

BRITISH

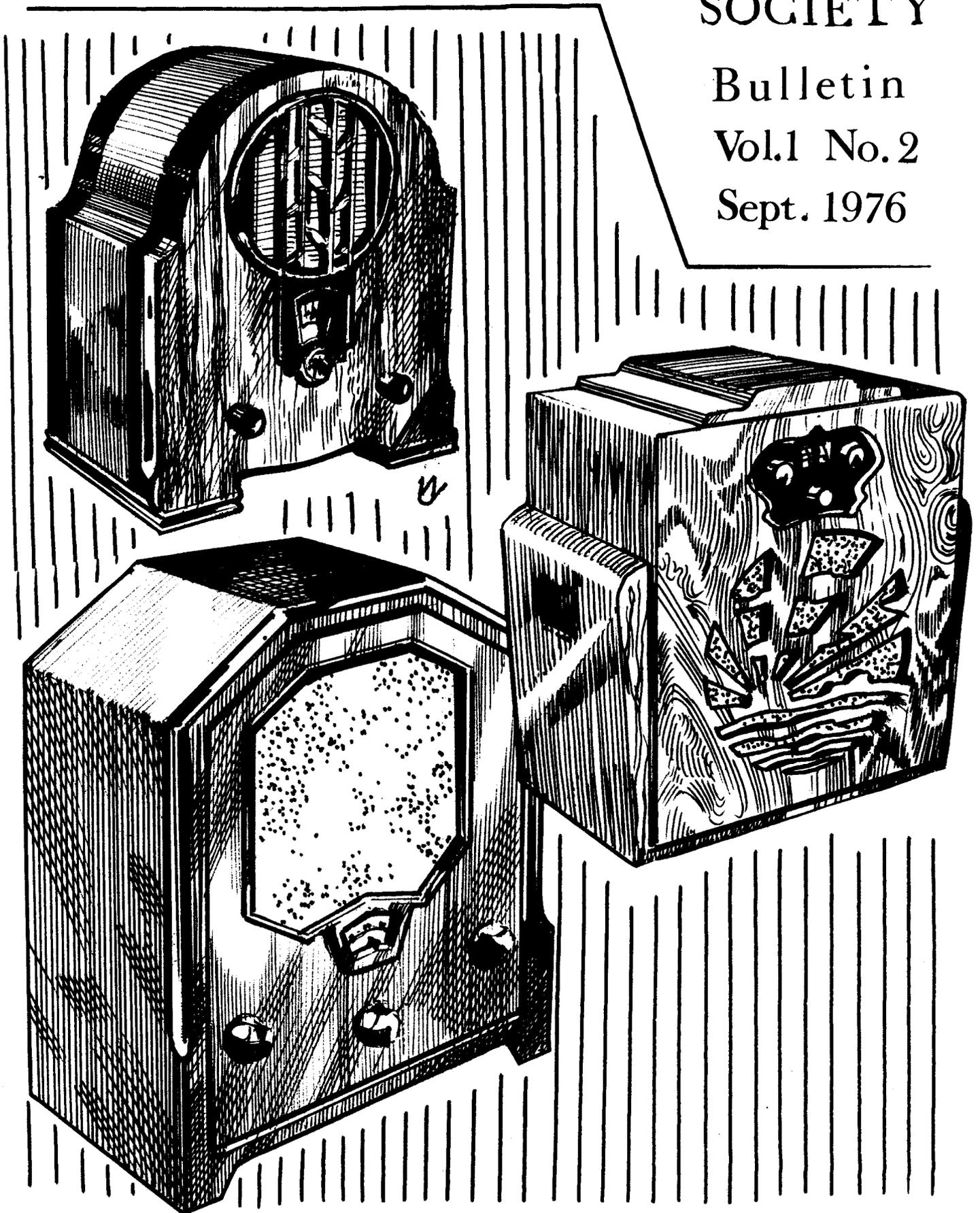
VINTAGE WIRELESS

SOCIETY

Bulletin

Vol.1 No.2

Sept. 1976



THE BRITISH VINTAGE WIRELESS SOCIETY

address all correspondence to: BVWS, 18 Ravensbourne Gardens,
Ealing, London, W.13. 8EW. U.K.

Membership of the Society is open to anyone interested in any aspect of the history of wireless.

The BULLETIN of the BVWS is edited by A.R.Constable (address as above) and is circulated to all members of the Society. It is hoped that about four issues will be published each year. Please send any contributions in the way of articles, anecdotes, requests for collectable items, 'letters to the editor', etc etc to The Editor, BVWS.

At the time of publishing Bulletin No.2, there are thirty members of BVWS. A complete membership list will be published with Bulletin No.3. This will include Name, address, and telephone number - so if you think we may not have the complete information about yourself, please write and put the record straight.

The acting Hon. Treasurer of BVWS is John Gilles of 33, Lannock Rd., Hayes, Middlesex, Tel 01-561-5199.. New members should send their application forms and subscriptions to Mr. Gilles.

FRONT COVER ILLUSTRATION

Three well known wireless sets from the early 1930's. The set in the top left hand side is the Philips Superinductance receiver model 634A which sold for 16 guineas in 1933. This set is described by John Gilles on page 3 of this Bulletin. At the lower left-hand side of the picture is the Osram Music Magnet 'Thirty-Three' which sold as a constructors kit for £6.15.6d. This set used two tetrodes, S21's and one LP2. The set on the right is the Pye 'Twintriple' AC4 of 1930 which sold for the princely sum of 28 guineas. With its side handles, this set was referred to as 'transportable' and apart from the mains lead was entirely self contained. The circuit consisted of two H.F. stages, detector and L.F. amp. and used the valves two S4VB's, one MH4, one ML4 and a metal rectifier.

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Editorial

Collectors of vintage wireless equipment are very varied in their interests and motives. If collectors specialising in the early 1920's look unfavourably upon the superhets of the 1930's, they are probably outnumbered by collectors specialising in the 1930's who have very little time for the simple primitive circuits of ten to fifteen years earlier.

