

21 Sets & 6^d Speakers

FOR YOU TO BUILD

LAYOUTS
CIRCUITS
SPECIFICATIONS



THE TWENTY-ONE

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All Blueprints obtainable from the Publishers,

Bernard Jones Publications, Ltd., of 58/61 Fetter Lane, London, E.C.4

SEVEN OUT OF ELEVEN USE READI-RAD COMPONENTS

There is no need to pay fancy prices in order to obtain good components. Readi-Rad Components are low in price because the designers have concentrated on obtaining the highest efficiency with the utmost simplicity of construction. The fact that seven out of eleven set builders use Readi-Rad Components is proof of their high merit and their lasting reliability.

Complete Kits of parts for every set described in this booklet are obtainable by return of post. Cash or monthly payments. Particulars post free on request.

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OF OUR ILLUSTRATED LIST**

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Telephone: Hop 5555 (Private Exchange) Telegrams: READIRAD, SEDIST.

Advt. of READY RADIO (R. R. LTD.) 159 Borough High Street, London, S.E.1.

Our Latest Linen-diaphragm Loud-speaker!

BUILD THE NEW

"A.W." LINEN DIAPHRAGM LOUD-SPEAKER

Only ONE linen diaphragm is employed in this latest "Amateur Wireless" loud-speaker development. The diaphragm is held in a state of tension by means of a Bowden wire at the back. This NEW "A.W." loud-speaker provides wonderfully realistic reproduction. Speech is crisp and incisive; music is brilliant.

To make this fine loud-speaker, best-quality Irish handkerchief linen is required. The wooden framework can be assembled by referring to the A.W. No. 248 blueprint, which gives all the necessary dimensions.

For constructors of this loud-speaker, the blueprint is an invaluable guide. It can be obtained, post free, from the Blueprint Department, AMATEUR WIRELESS, 58-61 Fetter Lane, E.C.4. The price is 1s.

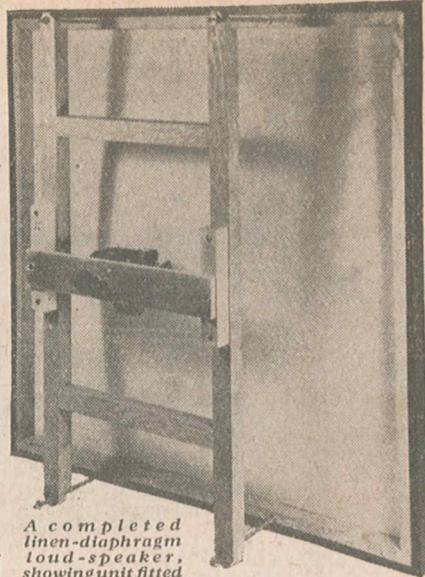
One of the most useful points about this new linen-diaphragm loud-speaker is that any good unit can be used to drive it. The makes of units tried with success are:—

Lissen, Blue - Spot, Tunewell, Watmel, Triotron, Sheffield Magnet, Ormond, Hegra, and Brown. Best results are obtained with a well-designed balanced-armature movement.

The diaphragm can take a tremendous volume without overloading, which, therefore, only occurs when the unit is loaded to its distortionless limit.

The sequence of assembling this loud-speaker can be briefly ex-

"A.W." BLUEPRINT No. 248
PRICE 1/- POST FREE



A completed linen-diaphragm loud-speaker, showing unit fitted at the back.

plained. Firstly, the hardwood frame is constructed.

Secondly, the linen is glued to the frame; it is first cut a few inches larger all round than the frame and then firmly glued down one side. Then the linen is stretched across the frame and glued down to the opposite edge. The two remaining sides are similarly dealt with.

Thirdly, a hole is made at the exact centre of the linen, by inserting a sharp point *between* the threads. The usual cone washer can then be fixed.

Fourthly, the back framework, for the support of the unit and the tensioning wire, is constructed according to the blueprint. At each end of the strip holding the unit screw eyes are fitted; to these is fixed a 14-in. length of Bowden cable, as used for three-speed gears on bicycles. At the middle of the wire it is twisted once under the cone washer.

The tensioning frame is supported by four lengths of threaded 2 B.A. rod. At this stage the linen should be "doped" with Kone Dope or similar dope. Then the tensioning of the diaphragm can be done by adjusting the 2 B.A. nuts on the threaded rod.

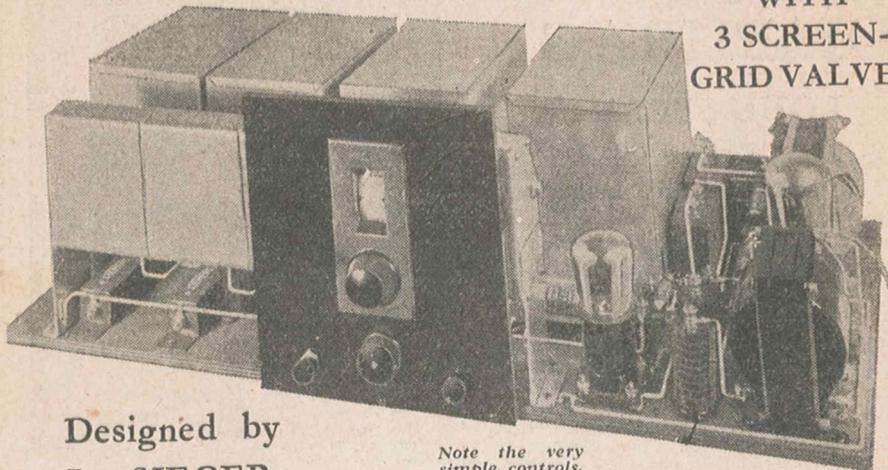


Side view shows how the linen-diaphragm is stretched to the back.

Single Control—But Three H.F. Stages!

The OVERSEAS FIVE

WITH
3 SCREEN-
GRID VALVES



Designed by
J. SIEGER,

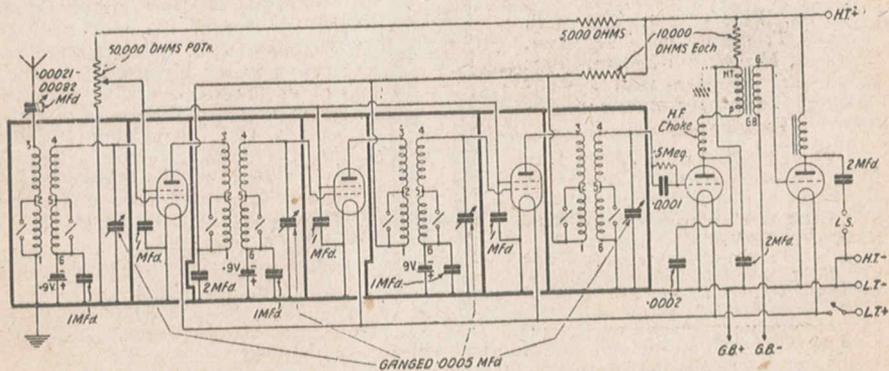
Note the very
simple controls.

of the
"WIRELESS MAGAZINE"
TECHNICAL STAFF

This set was fully described in the April, 1930, issue of *Wireless Magazine*. It can easily be constructed from the full-size blueprint, W.M.191, price 1s. 6d., post free, from the Blueprint Department, AMATEUR WIRELESS, 58-61 Fetter Lane, E.C.4.

