusting handle"; (2) *Crystal Type A* — "a larger instrument capable of fine tuning. The crystal is in conjunction with a special patented circuit"; (3) *Marconiphone V2* "with two valves. A range of not less than 50 miles is guaranteed with an outdoor aerial. With an indoor aerial, a range of not less than 10 or 12 miles may be obtained. The adjustments are of a simple nature and at the same time, capable of fine tuning"; (4) *Multivalve Marconiphone* "with this instrument and an outdoor aerial, a range of 100 miles or more is attainable. With an indoor aerial, the range is at least 50 miles". The valve receivers can be fitted with a special type of valve, for which dry batteries can be used in place of the usual accumulator.

Long Range Model

In this article, we are concerning ourselves with Model V2, which started life without a regenerator unit and in October 1922 was issued with GPO number 2001, but it was soon withdrawn due to dismal sales figures — caused, no doubt, by its poor performance.

The receiver was reintroduced with a regenerator unit, renamed the V2A Long Range Model and bearing the GPO number 0175 which was first issued in December 1922. Original records do not confirm that any V2A receivers left the factory in a cabinet bearing the GPO number 2001.

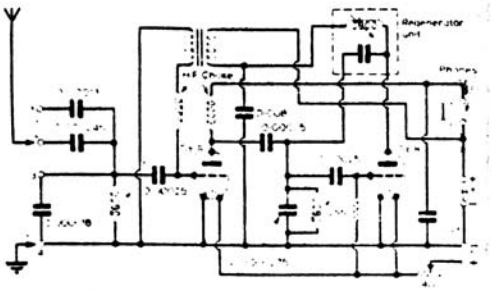


Fig.: 1 Circuit diagram of the V2 receiver c1922

The Circuit

The V2A employs one stage of h.f. amplification, choke-capacitance coupled to a leaky grid detector. The demodulated output at the anode of the detector is fed back to the grid of the h.f. amplifier, via an l.f. transformer, where it is amplified at audio frequency, the signal being fed via the h.f. choke to the headphones; in other words, a reflex circuit.

Regeneration is obtained by a novel type of capacitance circuit. A coil is connected in the anode circuit of the detector, the inductance being varied by means of a copper plate which is so arranged that it moves over the face of the coil. The potential variation across the coil is fed, via a small capacitor, to the tuned grid circuit, thus providing regeneration.

The coil and capacitor are mounted together in a "regenerator unit" fitted on the right-hand side of the deck. A selection of these interchangeable units was supplied for the receiver to cover the overall range of 185m to 3200m. This enabled most British and many other stations (as well as time signals from the Eiffel Tower transmitter) to be received.

Aerial and Earth Connections

As can be seen from the circuit diagram, there were three alternative connections provided for the aerial, the series capacitors providing different loadings. Socket 1 is for use with long wires, socket 2 (with a higher value capacitor) is for use with aerials of moderate length, while socket 3 is for short or indoor aerials (which would be connected directly across

RANGE BLOCKS. REGENERATOR UNITS.
for use with The Marconiphone V.2.

Price 10/- each.			Price 15/- each.		
		metres.			metres.
B620	-	185-250	B650	-	185-250
*B621	-	300-390	*B651	-	300-500
*B622	-	390-530	B652	-	450-800
B623	-	400-600	B653	-	800-1300
B624	-	600-800	B654	-	1300-2100
B625	-	800-1000	B655	-	2100-3200
B626	-	1000-1300			
B627	-	1300-1700			
B628	-	1700-2100			
B629	-	2100-2600			
B630	-	2600-3200			

*These are supplied with instrument as standard.

the input tuning coil/capacitor combination).

The earth connection is made by pushing a protected socket, fitted to the end of the earth lead, onto a pin mounted on the instrument itself. A useful feature for the time was that the earth socket and the aerial pin fitted each other, so that when the set was not in use the aerial could be safely earthed to protect the set from lightning and static electricity.

Tuning

For reception of a nearby broadcasting station, up to 10 or 20 miles distant, no regeneration was necessary and the station could be tuned by sliding the two milled knobs, one on each side of the cabinet, in or out as appropriate. Rotary type tuning was introduced in 1924.

The tuning consisted of two copper spades moving across the aerial and tuned grid coils which were mounted together in a removable ebonite 'range block'. A series of interchangeable range blocks was available, covering 185-3200m. As can be seen from the list of accessories, two range blocks generally covered the wavelengths of one regenerator unit, although on the lower wavelength bands there was some overlap.

Valves and Cabinet

The two valves were of the dull-emitter D.E.R. type with 1.8V filaments. Operated from the recommended 40 amp hour accumulator, the set would work for about 50 hours before the accumulator needed recharging. The h.t. required was 42V, the battery often being housed in the base of the receiver cabinet. Alternatively, the set could be operated from 42V h.t. and 4.5V l.t. dry batteries by using two D.E.3 valves and special filament resistor.

Reception Results

Harmsworth's *Wireless Encyclopeadia* tells us that "owing to local conditions it is impossible to give a definite figure for the range of reception of the V2 receiver, but under average conditions it is possible to receive all the British broadcasting stations as well as the Eiffel Tower, Radiola, etc, whilst there are many localities in which the reception of much more distant telephony stations such as Konigswusterhausen, Lyngby (in Denmark) etc. is possible.

"During the Transatlantic tests in 1923, so many reports of the reception of American broadcasting stations were received from owners of the V2 receiver that such reception is no longer out of the ordinary. Broadcasting from the London station has been received on the V2 at places as far apart as Geneva, Copenhagen, Barcelona and St. Vincent, making this receiver one of the most efficient two-valve receivers yet constructed. Much of the credit for the circuit is due to the experiments of Round on behalf of the Marconi Company".