The BVWS Bulletin will attempt to cover the interests of collectors as broadly as possible but no special attempt will be made to give equal coverage to all periods. By and large, the contents of the Bulletin will be governed by the contributions received, so if you feel that your special interest is not being adequately dealt with, the problem can easily be solved by putting pen to paper.

Some collectors feel that the word 'Vintage' should be accurately defined though it is not at all clear what the consensus of opinion is on the topic. The word vintage simply relates to the "grape gathering season" and a "vintage wine" usually implies one from a good grape gathering season - not necessarily an old one. The word has also come to mean "old and good" and there is no definition of how old is old, nor how good is good! Judging by the very fine collections I have seen, it seems that each collector has his own built-in sense of what is old and what is good and there is probably no need for any organisation to impose restrictions on collectors by trying in any way to define the word "vintage".

Wireless history is open-ended and it is up to collectors themselves to decide where to draw the lines on what is and what is not vintage and collectable.

Please let us have your view on this subject - letters to the editor will be published as far as possible.....if too many are received some selection will have to be made!

.....

Our first Bulletin was well received and readers seemed to think we had just about struck the right note. However, it was hoped there would be more 'feed back' in the way of contributions to our subsequent issues. Collectors may not be in the habit of putting pen to paper too often but you are the people who have the knowledge about your own equipment so make the attempt write it down and send it to us.

.....

THE MILNES HIGH TENSION UNIT

Lead acid accumulators came in all shapes and sizes in the 1920's and 1930's to provide wireless owners with a very complete range of low voltage sources for heating their hungry filaments. As well as the low-tension accumulators, many manufacturers also produced high-tension versions consisting of a large number of small accumulators of the conventional type. These lead-acid H.T. batteries were not easy to maintain and were not used very extensively by the domestic consumer. In the late 1920's the Milnes Radio Co. Ltd., of Church Street, Bingley, Yorkshire, introduced a nickel-cadmium H.T. accumulator which they proudly claimed would provide the "permanent solution of the H.T. problem".

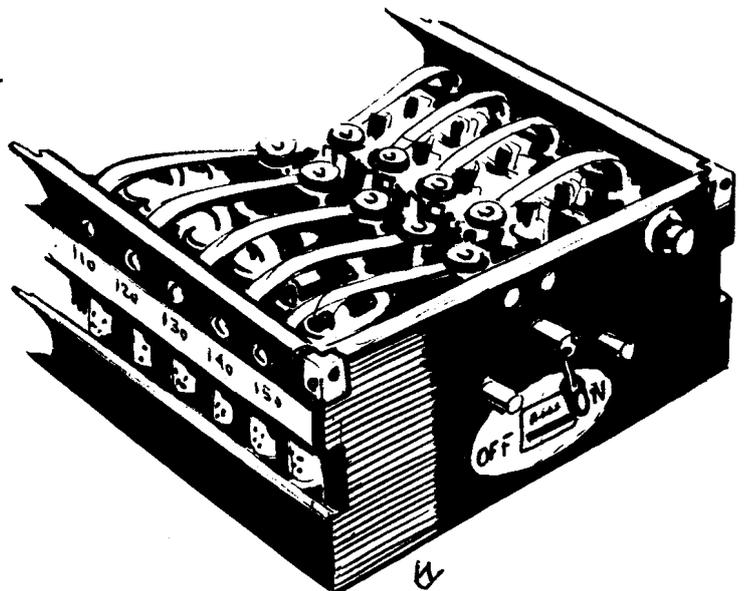
The Milnes H.T. unit consisted of two parallel banks of test-tube size nickel-cadmium cells arranged in groups of four. Between the two banks of cells was mounted a stout rotary switch in the form of an ebonite rod with its switching contacts permanently in place along the rod. With this switch it was possible to connect all the cells in series for normal operation as a high tension battery and to connect them in a series/parallel arrangement. When the unit is in the series/parallel arrangement, the groups of four cells in series are all connected in parallel resulting in a low voltage (approx 5volts) unit which could then be charged with a conventional low-voltage battery charger.

In practice, the Milnes company recommended that the user bought four low voltage conventional lead-acid accumulators as well as the H.T. unit. The idea then was that these L.T. accumulators, when connected in series, could be used to re-charge the H.T. unit. Thus, by permanently solving your H.T. problems, you had introduced enormous complications into your low tension re-charging routine. Imagine going to the local battery shop periodically with four glass accumulators instead of the usual one!

The contemporary advertising claimed that a Milnes H.T. unit could be just as efficient in 20 years' time....the nickel-cadmium plates being practically indestructible. I found one of these batteries a couple of years ago in a very badly damaged state on a rainy day in a skip. After a very careful cleaning, replacing of several broken test-tubes and a complete renewal of the caustic potash (KOH) electrolyte it responded to a full charge-discharge cycle precisely as recommended by the manufacturers. The unit has been in regular use for about 18 months driving a 1928 receiver and shows every sign of living up to a very extended version of the 20 year claim.

The renovation of this old Milnes H.T. unit was aided considerably by being fortunate enough to find a copy of the original instruction book. Unlike many instruction books published by manufacturers in the 1920's (or indeed in the 1970's) this one is packed with all the relevant technical details and certainly made the renovation job go very smoothly indeed.

If any other collector has an operational Milnes H.T. unit the editor would welcome the opportunity of comparing notes.



THE PHILIPS "SUPERINDUCTANCE" RECEIVER - 634A

John A. Gilles

For those interested in receivers made in the early 1930's this Philips model must be high up on the collector's list. It has many interesting features, not least of which is the elegant cabinet design. The styling is typical of many sets of the period being of the rounded top "Cathedral" style. The matching veneers and general construction are above average, even when compared with the better sets of the period. The 634A will by now be familiar to the layman and collector alike as it has been featured in several Television commercials recently, including the famous "Ovaltiner's", as well as one or two period dramas.

The cabinet design is by no means the only interesting feature of the Superinductance receiver. It was introduced at the Eleventh Radio Show at Olympia in 1933 and was unusual in the fact that it was T.R.F. - by now most sets of the same price range were superhets. This one was priced at 16 guineas. Other notable features which made this set stand out among its contemporaries were the inclusion of A.V.C. and resistance capacity smoothing circuits - no smoothing choke was used and the speaker was of the permanent magnet type.