Wiring is simple if carried out in the numerical order shown. Although it has five valves, including three screened-grid high-frequency amplifying stages, the connections are greatly simplified by the special system of screening.

Power detection is a notable feature. This was the *first* set designed in this country to include this form of valve detection.



Theoretical circuit of the Overseas Five, which has three screen-grid valves, detector and power valve.

The First Set to Employ Power Detection!

COMPONENTS FOR THE OVERSEAS FIVE

High-frequency choke (Climax, R.I., Polar).

Low-frequency choke, 30-henry filter (Parmeko, Varley, R.I.).

Four dual-range coils (Colvern type T2R).

Four coil switches, with spindle and crank (Colvern).

.001-microfarad fixed condenser with grid-leak clips (Dubilier, Graham-Farish, Watmel).

.002-microfarad fixed condenser (Dubilier, Graham-Farish, Watmel).

Six 1-microfarad fixed condensers (T.C.C., Dubilier, Hydra).

Three 2-microfarad fixed condensers (T.C.C., Ferranti, Dubilier).

Four-gang (.0005-microfarad each) variable condensers, with drum dial and screens (Jackson).

Pre-set variable condenser (Igranic type 2231/34).

Ebonite panel, 8 in. square (Becol, Pilot, Parfait).

Two ebonite terminal strips, 6½ in. by 2 in. and 3 in. by 2 in.

Five valve holders (Benjamin Vibrolders, Lotus, Edison Bell).

Two wander plugs, marked G.B.+ , G.B.— (Belling-Lee, Igranic, Clix).

5,000-ohm fixed resistance, with holder (Ferranti, Varley, R.I.).

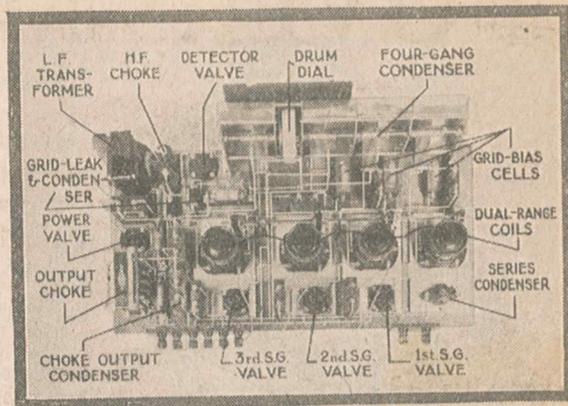
Two 10,000-ohm fixed resistances, with holders (Ferranti, Varley, R.I.).

½-megohm fixed resistance (Lissen, Dubilier, Ediswan).

50,000-ohm potentiometer, panel type, (Lissen).

Four screens (Colvern boxes type B1).

On-off switch (Bulgin QMB, Claude Lyons, Igranic).



All the baseboard components can be clearly seen in this plan view of the Overseas Five set.

Cabinet, with special front and 12-in. baseboard (Keystone, Pickett, Ready Radio).

Loud-speaker (Brown Duplex, Ediswan, Amplion).

Mains unit, high-tension (Regentone type W2A for A.C., type De Luxe for D.C.).

Valves

3—Osram S610, Cossor 610SG, Marconi S610.

1—Osram P610, Cossor 610P, Marconi P610.

1—Osram P625, Cossor 610XP, Marconi P625.

THE DESIGNER SAYS:

“The Overseas Five” is an American type of set—but built with British components. A glance at the circuit diagram will show at once the various unique features of the set.

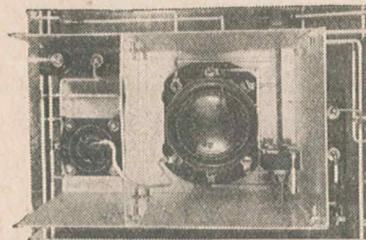
“The high-frequency transformers have both primary and secondary switched for the two wavebands.

“Four coils are used in four special screened boxes.

“A 50,000-ohm potentiometer is used to control volume, by varying the voltage impressed on the screening grids of the screen-grid valves.

“Power detection is used; the values of the grid-leak and grid condenser are smaller than usual. The power detector gives better quality because of its ability to handle power.

“The Overseas Five” is a set for the connoisseur.”



Looking into one of the screening boxes of the Overseas Five.

Glazite insulated wire for connecting short length of rubber-covered flex.

Three screen-grid connectors (Belling-Lee).

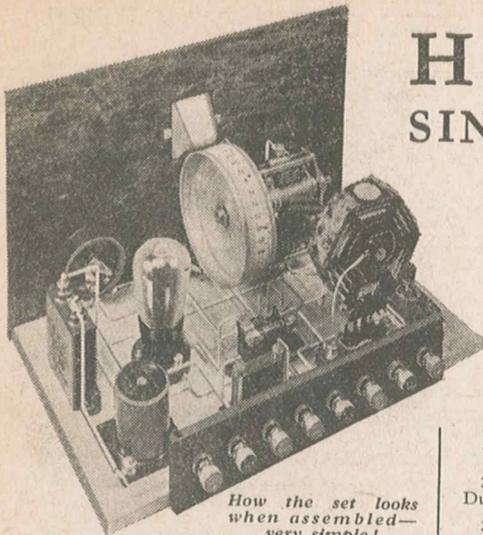
Eight terminals, insulated, marked: Aerial, Earth, L.T.+ , L.T.—, L.S.+ , L.S.—, H.T.+ , H.T.— (Belling-Lee, Igranic, Clix).

Low-frequency transformer (Ferranti AF5, Brown, Lewcos).

Three 0-volt cells (Siemens type SG).

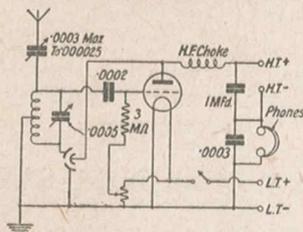
6-volt accumulator (C.A.V. type 6AC9, Tudor, Lissen).

Only One Valve—But It Gets Dozens of Stations!



How the set looks when assembled—very simple!

Fully described in the June, 1930, issue of "Wireless Magazine."



Hartley one-valve circuit.

COMPONENTS REQUIRED

High-frequency choke (Dubilier type 40, Igranic, Tunewell).

Two Coils, Nos. 60 and 150 centre-tapped (Edison Bell, Lewcos, Lissen).

.0002-microfarad fixed condenser (T.C.C. type SP).

.0003-microfarad fixed condenser (T.C.C., Igranic, Ormond).

1-microfarad fixed condenser (T.C.C., Hydra, Lissen).

.0005-microfarad variable condenser (Jackson Junior Log, Igranic, Ready Radio).

.0015-microfarad differential reaction variable condenser (Ready Radio).

.0003-microfarad maximum semi-fixed condenser (Sovereign, Igranic, Formo).

Slow-motion dial (Peto-Scott drum type, Jackson, Ormond).

HARTLEY SINGLE-VALVER

One of the home-builder's favourite circuits assembled with up-to-date components. For headphone and loud-speaker reception.

Ebonite panel, 12 in. by 8 in. (Becol, Lissen, Ripault).