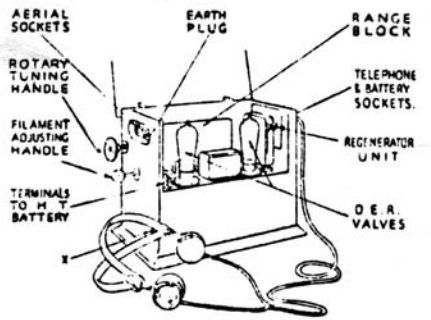


Fig. 2: Controls and connections for the V2.

Fig. 3: Marconiphone "Sterling" speakers recommended for use with the V2 in conjunction with amplifiers NB1 or NB2.

The Handbook

The handbook supplied with the V2 was very comprehensive. It recommended that the set should be placed as near as possible to the point where the downlead of the aerial entered the building through the lead-in insulator, at the same time allowing for the attachment of whatever earth connection had been chosen.

Having decided on the location of the receiver, the owner was told to look at the set with a view to connecting up. All connections were to be checked to ensure that they were correct, clean and firm, and were to be made with plugs and sockets which were non-interchangeable so that it was impossible to make wrong connections. If the plugs did not fit firmly in their sockets, it was suggested that they should be opened a little with a knife.

In order to fit the h.t. battery in place, the instructions were to withdraw the screws on each side of the cabinet, remove the front panel and insert the battery. Wires should then be pushed up through the slit in the left-hand end of the deck and connected to the terminals marked H.T. When connecting up new batteries, the user was advised, it would be seen that the ends were always covered in rubber to eliminate short circuits. This rubber should be stripped from the wire before a connection was made!

AK HORNS AND POT METAL

by Ray Windrix

Most of us have had a variety of Atwater Kent horn speakers at one time or another. I thought it might be of some help to collectors if I relate my experiences with AK horns and problems reguarding pot metal. I will be talking about the AK horns that I have, models L, M and H. I do not have a model G, but after describing these one can easily gauge any other AK horns.

The AK L and H horn problems are two fold. One is the pot metal driver. The very bottom, or cap, of the driver is pot metal and is impossible to unscrew. This means you will not be able to gain access to the inside of the driver. So, if the driver works or not, there is nothing you can do in this situation. Any attempts to unscrew the driver will only end in disaster.

The second problem with the L and H horns is the fact that the stem or neck of the driver is also pot metal. This means that often the bell or horn section is frozen onto the base at the neck of the driver. When this happens don't attempt to separate them. What will usually result is the neck snapping off at the base, leaving a frozen piece inside the base of the horn section.

So again, if the horn section is frozen to the base on the driver section don't attempt to separate. Likewise if the pot metal driver section will not unscrew, do not try to force it.

Now for some good news. On the model M horn, both problems were corrected. While the driver is still pot metal, the cap of the driver is bakelite, and most times can be unscrewed. Also on a M horn we are fortunate to have a steel stem or neck. This will allow the separation of the bell or horn section from the base.

Needless to say I learned my lessons on the AK horns the hard way. I am happy to say that I had good success in repairing both problems with a product called E-POX-E RIBBON. This product was described in a restoration tip in RADIO LOG, Vol. II Log 2. So, depending on just how bad the situation, in some cases, both problems can be repaired.

ANNUAL CONTEST RESULTS

Listed below are the results of the 1979 RMAWA contest. Judges(?) for this event were Doug Furney, Ron Harmon and Bill Miller. The first three places of each catagory are listed respectively in that order.

WIRELESS:
Klitzen - Miller, BC9A - Furney, Loose Coupler - Slagle

CRYSTAL:
Aeriola Jr. - Harmon, Federal Jr. - Furney, Blairadio - Miller

ONE TUBE:
Kennedy 220 - Furney, Aeriola Sr. - Johnson, Crosley Pup - Furney

TWO TUBE:
Radiola II - Furney, Radiola RS - Furney, Radiola RS - Harmon

3 - 4 TUBE:
Deforest Interpanel - Slagle, Echophone 3 - Hardy, Echophone J+JA - Miller

MULTI-TUBE:
AK12 - Hardy, Radiola VI - Furney, Kennedy XV - Slagle

SUPERHET/REFLEX:
Deforest D12 - Hardy, Radiola 24 - Brooks, Best - Slagle

CONSOLES:
Scott Imperial - Harmon, Majestic Consolette - Windrix

AC PRE - 1930:
Radiola 60 - Furney, Brunswick - Harmon

AC POST - 1930:
Jackson Bell - Hardy, RCA R7 - Harmon, Crosley Buddy Boy - Johnson

ACCESSORIES:
Magnavox A1R - Furney, Magnavox A1R - Hardy, Radiola 103 - Harmon

BEST OF SHOW:
1916 Klitzen - Miller

A note from the printer:

Recently I tried to purchase for stock some 20 mfd at 450 volt electrolytic capacitors. To my surprise, they are not being made anymore and none were available at sale prices, even though advertised.

Further search revealed their availability from a major supplier at $3.11 for one, $0.96 in lots of 100, and $0.80 in lots of 250 or more.

For restoration of AC sets these capacitors in voltages of 450 are a must. How many do you have in your junk box that you know are good? How many would you buy as part of a bulk club purchase. For that matter, how many .01 mfd-600 V paper bypasses would you want as part of the same bulk purchase. Prices are still increasing and more of these high voltage units are becoming scarce.

Please input your thoughts to me either by telephone (Denver 447-6566), mail at Box 704, Longmont, 80501, or at the next club meeting. ED

(George Stevens)

RMAWA
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80217

1ST CLASS