In order to obtain adequate sensitivity and selectivity in a T.R.F. of this type, considerable skill in design was required. The success of the design is largely attributable to the efficiency of the tuning coils, which are Litz-wound on glass formers and were of a large physical size, hence the use of the word "superinductance" for this and other models in the Philips range.

There are four tuned circuits, two in the band-pass input circuit and one in each of the coupling transformers associated with the H.F. valves. Detection is carried out by a single diode S.G. valve which supplies the bias for the A.V.C. to the first H.F. valve and amplifies the L.F. signal before feeding it to the output valve R.C. coupling. To compensate for the variation in sensitivity between the top and bottom of the wavelength scale, the bias of both H.F. stages is varied by a wire-wound potentiometer ganged to the main tuning control. There are only two controls on the front of the set. The left-hand one is the on/off switch, volume control and two position (in/out) sensitivity switch. The right-hand control is the combined tuning and wave-change.

The writer has restored one of these receivers with little difficulty due to the solid construction and the high quality of the original components used. However, mention must be made of particular problems encountered.

The two main smoothing capacitors are Philips 16 mfd electrolytics (C39 and C40). If the receiver has not been used for many years, these are likely to have dried out. They should be carefully checked for shorts, leakage and an estimation of capacitance. Remember that, when testing electrolytics, the polarity of the testing voltage should agree with that of the capacitor. With most multimeters on the resistance range, the positive polarity is on the negative lead. If you are lucky enough to have capacitors which show some signs of capacitance and which are not too leaky, it is time to apply D.C. volts. This is best done using a variable D.C. power supply increasing the volts very slowly over a period of one hour or so up to about 270 volts. The capacitors in the writer's receiver were found to be completely short circuit and replacements had to be found. The insides of the original capacitors were completely removed and modern small electrolytics were inserted and the tops replaced - a technique well known to restorers and quite acceptable even to the advanced purist.

The next source of trouble was the wire-wound potentiometer (R4), the sensitivity control ganged to the main tuning control. A replacement had to be found which could be adapted mechanically to fit in place of the old control. The pulley had to be removed from the old control and soldered onto the spindle of the new one. Make sure the new control is capable of passing the total H.T. current of the set!

Another problem encountered was the failure of the decoupling capacitors C22,30,32,33,34,35,37,38. These capacitors were all short circuit - very strange considering they are of the paper variety and totally sealed in a "tin" box. Rather than replace the capacitors with individual components, it is preferable to open the box and replace with small modern capacitors before re-sealing - a difficult job!

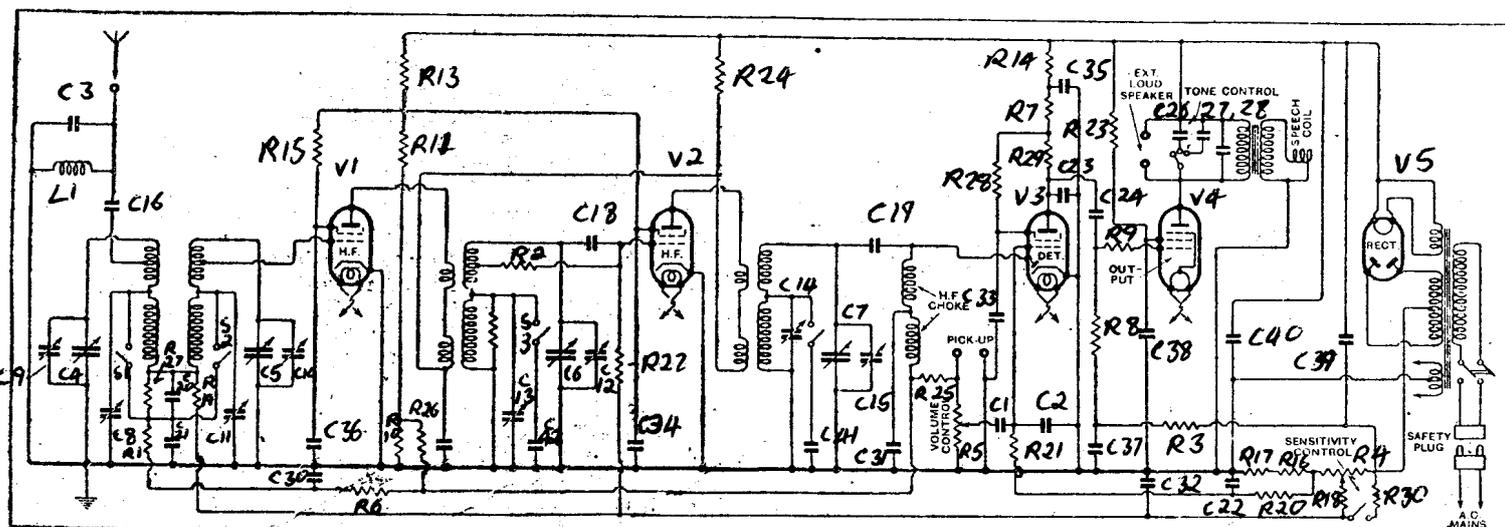
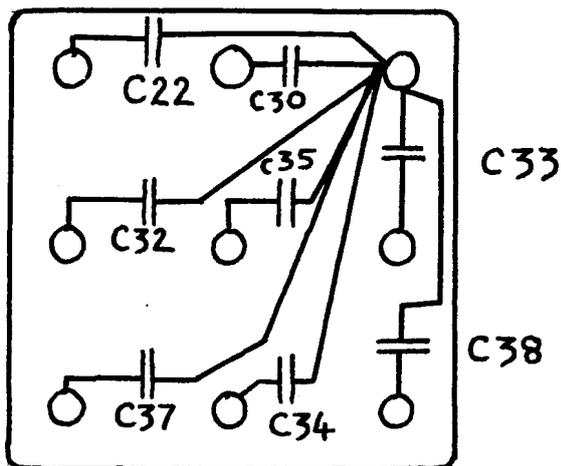
At this stage having checked the mains leads, switch and transformer for shorts and open circuits, it should be safe to switch on. It will probably be necessary to clean the contacts on the wave-change switch. One of the good features of the receiver is the limited use of rubber covered wire. However, the mains lead, speaker lead and dial lamp wires are rubber covered and will probably have perished and need replacing.