Ebonite terminal strip, 8½ in. by 2 in.

Coil holder (Edison Bell, Lissen, Lotus).

Valve holder (Trix, Benjamin, Lotus).

3-megohm fixed resistance (Watmel, Lissen, Dubilier).

300-ohm potentiometer (Varley, Wearite, Lissen).

Glazite wire for connecting.

Short length of rubber-covered flex.

On-off switch (Jewel Pen, Bulgin, Lotus).

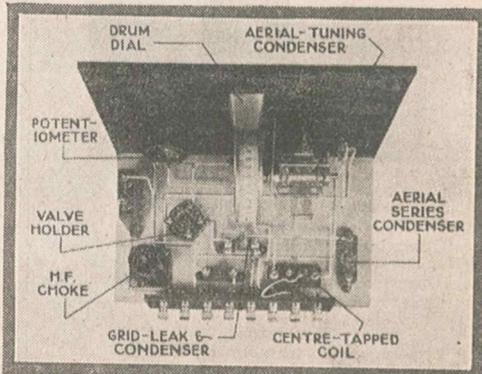
Eight terminals, marked: Aerial, Earth, L.T.+, L.T.-, Phones (2), H.T.+, H.T.- (Belling-Lee type M, Burton, Clix).

H.T. battery (Pertrix 99-volt type 239, Kolster-Brandes, Obeta).

2-volt accumulator (Lissen, Ever Ready).

Valve (Cossor 210HF, Mazda HL210, Lissen HL210).

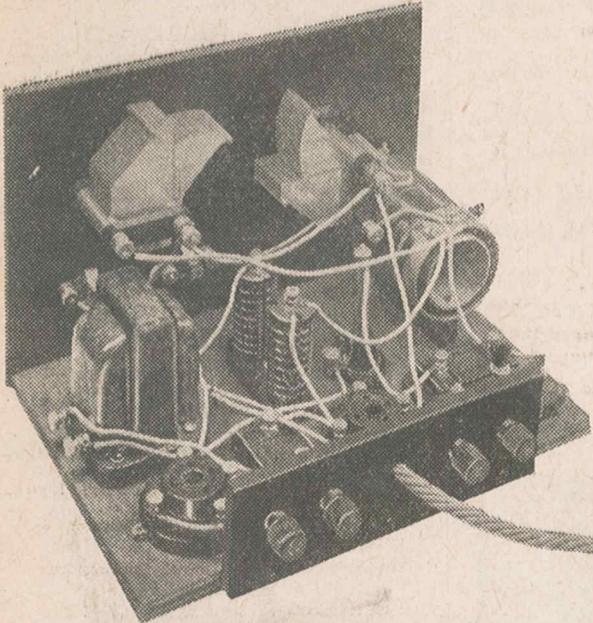
Blueprint W.M.198 (price 1s., post free) gives full working details.



A plan view showing how the parts of the Hartley single-valver are arranged on the panel and baseboard.

The Most Efficient Two-Valver Yet!

THE MUSIC MONITOR

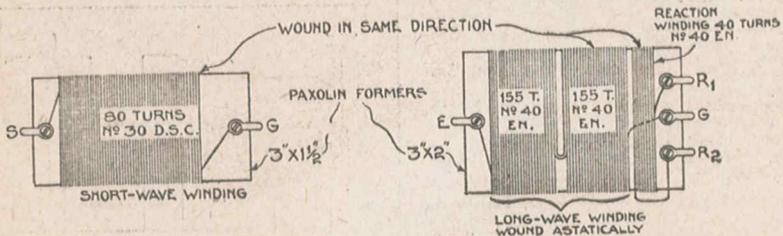


Over twenty stations at loud-speaker strength with a simple two-valver may seem too good to be true—but such were the results obtained with this set during a three-hour test one evening. If you build it you can have a choice of programmes from Europe!

The tuning coil in this set, although small, is particularly efficient and was designed by W. James specially for "Wireless Magazine."

Even if this is the first set you have ever tackled, its construction should not take more than two hours with the help of the W.M.208 blueprint, price 1s., post free.

All the connections in the "Music Monitor" can be made with rubber-covered flexible wire—no soldering is needed.



Details of the simple dual-range coil used in the "Music Monitor." The wonderful results with this set are largely due to the James' coil.

Utilises a Special James Coil—Very Efficient!

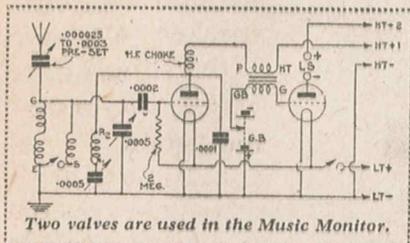
COMPONENTS FOR THE MUSIC MONITOR

High-frequency choke (Sopranist, Igranic, Cardinal).

Dual-wave coil, wound to specification.

.0001-microfarad fixed condenser (Bullphone, Lissen, Trix).

.0002-microfarad fixed condenser (Bullphone Lissen, Trix).



Two .0005-microfarad variable condensers (Formo).

Pre-set condenser (Formodenser type J, Sovereign, Lewcodenser).

Slow-motion dial (Brownie, Igranic, Lissen).

Ebonite knob for reaction condenser.

Ebonite panel, 9 in. by 6 in. (Becol, Parfait, Trolitax).

Ebonite terminal strip, 6 in. by 2 in.

Grid-leak holder, vertical type (Dubilier).

Two valve holders, rigid type (W.B., Benjamin, Formo).

Five wander plugs, marked: H.T.+1, H.T.+2, H.T.-, Bias-, Bias+ (Clix, Belling-Lee, Eelex).

Two spades, marked: L.T.+ , L.T.- (Clix, Belling-Lee, Eelex).

2-megohm fixed resistance (Dubilier, Wamel, Lissen).

Two on-off switches, rotary type (Benjamin).

Ten yards rubber-covered wire (Lewcos).

Four terminals, marked: A, E, L.S.+ , L.S.- (Belling-Lee, Burton, Igranic).

Low-frequency transformer (Lissen Hypermite, Telsen, Radio Instruments).

9-volt grid-bias battery (Pertrix, Lissen, Obeta).

120-volt standard capacity H.T. battery (Pertrix, Lissen, Obeta).

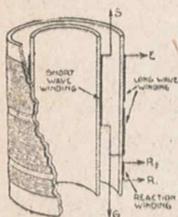
2-volt accumulator (Oldham type I.V.D.).

Loud-speaker (Marconiphone type M,60, Blue Spot, Ediswan).

Valves

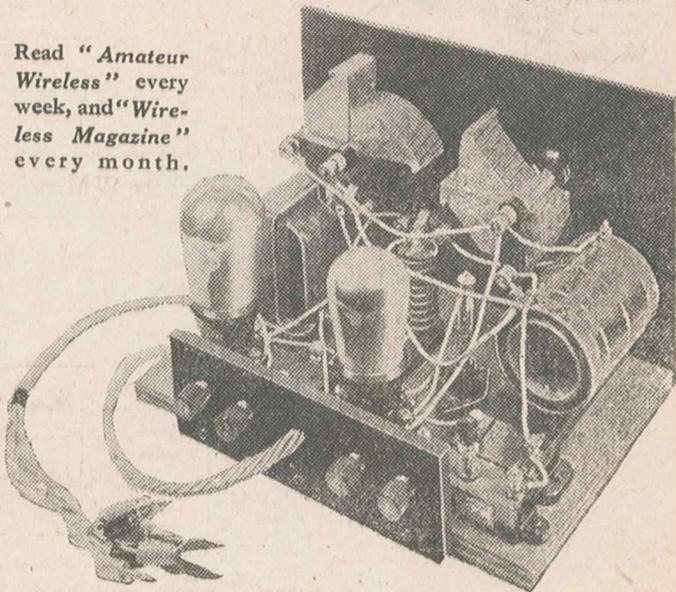
1—Marconi HL210, Mullard PM1HF, Lissen HL210.

1—Marconi P2, Mullard PM2, Lissen P220.



Read "Amateur Wireless" every week, and "Wireless Magazine" every month.

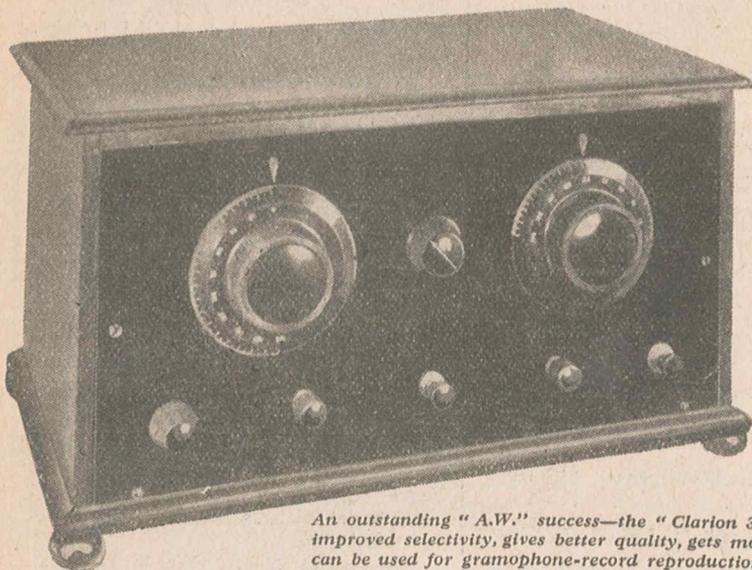
A cross-sectional view of the dual-range coil of the "Music Monitor." This coil was specially designed by W. James. Details of this coil and the rest of the set were given in the September, 1930 issue of "Wireless Magazine." The coil can, if desired, be purchased ready made.



The simple construction is clearly shown by this view of the completed Music Monitor.

A New Edition of an Old Favourite

1930 CLARION THREE



DESIGNED
BY THE
"AMATEUR
WIRELESS"
STAFF



SEE "A.W."
DATED
MARCH 8, 1930
FOR FULL
DETAILS.

An outstanding "A.W." success—the "Clarion 3" for 1930 has improved selectivity, gives better quality, gets more stations and can be used for gramophone-record reproduction.

COMPONENTS REQUIRED

Ebonite panel, 16 in. by 8 in. (Trolitax, Lissen, Becol).

Two .0005-mfd. variable condensers (Ready Radio, Igranic, Lissen, J.B., Dubilier, Lotus, Burton).

.0001-mfd. reaction condenser (J.B., Dubilier, Bulgin, Keystone, Burton, Formo, Polar, Lissen).

Two dual-range coils, one aerial and one anode (Tunewell).

.15-ohm rheostat (Lissen, Wearite, Igranic, Varley).

Single-pole double-throw jack switch (Lotus No. 7, Bulgin, Lissen).

Filament switch (Bulgin Q.M.B., Claude Lyons, Igranic).

Panel brackets (Lissen, Bulgin, Ready Radio, Keystone).

Three valve holders (Lotus, Benjamin, Burton, Igranic, Wearite, W.B.).

High-frequency choke (Lewcos, Watmel, Sovereign, Varley, Lissen, Bulgin, Tunewell, Keystone, Ready Radio).

.0001-mfd. fixed condenser (Dubilier, T.C.C., Graham-Farish, Lissen, Watmel).

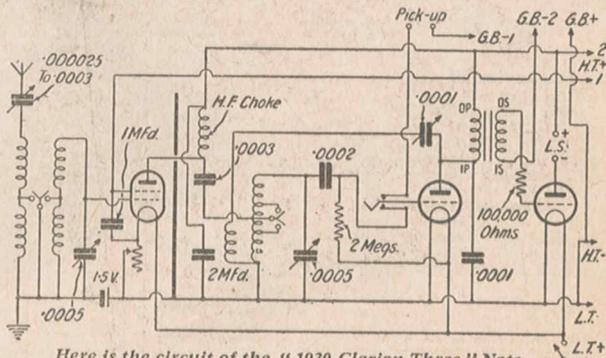
.0002-mfd. fixed condenser with series clip (Dubilier, T.C.C., Graham-Farish, Lissen, Watmel).

.0003-mfd. fixed condenser (Dubilier, T.C.C., Graham-Farish, Lissen, Watmel).

2-megohm grid leak (Dubilier, Lissen, Graham-Farish, Watmel).

100,000-ohm resistance with vertical holder (Graham-Farish, Lissen).

.1-mfd. fixed condenser (Lissen, Dubilier, T.C.C., Hydra, Helsby, Ferranti).



Here is the circuit of the "1930 Clarion Three." Note the gramophone pick-up jack in the detector valve circuit—one of the many fine features.

Knife-Edge Tuning—Easy Wiring

“CLARION THREE” COMPONENTS

—continued

2-mfd. fixed condenser (Lissen, Dubilier, Ferranti, T.C.C., Hydra, Helsby).

Low-frequency transformer (Lissen, Ferranti, Varley, Lewcos, Telsen, Igranic).

Three terminal strips, each 2½ in. by 2 in. (Keystone, Junit, Becol, Ready-Radio).

Six terminals, marked: A, E, Pick-up (2), L.S.—, L.S.— (Belling-Lee, Elex, Clix).

Cabinet and baseboard, 16 in. by 10 in. (Camco, Pickett).

Aluminium partition screen, 10 in. by 6 in. (Parex, Ready-Radio).

Pre-set condenser, .0003-mfd. maximum to .00025 mfd. (Formo-denser type J, Igranic, Sovereign).

1½-volt grid cell (Siemens, G.T., Ever-Ready).

Six wander plugs, marked: G.B.—, G.B.—1, G.B.—2, H.T.—, H.T.—1, H.T.—2 (Belling-Lee).

Two spade terminals, marked: L.T.—, L.T.— (Belling-Lee, Elex, Clix).