Resistors:

R1 10000	R21 1m	C8 to C15 .000027 each, trimmers
2 1.6m	22 3.2m	C16 .000025
3 500k	23 4k	17 .1
4 550 Sens. control		18 .000027
5 500k	24 1k	19 .000013
6 2m	25 50k	20 .025
7 64K	26 5m	21 .04
8 1m	27 200k	22 .25
9 100k	28 400k	23 .00025
10 3.2k	29 100k	24 .002
11 20k	30 2m	25 .0001
12 20k	31 320k	26 .00032
13 20k		27 .00125
14 25k	Capacitors	28 .002
14 1k	C1 .01mF	29 .1
16 250	2 .0002	30 .1
17 64	3 .0001	31 .0001
18 2.5m	4 .00043	32 .25
19 4m	5 .00043	Ganged 33 .5
20 800k	6 .00043	34 .5
	7 .00043	35 1.0
		C36 .1mF
		37 .1
		38 1.0
		39 16
		40 16
		41 .04
		42 .04

VALVES.	anode		screen		
	v	mA	v	mA	
V1 S4VB	230	0.8	120	0.2	H.F. amp
V2 S4VB	230	1.6	120	0.4	H.F. amp
V3 SD4	70	0.6	-	-	Det.
V4 PM24A	218	17.5	208	5.5	O/P
V5 1821	250	-	-	-	Rect

The diagram at the top of the next page shows the layout of the condenser block and the connections to the individual capacitors.



Complete circuit diagram, showing bias resistance network. No chokes are included for H.T. smoothing.

THE HOROPHONE

A product of the Synchronome Co., of London. the Horophone was manufactured in the early part of the 1900's. It was a complete receiver for listening to morse transmissions of time signals, news and weather reports from high powered stations such as Norddeich and Paris. The receiver consisted of a tuning coil, condenser, crystal detector, bell push and buzzer. Also there were terminals for connecting the aerial, earth and headphones plus a hook for hanging a pocket watch on. All this was neatly mounted on a polished board which the user fixed on an available wall. The only other requirements were then a good aerial and earth. As a safeguard against lightening a shorting plug was provided between the aerial and earth terminals and this had to be disconnected each time the set was in use. Adjustment of the crystal detector was accomplished by using a buzzer as a weak local oscillator. Has any other collector got any more information on this old set - dates etc? Has anybody got the actual set?

Alan Skinner, Blackpool.

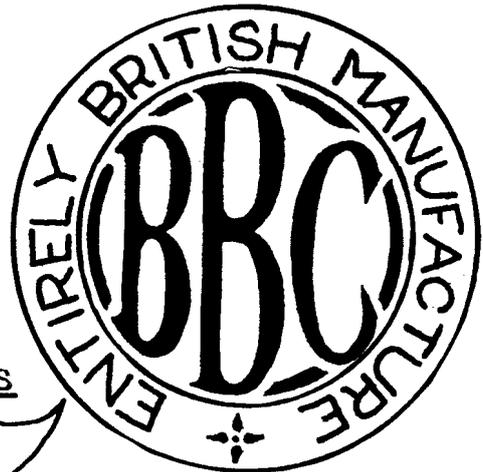
FOR THE HISTORIANS

Think very carefully: What have the following great men got in common? Samuel Morse, Alexander Graham Bell, Heinrich Hertz, James Clerk Maxwell, and Sir Oliver Lodge? Answer at bottom of page 12 - upside down.

Mr. T. Leeman, Leeds



CONCERNING
THE
B.B.C.
TRADE MARK
ON



EARLY WIRELESS SETS

THIS? ..OR.. THIS?

The BBC stamp is a well known trade mark often used by collectors and dealers as the definitive symbol of authenticity. But there were two BBC trade marks and it is not at all obvious from the literature exactly when and how these two marks were used. When the BBC was formed in November 1922, the member companies were protected for a period of two years against competition from foreign manufacturers. All sets sold in this country had to be British manufactured and the manufacturers were obliged to obtain approval for their apparatus from the Post Master General. When a set had received the Post Office approval, the BBC member firms were obliged to adorn it with the BBC stamp which bore the words, "Type approved by the Post Master General" round its perimeter.

In the official words, the procedure was as follows: "Firms desiring to submit apparatus for approval and registration should send a sample set of each type, together with relevant wiring diagrams, preferably of foolscap size, to the Engineer in Chief, Wireless Section, Room 8B, 4th Floor, General Post Office (North) London, E.C.1. Batteries, valves and telephone receivers need not be sent with the apparatus for test. These accessories will be provided by the Post Office. After test, the firms will be notified of the result and advised that the sets are ready for collection."

By early 1924, some manufacturers began to object ... why should they have to seek approval when the 'home constructor' could make any set he liked (subject nominally to legal reaction restrictions etc) and obtain an experimenter's licence for 15/- and no approval required! One manufacturer, who was also the Secretary of the Kingston and District Radio Society, wrote a long letter (dated 21/3/1924) to the BBC complaining bitterly about this state of affairs. His letter was passed from G.V.Rice (Assistant Controller & Secretary BBC) to F.J.Brown (Assistant Secretary GPO) and the matter was referred to the Broadcasting Board on 30th April 1924. F.J.Brown wrote to Reith (17/6/24) suggesting the words "Type approved...etc" should now be removed from the stamp. G.V.Rice wrote to the GPO (also 17/6/24) saying the BBC trade mark should in future only be used to signify that goods are of British Manufacture. It seems that by July 1st 1924 the P.M.G. no longer required approval of types.

Sets bearing the original stamp were made between 1922 and 1924 and by the end of 1924 the stamp was only being used by manufacturers who wished to take advantage of its prestige value. From this time (end of 1924 - start of 1925) the new stamp began to appear bearing the words: "Entirely British Manufacture" but it was no longer obligatory for manufacturers to use any stamp at all. By 1927 the second form of the stamp had just about disappeared from the scene. So collectors should remember that the first stamp covers the two year period - end of 1922 to end of 1924 and the second form covers the period - end of 1924 to end of 1926 or, at the latest, the early months of 1927. Incidentally, the widespread use of the

early form of the stamp on headphones, valves etc., does not imply that these items had to have the approval of the P.M.G..... it was only used in these instances as a trade mark of the member companies of the BBC and for the prestige value that the stamp had acquired.

.....

When the approval of the P.M.G. was granted to a manufacturer for a particular set, a registration number was issued and the manufacturer was expected to display this number near to the stamp itself on all sets made to the specifications of the prototype. It would of course be of great interest to collectors of early equipment for a complete list of these early registration numbers to be published in the pages of our Bulletin. However, it appears that the list is no longer available. A very detailed search at the Post Office Archives does not reveal even the slightest trace of the official list and enquiries through other relevant organisations has been totally unsuccessful in locating its whereabouts.

If any reader has useful suggestions concerning further enquiries that might unearth the complete original Post Office list, the Bulletin Editor would welcome the fullest possible information.

In the meantime, all collectors of early equipment are invited to take a careful look at each of their crystal sets, valve sets and what-have-you and note down the following facts: Registration number; Name of manufacturer; Set type number or other descriptive details.

Send this information to the Bulletin Editor and incomplete lists will be published in the Bulletin from time to time.

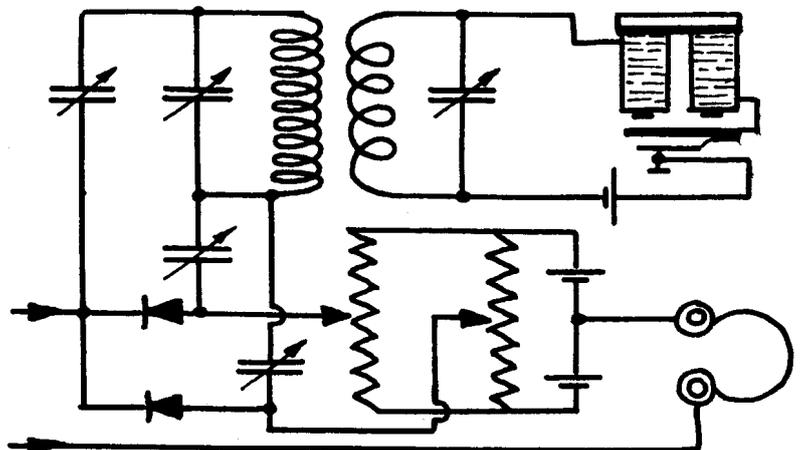
Failing the appearance of the original list which appears to be either lost or (for reasons which can only be guessed at!) to have been purposely destroyed, it is necessary that collectors attempt to re-compile the list even though it will probably take years to complete.

The co-operation of all readers in this venture would be greatly appreciated

EARLY CIRCUITS

Those early circuits from the pre-superhet days are so simple that they are hardly worth the serious attention of the modern solid-state oriented engineer - or are they?

The circuit shown in the accompanying diagram contains a buzzer, batteries, five tunable capacitors, two rheostats, a mutual inductance, a pair of headphones and two diodes.



The use of this circuit was described before the first world war. The details of its operation will appear in the next Bulletin - but, in the meantime and without scurrying to your 60 year old text books, can you say exactly what this circuit is all about?

CRYSTALS & CRYSTAL DETECTORS

By Desmond Thackeray

Readers attempting to resuscitate vintage crystal sets, or constructing equivalent detectors from modern materials, will find that they can still buy from mineralogical suppliers many of the natural crystals cited in the literature of fifty years ago. However, natural minerals are of such variable composition that finding ideal samples for crystal detectors is still as much of a lucky dip as it ever was. As I write, I have by me a crystal cup in which some enthusiast of an earlier day has nicely set a piece of green carborundum (silicon carbide, SiC). He was unlucky enough to mount a piece which does not conduct electricity! My own samples of this material, and of zincite (ZnO), not only conduct but also rectify when used in conjunction with a spring-loaded sewing needle.

Sixty years ago, the carborundum-steel combination was rugged enough to provide a stable detector for Marconi marine receivers; but it needed to be forward biased to a suitable operating point on the junction characteristic. This 'suitable' bias was found by trial and error, a potentiometer being adjusted for loudest signal. Some of the more elaborate receivers had a built-in signal generator (a buzzer) as an aid in this. Not until some years later is the theory of the semiconductor-metal junction understood, so hats off please to the developers of this biased detector who got their circuit design right without really understanding why. What was happening as they adjusted their potentiometers for strongest reception of the Eiffel Tower or whatever the buzzer produced was that they were lowering the inherent potential barrier (energy gap) of the junction, and empirically bringing the trans-conductance of the junction to a value commensurate with the resistance of their headphones. The transconductance of the junction also increases with increasing signal strength, so it was more important to optimise for the weakest signal heard.

Carborundum (which if pure is optically transparent) has a relatively large energy gap and needs a larger bias potential than say galena (which is optically opaque). As aficionados know, sulphide crystals such as galena (PbS) were widely used without biasing in domestic crystal receivers in conjunction with high resistance headphones. Galena is friable and a usable junction will need only a light pressure from a 'cat's whisker'. The resulting contact is so unstable that 'listening-in' with the average commercial crystal set was a most frustrating business requiring patience and perseverance of the highest order.

There is some advantage in forward biasing even a modern germanium diode, particularly if low resistance headphones are used. It is actually more logical to bias to a particular (not very critical) value of current, rather than incorporate a variable voltage source, since the dynamic resistance R of the junction is given by $R = 25/I$ where I is the bias current in milliamps. So, if R is to be 125 ohms the current should be about 0.2 mA. A suitable circuit for investigating diode detectors, ancient and modern, can be set up as shown in Fig 1. (Philips 'Electronic Engineer' kit e.g.) the tuning being accomplished by sliding the ferrite rod in and out of the medium - wave coil, the tuning capacitance being provided by the aerial (70 to 100 feet of wire).