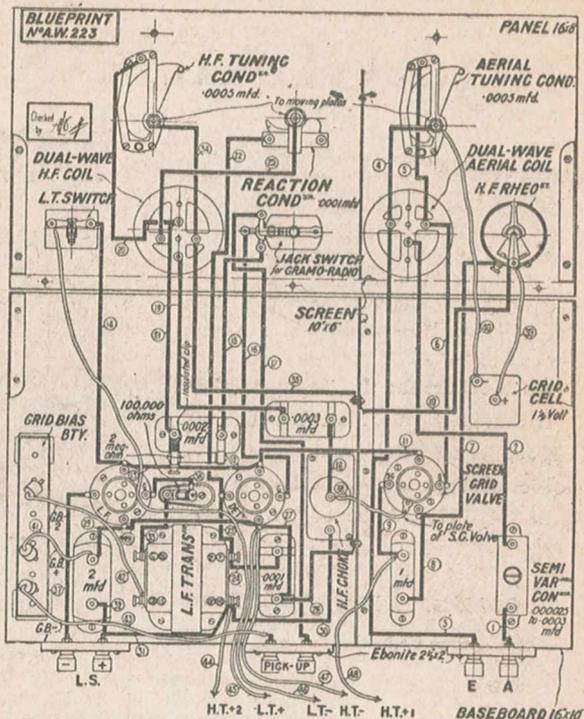
Grid-bias battery clips (Bulgin).

Connecting wire (Koneceterkit No. 4, British Radio Gramophone Co., Ltd.).

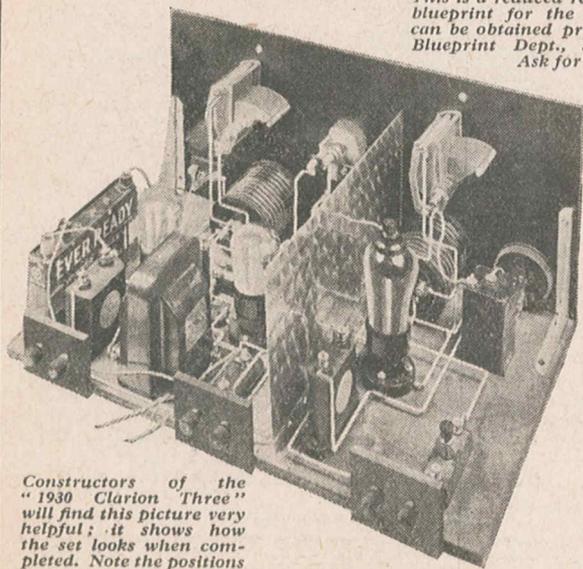
Four yards of thin flex (Koneceterkit No. 4, British Radio Gramophone Co., Ltd.).

Two dial indicators (Bulgin).

Two 4-in. dials (Ready-Radio Keystone, Trolite).



This is a reduced reproduction of the full-sized blueprint for the "1930 Clarion Three"—it can be obtained price 1s. post free, from the Blueprint Dept., 58-61 Fetter Lane, E.C.4. Ask for No. "A.W." 223.

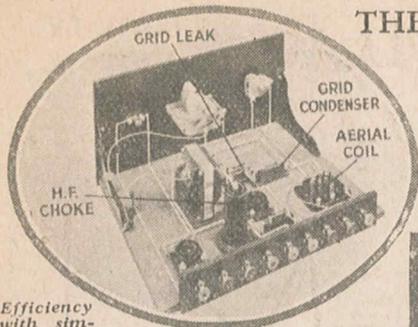


Constructors of the "1930 Clarion Three" will find this picture very helpful; it shows how the set looks when completed. Note the positions of the valves.

FIVE FEATURES OF THE "CLARION 3"

1. REAL SELECTIVITY.
2. SCREEN-GRID VALVE FOR SENSITIVITY.
3. DUAL-RANGE TUNING.
4. GRAMO-RADIO.
5. EASY TO MAKE.

Cheap to Build—and Very Easy to Work!



Efficiency with simplicity.

An ideal set for the beginner, the Gleaner two-valver is exceptionally good for selectivity and sensitivity. No soldering is needed. Described in July, 1930, issue of "Wireless Magazine."

COMPONENTS REQUIRED

High-frequency choke (Bulgin, type SG, Lissen, Igranic).

Two six-pin coils (Lewcos Super six-pin types CSP5 and CSP20).

Primary coil (Lewcos type P22).

.0001-microfarad fixed condenser (Trix, Magnum, Edison Bell).

.0002-microfarad fixed condenser (Trix, Magnum, Edison Bell).

.0005-microfarad variable condenser (Lotus type I.C/5, Edison Bell, Burton).

.00013-microfarad reaction variable condenser (Lotus type RC13, Polar, Cydon).

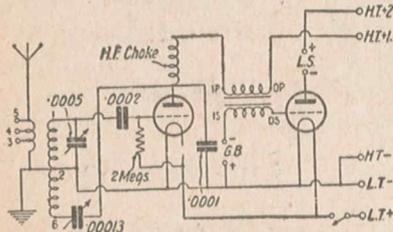
Slow-motion dial (Brownie, Harlie, Lotus).

Ebonite panel, 14 in. by 7 in. (Lissen, Becol, Potter).

Ebonite terminal strip, 12 in. by 2 in.

Coil holder, six-pin base (Lewcos type SPB, Magnum, Cason).

Two valve holders (Benjamin Vibrolders, Igranic, Edison Bell).

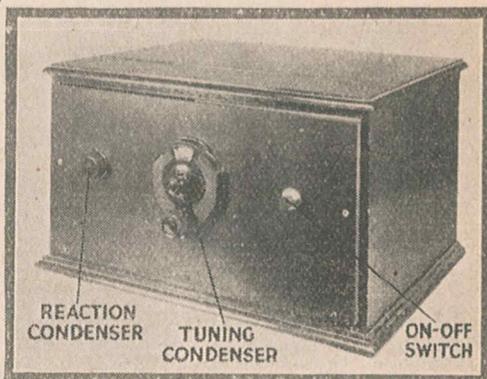


Circuit comprises a leaky-grid detector and a transformer-coupled power valve.

THE

GLEANER TWO

Build it for a £5 note!



Only three controls on the panel—nothing could be simpler.

Two plugs, marked: G.B.+ , G.B.— (Belling-Lee, Clix, Igranic).

2-megohm fixed resistance (Watmel, Lissen, Ediswan).

Holder for above (Bulgin, Watmel, Lissen).

Insulated wire for connecting (Glazite).

Pair panel brackets (Ready Radio).

Push-pull switch (Bulgin type S22, Lotus, Junit).

Nine terminals, marked: Aerial, Earth, L.S.+ , L.S.—, L.T.+ , L.T.—, H.T.+ , H.T.— (Ealex, Burton, Igranic).

Low-frequency transformer ratio 5-1 (Telsen Radiogrand, Burton, Brownie).

H.T. battery (Marconiphone 108-volt type B1570, Hellesen type POSOL, Siemens type 1206).

Grid-bias battery (Marconiphone 9-volt type B500, Hellesen, Siemens).

2-volt accumulator (C.A.V. type 2AG5, Exide, Oldham).

Cabinet (Carrington table model, Pickett, Ready Radio).

Loud-speaker (Brown Duckling, Whiteley Boneham, Philips).

Valves

1—Lissen HL210, Dario Super HF, Mazda HL210.

1—Lissen P220, Dario SP, Mazda P220.

BLUEPRINT W.M.201, PRICE 1s., POST FREE, gives full working details

Just the Unit for Regional Areas!

THE TRIMMER SELECTIVITY UNIT

Here is a simple unit that can be added to any existing set, without constructional alteration, to improve the selectivity. It is equally useful for reception of both broadcasting wavelengths and is a boon to those whose sets do not give sufficiently sharp tuning as they stand.

COMPONENTS

Dual range coil (Bulgin type A).

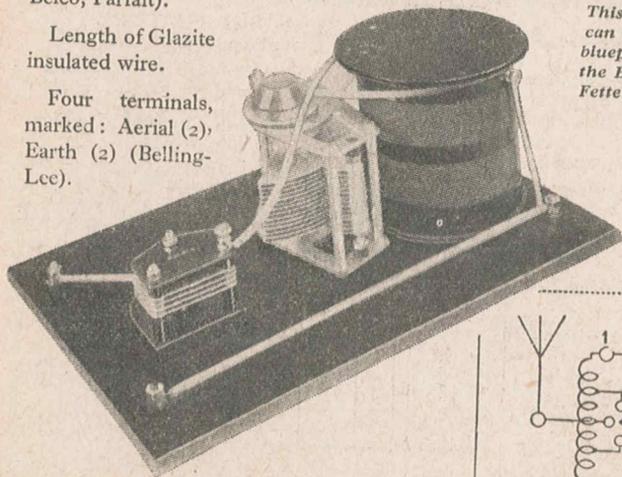
.0005-microfarad variable condenser, fast and slow motion (Polar Ideal type, Jackson, Ormond).

.0005 - microfarad variable condenser (Bulgin type N.12)

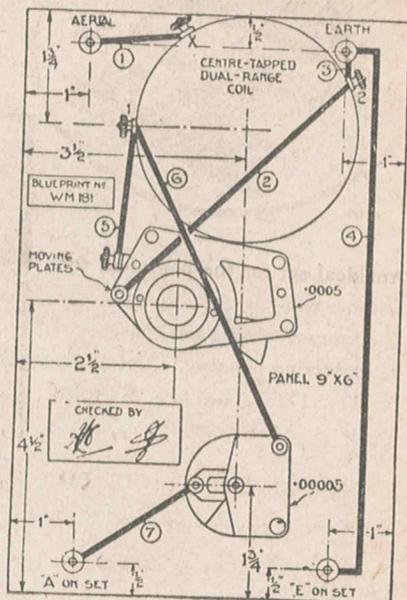
Ebonite panel, 9 in. by 6 in. (Raymond, Belco, Parfait).

Length of Glazite insulated wire.

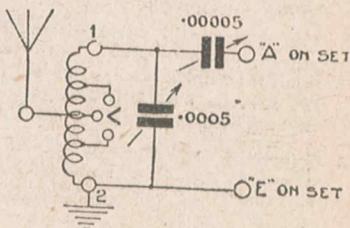
Four terminals, marked: Aerial (2), Earth (2) (Belling-Lee).



In such a simple unit the wiring is very easy, as is shown by the above pictures. See "W.M." for February, 1930.

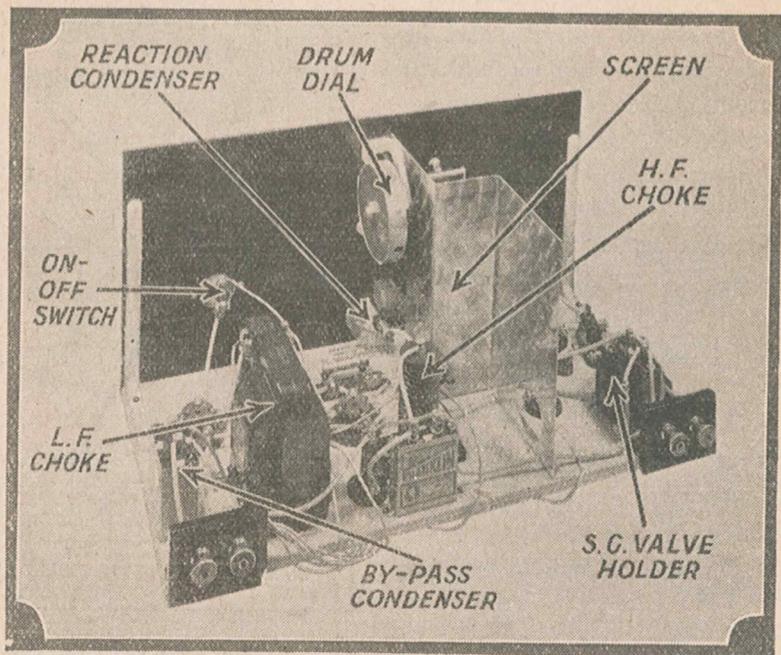


This layout and wiring diagram can be obtained as a full-sized blueprint for 6d., post free, from the Blueprint Department, 58-61 Fetter Lane, E.C.4. Ask for WM18L.



Circuit of the "Trimmer Selectivity Unit."

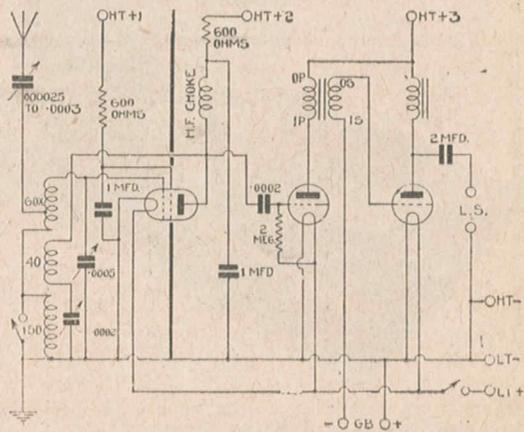
The FIVE-POINT THREE *



STRAIGHTFORWARD CONSTRUCTION IS A BIG FEATURE

* FIVE SPECIAL POINTS

1. Construction has been specially simplified for the benefit of beginners.
2. There is only one dial to turn for the reception of many European stations.
3. The screen-grid valve gives good range, and both medium and high wavebands are covered with coil changing.
4. Excellent volume is obtained with ordinary standard valves.
5. The cost of the parts, which are all standard and easily obtainable, is roughly £11.



Here is the circuit of the Five-point Three — a screen-grid H.F. stage is included.

No Soldered Connections in the Five-point Three!

COMPONENTS FOR THE FIVE-POINT THREE

High-frequency choke (Lewcos, British General, Watmel DX3).

Low-frequency choke (Lissen, Igranic, Telsen).

No. 40 plug-in coil (Atlas, Lewcos, Edison Bell).

No. 150 plug-in coil (Atlas, Lewcos, Edison Bell).

No. 60 double-tapped plug-in coil (Atlas, Lewcos, Edison Bell).

.0002-microfarad fixed condenser (Edison Bell, T.C.C., Graham-Farish).

1-microfarad fixed condenser (Franklin, Dubilier, T.C.C.).

2-microfarad fixed condenser (Franklin, Mullard, T.C.C.).

.0005-microfarad variable condenser (Ormond, Lotus, Polar).

.0002-microfarad variable condenser (Formo Midget, Dubilier, Bulgin).

Preset condenser, .0003-microfarad maximum (Sovereign, Lewcodenser, Formodenser).

Slow-motion dial (Ormond drum, Lotus, Polar).