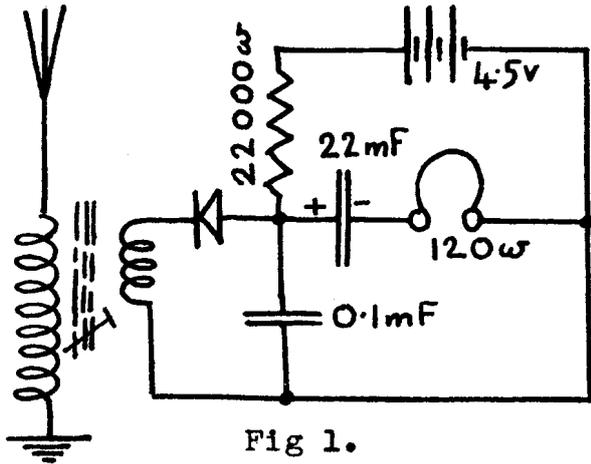


Fig 1.

For a comparison with the unbiased condition, disconnect the battery and connect the headphones directly across the 0.1 mF bypass capacitor. The simplest and most basic circuit wired as in Fig.2. provides an alternative comparison, since although the lack of bias gives poorer efficiency in the detector, the stronger coupling to the aerial circuit may provide a stronger signal by sacrificing selectivity.

For constructors wholly eschewing the manufactured product, I find that a sliver of germanium soft soldered to a brass tag together with the aforementioned sprung sewing needle rectifies fairly reliably.

Now a fragment of carborundum set in Wood's alloy, forming a junction under pressure against a steel needle or plate, may well have an ohmic resistance much higher than a commercial germanium diode. Efficiency can only be recovered by using the high resistance headphones of traditional crystal receivers, and much smaller bias currents are needed. More turns of wire are also required on the detector coupling coil; or again with loss of selectivity, the alternative is to connect the detector across the aerial coil as in Fig 3.

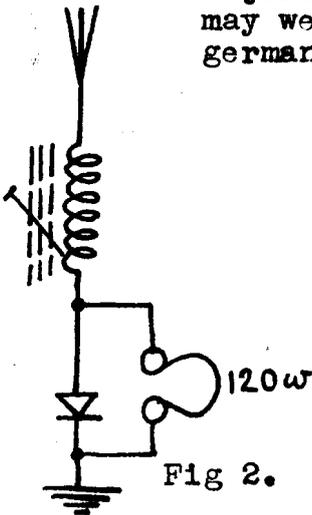


Fig 2.

Finally, what of the two-crystal detectors, known as 'perikons'? These must represent in embryo what we now call a p-n junction diode. The quoted combinations of zincite (an oxide) and bornite or chalcopyrite (sulphides) were spring-loaded together, and must have been mechanically more stable than a cat's whisker for domestic use. However the chances of success in two lucky dips are calculably less than one, and one is ineluctably reminded of the rhyme "when she was good she was very very good....etc". My own two-crystal cups had, rather mysteriously, a piece of badly eroded galena set in one and what was possibly the remaining fragment of a very pale yellow zincite crystal in the other. A rebuild seems

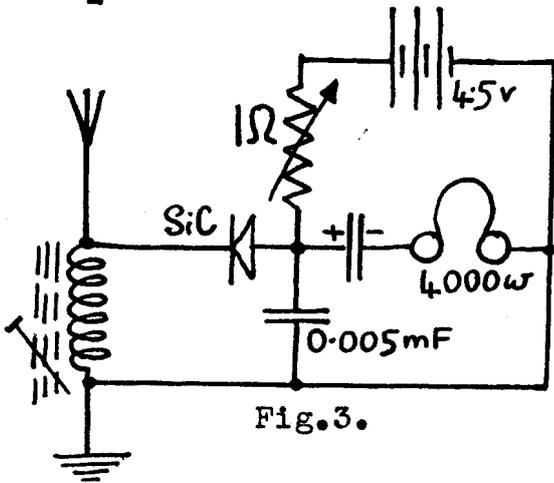


Fig.3.