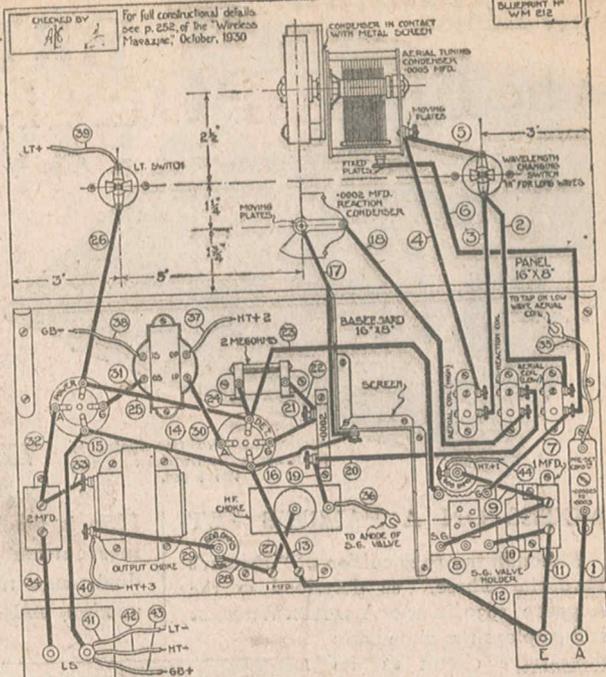
Ebonite panel, 16 in. by 8 in. (Potter, Ready Radio, Raymond).

Two ebonite terminal blocks (Junit, Lissen, Belling-Lec).

Three two-pin coil holders (Lissen, Magnum, Lotus).

Three valve holders (Telsen, Lotus, Igranic, Junit Universal, Parex, W.B.).

Eight terminals, marked: L.T.+ , L.T.- , H.T.+3 , H.T.+2 , H.T.+1 , H.T.- , G.B.+ , G.B.- (Belling-Lec, Eelex, Clix).



Get the full-size working blueprint of the "Five-point Three-valver." It is WM212, price 1s., post free, from the Blueprint Department, 58-61 Fetter Lane, E.C.4.

Two 600-ohm fixed resistances (Bulgin, Wearite, Magnum).

2-megohm fixed resistance with holder (Lissen, Watmel, Dubilier).

Tinned copper wire for connecting. Length of Sistoflex sleeving.

Six yards of rubber-covered flex (Lewcos).

Pair of panel brackets (Keystone, Camco, Bulgin).

Screen to specification (Parex, Ready Radio, H. & B.).

Single-pole "on-off" switch (Gripso).

Single-pole "short-long" switch (Gripso).

Four terminals, marked: Aerial, Earth, L.S.+ , L.S.- (Eelex, Belling-Lec, Igranic).

Low-frequency transformer ratio 1-6 (Igranic type J, Telsen, Burton).

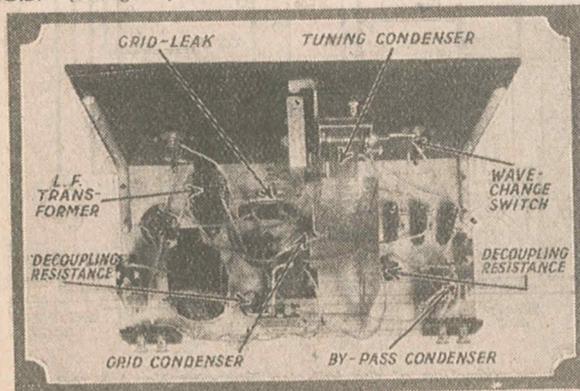
120-volt H.T. battery (Pertrix, type 295, Lissen, Columbia).

9-volt grid-bias battery (Pertrix, Lissen, Columbia).

2-volt accumulator (C.A.V. type 2AG7, Exide D.P.).

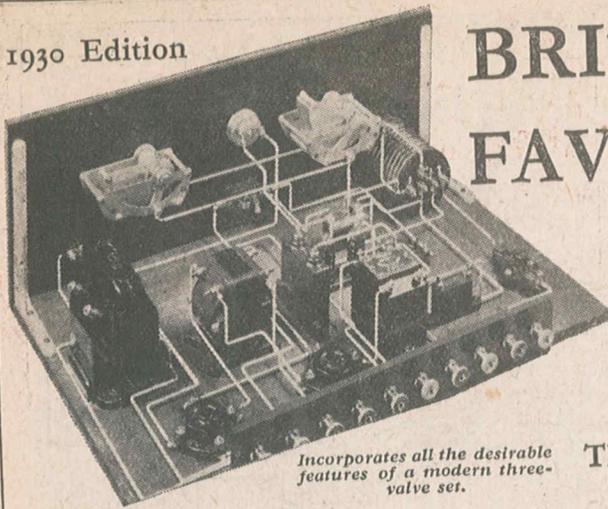
Table-model cabinet (Neophone, Ready Radio, H. & B.).

Loud-speaker (Blue Spot, Wates, Loewe).



Note the screening arrangement of the "Five-point Three," as shown in this view of the completed set.

1930 Edition



Incorporates all the desirable features of a modern three-valve set.

BRITAIN'S FAVOURITE THREE

BY THE

"A.W."

TECHNICAL STAFF

NOTES ON A FAMOUS SET

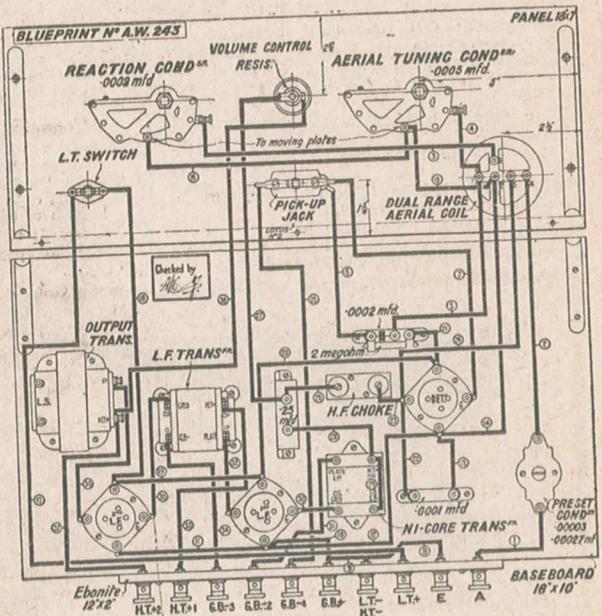
Although the 1930 edition of "Britain's Favourite Three," as described in the August 9, 1930, issue of AMATEUR WIRELESS still employs the same basic three-valve circuit as its predecessors, many detailed improvements are included.

The set now includes a dual-range coil, so that medium- and long-wave stations can be tuned in without changing coils. A special feature is the gramophone pick-up jack, arranged so that the detector valve can, if desired, be used as the first low-frequency amplifying valve of a gramophone amplifier.

The volume control is another modern feature of the set.

So that it can be worked from a mains unit, the 1930 "Britain's Favourite Three" also includes an output transformer, which isolates the anode current of the power valve from the loud-speaker.

Here is the latest version of "A.W.'s" most outstanding three-valver; it includes dual-range tuning, a grammo-radio connection, and an output transformer.



A reproduction of the full-size blueprint No. A.W. 243, price 1s., post free.

A "Three" that Includes all the Latest Ideas!