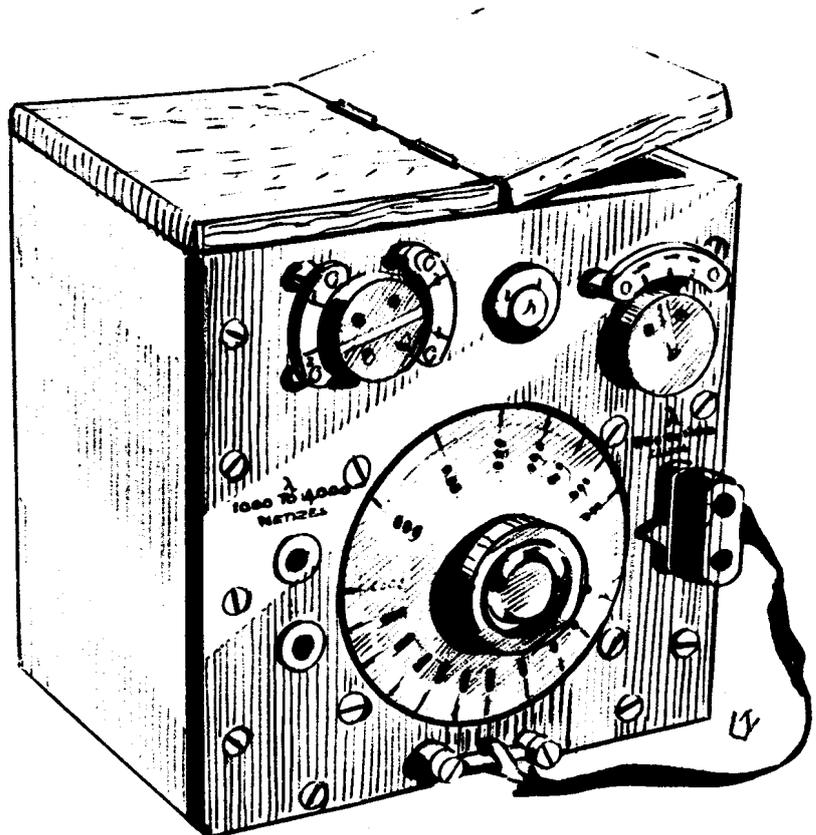
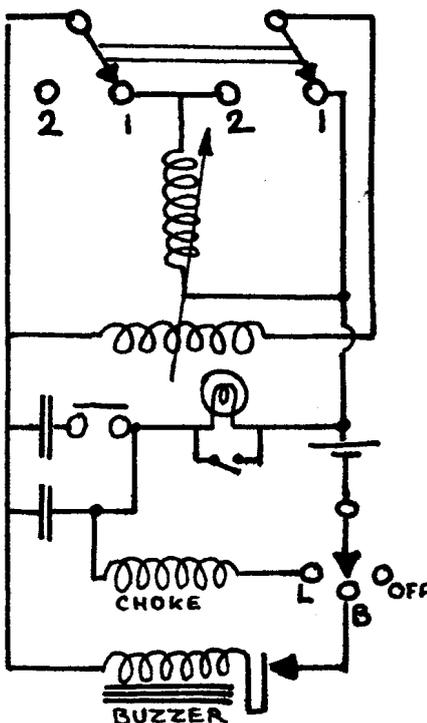
desirable, using the correct minerals if at all possible. Perhaps some knowledgeable reader can help to provide the missing information here: the two-crystal detector referred to is a 'Red Diamond' and I would really like to know which pair of crystals were recommended by the manufacturers (The Jewel Pen Co., 21-22, Great Sutton Street, London, E.C.1. - a company making several small wireless components in the mid to late 1920's)

THE TOWNSEND WAVEMETER

This wavemeter was manufactured by Messrs Muirhead and Co. under patent and to the design of Prof. J.S.Townsend. It was used extensively during the first world war and was specially designed to be a light-weight portable instrument capable of maintaining its accuracy under widely varying conditions.

The instrument came in three stock ranges: The No.122 (300 to 4000 metres), the long range model; No.67SB(1000 to 2000 metres), the High Wave Broadcast model; No.67L(320 to 1400 metres), the Low Wave Broadcast model, and all instruments were calibrated against N.P.L. standards and guaranteed correct.

Wavemeters were of course considered to be of great importance in the early days of radio when few other instruments were available. The wavemeter was probably the first instrument designed solely for the use of the 'wireless man'. The instrument illustrated covers the range 300 to 4000 metres and is almost as accurate today as it was when it was made 60 years ago. As the circuit shows, tuning was achieved with a variometer and four ranges were obtainable by means of (a) a two position switch which could connect the variometer coils in series or in parallel and (b) a removable dial pointer which doubled as a plug which brought an extra fixed condenser into the parallel tuning circuit when the pointer was put into the long wave (left-hand side) position. The dial was calibrated directly in metres (quite unusual for the period) and is remarkably linear over the full range. The variometer itself is wound on a former made of wood and has a pleasingly crude 'no nonsense' type construction considering the overall accuracy of the instrument. The usual buzzer and lamp circuits are obtainable with a change-over switch and when the lamp is removed a shorting switch ensures that LC continuity is maintained for receiver tuning with the buzzer transmitter.



THE HAZARDS OF WIRELESS COLLECTING

THE ADVERT

By Philip Beckley

Some wireless collectors confine their purchasing to jumble sales and reliable Antique Wireless Shops (we all know who); but at one time or another the more adventurous have tried the ADVERT.

The first problem is where to place it, the second what to say. Shop window cards are small stuff compared with a good local paper, but one is advised to write or to visit the office rather than phone lest Bright Emitter Valves..... comes out to be Mild and Bitter Halves..... and so on.

Well the advert is placed and the phone starts to ring. Soon the collector learns that 'very old' to some means pre-1970 while other people imagine that Noah sailed with radar incorporating Mazda octal types (SP61 mostly).

Marconi, it appears, discontinued the use of coherers to rush in B7G bases without any pause for other types!

Curiously age seems to be transferable from the user to the apparatus. If Grandma used the radio and died at 98 this confers great age on the device even if grandma purchased it in her 90th year....and so on; people even suggest that you keep current gear for a long time (yes, well it had occurred to us!)...but can you imagine an OC71 being smiled on as fondly as a Marconi 'R' in the year 2000? Perhaps!

Very few of the telephoners can be policemen, their powers of observation seem very frail. "Does it have valves out on the front panel?", one asks, keeping two fingers crossed. "Well I don't really know, you had better come and see!"

The worst hazard is of course valves with pips on top. "Oh yes, this set has four valves with pips on top." Has this remark ever led you to drive 20 miles for the pleasure of viewing members of the EF80/EF91 family?

"Oh yes, it works from batteries - lead acid ones," ... can mean a car radio working off the 12 volt battery.

Then of course ones friends tend to see the advert. Being friends, you would expect them to shut up unless they have something useful to say, but no, not a bit of it! They telephone to say, "Pity I hadn't known before, only last week I threw out"

Take comfort, careful research has shown that the average citizen uses the words "only last week" without a qualm to cover a period of up to ten years ago so all the apparent near misses are not really quite that.

Well, we've survived the telephoners, now for the letters. Curiously the letters are a lot saner, time to think I suppose. They tend to come from elderly widows or spinsters and correspondence can heap up while price, more description, means of transit etc are considered.

Well, adverts have their uses. They are not very productive unless of the expensive long-run type, but don't call yourself a serious collector till you have survived the experience a few times.

VINTAGE CRYSTAL SETS 1922-1927

The appearance of our first Bulletin coincided with the publication of Gordon Bussey's book on vintage crystal sets: Vintage Crystal Sets 1922-1927, Published by the Wireless World, price £2.50 (U.K.) and \$6.00 (U.S.A.).... a low enough price for a unique monograph.

This excellent little book attempts to give a broad coverage to the whole range of crystal sets manufactured during the first five years of broadcasting. The large number of sets mentioned (nearly 200 manufacturers) must come as something of a surprise - not only to the uninitiated.

The author has written introductory chapters: 'The First Days of Broadcasting' and 'The Crystal Set'. These two chapters contain background material helpful to the newcomer or to the non-specialist casual reader, but they are disappointingly brief for the serious collector. This is not an important criticism - it rather emphasises the fact that the readership is intended to be much wider than the small specialist circles of dedicated collectors. The material in these chapters is well thought out and is written in a very readable style. There do not appear to be any important factual errors though I would take issue with the statement (page 10), "All wireless receivers and principal accessories, for instance, valves and headphones, were to be approved by the Post Office" . Readers should refer to the article in this Bulletin "Concerning the BBC Trade Mark...." on page 6. Only the wireless receiver itself had to have Post Office Approval. The official trade mark was certainly used on other components and often bore the words, "Type approved by the Post Master General" even though no such approval was needed all very confusing!

Many sets are indicated as being designed for Daventry 5XX and 5XX is generally referred to frequently in this book. It would have been very helpful if the author had mentioned the following important dates: 5XX first came into existence as an experimental station at Chelmsford in the autumn of 1924 and Daventry 5XX came into existence in July 1925. Facts of this sort are tremendously helpful to collectors who are always anxious to date their sets accurately.

Chapter 2 on The Crystal Set is a good introduction to the subject - without being overtechnical, it should appeal to a much wider readership than might have otherwise been the case. However, I really think the author should have found some way of telling the non-technical reader that the Carborundum crystal needed a biasing voltage. Without this knowledge (and even, possibly, with it), what might the reader make of the description of the Marconiphone Crystal A (page 103)?.. "Automatic adjustment for Carborundum Crystal". All this meant was that the crystal was biased with a 1.5 volt battery through a 0.25 megohm resistor, thus ensuring adequate bias at all times without the need of the rheostat adjustment found on the more professional military receivers made by Marconi.

In general I found this book quite fascinating, very informative, clearly laid out and attractive in appearance. The very few spelling mistakes, the few omissions (where, for godness sake, is the Elwell crystal set?), and the almost negligible errors of fact in no way detract from the value of this book and the author is to be heartily congratulated on the enormous amount of work he undertook in compiling the only listing of its kind available to collectors and the first book on the subject.

EXCHANGE

SEARCHING

Type A Regenerator Unit, 245-530 metres for Marconi V2. Also, Amplion moving iron speaker unit for McMichael 4 vlv suit-case portable (King's set) c.1931. John Gilles, 33, Lannock Rd., Hayes.Mdx. 01-561-5199

Horn speakers, any condition. Also, unusual crystal sets: e.g. Kenmaca Book Crystal Set "The Listener", also tin boxes of crystals, also wireless subjects in china (usually seaside souvenirs). William Embling, 11, Gainsborough Gardens London N.W.3.01-794-2764

Any Crystal set wanted to fill gap in collection. H.B.Sheward, 140, Plymouth Rd., Tavistock, Devon.

New collector requires commercial crystal set - any make. Ron Franks, 69, Heathfield Ct., Heathfield Terrace, London, W.4. 01-994-7155

Information on Fellophone super two c.1923. Circuit & construct. details req'd for restoration of incomplete example. Also G.E.C. (GeCophone) black crackle transformer ratio 4:1 for set c.1926. Ian Higginbottom, 5, Templewood Ave, London, W.13 8BA 01-998-1594

Dowsett's Wireless Tel.&Broadcasting (1923) -vol 11 only req'd. Also Vol II of Rupert Stanley's Wireless Telegraphy 2nd Edition....Editor.

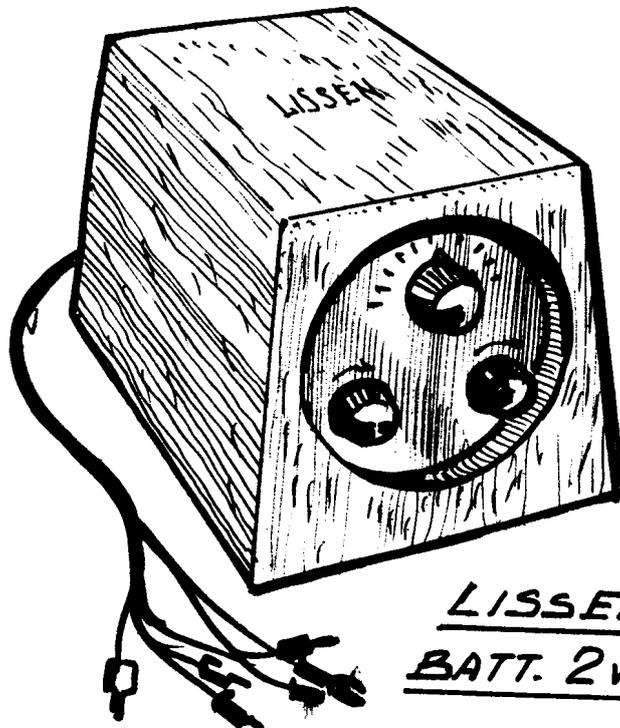
Req'd one X30 frequency changer. Also Lissen 2v battery set as illustrated. Norman Jackson, 5, Pyremont Rd., Strand-on-the-Green London, W4.994-3886

DISPOSAL

Amplion Horn Speaker Type, AR19 for sale or exchange. John Gilles, as above.

Type 41 Marconi - Cabinet only for sale or exchange. Ian Higginbottom - as above.

Various 1930 receivers. For further details of types and condition etc write to Norman Jackson as above.



LISSEN.
BATT. 2V 1933

WORD ORIGINS

MAYDAY (Distress signal used internationally) derived from M'aidez - French for Help me.

CQD Distress call used at sea prior to use of S.O.S.
CQ = SEEK YOU and D = DISTRESS

T.LEEMAN, LEEDS