BRITAIN'S FAVOURITE THREE

COMPONENTS WANTED

Ebonite or bakelite panel, 18 in. by 7 in. (Becol).

Baseboard, 18 in. by 10 in. (Pickett, Camco).

.0005-microfarad variable condenser (Lotus, Lissen, J.B., Dubilier, Igranic, Burton, Formo, Polar, Ready-Radio).

.0001 - microfarad fixed condenser (T.C.C., Lissen, Dubilier, Graham-Farish, Atlas, Watmel).

.25-microfarad fixed condenser (T.C.C., Dubilier, Lissen, Hydra).

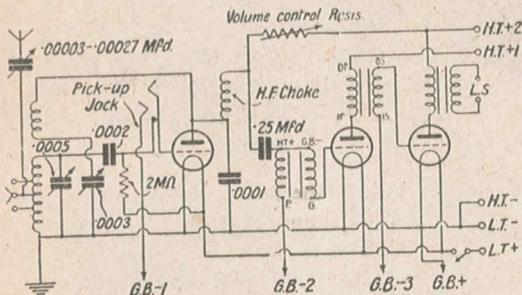
Pre-set condenser, capacity .00003 to .00027 - microfarad (Igranic, Formo, Sovereign, Lissen, Polar).

Low-frequency transformer, ratio 4 to 1 (B.T.H., Cossor, Lewcos, Telsen, Varley, Ferranti, Igranic, R.I., Lissen).

Output transformer (Lissen, Varley, Igranic).

Special-core transformer (Varley Nicore II, Lotus, Lissen, Igranic, Burton).

2-megohm grid leak (Lissen, Dubilier, Ediswan, Graham-Farish).



A detector with two low-frequency amplifying stages, the first resistance-capacity coupled and the second transformer coupled. Note the pick-up jack in the detector circuit.

.0003-microfarad variable condenser (Lotus, Lissen, Ready-Radio, Dubilier, Igranic, Burton, Formo, Polar).

Dual-range coil (Tunewell).

Push-pull filament switch (Junit, Lotus, Benjamin, Bulgin).

Variable resistance (Clarostat, "Volume" type, Atlas, Rheograd).

Pick-up jack (Lotus type No. 2, Igranic).

Panel brackets (Bulgin).

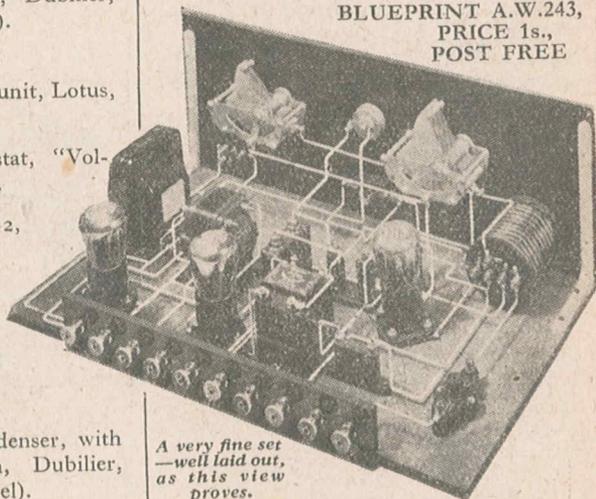
Three valve holders (Benjamin, Lotus, W.B., Formo, Burton, Wearite, Lissen, Junit, Trix).

.0002-microfarad fixed condenser, with series clips (T.C.C., Lissen, Dubilier, Graham-Farish, Atlas, Watmel).

Ten terminals marked: Aerial, Earth, L.T.+, L.T.-, G.B.+, G.B.-1, G.B.-2, G.B.-3, H.T.+1, H.T.+2 (Ealex, Clix, Belling-Lee).

Connecting wire (Glazite).

BLUEPRINT A.W.243,
PRICE 1s.,
POST FREE



*A very fine set
—well laid out,
as this view
proves.*

World-wide Reception Made Easy!

See "A.W."
dated May 3,
1930



A screening box encloses the short-wave tuning.

FOR SHORT-WAVE RECEPTION—

THE WAVELETS TWO

Interchangeable short-wave coils of the six-pin type are included in this fine short waver designed by the "A.W." Technical Staff.

COMPONENTS REQUIRED

Ebonite panel, 10 in. by 7 in. (Keystone, Becol).
.00025-microfarad variable condenser, with slow-motion attachment (Polar, J.B., Lissen, Dubilier, Igranic, Burton).

.0001-microfarad reaction condenser, with slow-motion attachment (Polar, J.B., Lotus, Burton).

400-ohm potentiometer (Lissen, Varley, Wearite, Igranic).

On-off filament switch (Bulgin, Junit, Lissen, Lotus, Benjamin, Keystone).

6-pin base (Lewcos, Tunewell, Formo, Lissen).

Short-wave high-frequency choke (Trix, Polar, Igranic).

.0001-microfarad fixed condenser, with series connection (T.C.C., Dubilier, Watmel).

3-megohm grid leak (Lissen, Dubilier, Graham-Farish, Watmel).

Low-frequency transformer (Varley, Nicore II, Lissen, Brownie, Telsen, Igranic, Lotus, Burton).

Two anti-microphonic valve holders (Benjamin, W.B., Lotus, Formo, Burton, Igranic, Wearite, Trix).

Aluminium screening box, 7 in. by 7 in. by 6½ in., with lid and foil base (Parex, Ready Radio).

Terminal strip, 2½ in. by 2 in. (Keystone, Becol).

Four terminals, marked: L.S.+, L.S.—, A, E (Belling-Lee, Clix, Eelex, Keystone).

Four plugs, marked: G.B.+, G.B.—, H.T.+, H.T.— (Belling-Lee, Clix, Eelex, Keystone)

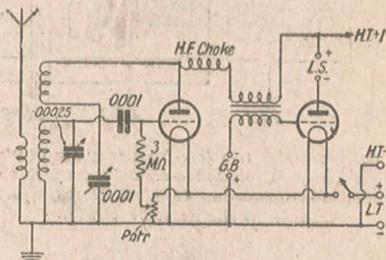
Two spade tags, marked: L.T.+, L.T.— (Belling-Lee, Clix, Eelex, Keystone).

Baseboard, 10 in. by 7 in.

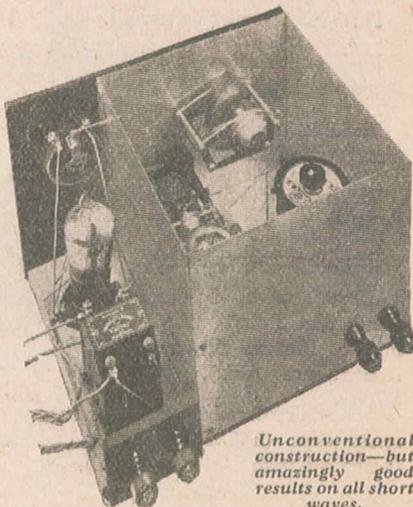
Five yards flex (Lewcoflex, Keystone).

Glazite for wiring.

Set of 6-pin short-wave coils (Lewcos, Tunewell).



The two-valve circuit of the "Wavelets" set has a potentiometer in the detector circuit, giving very smooth reaction.

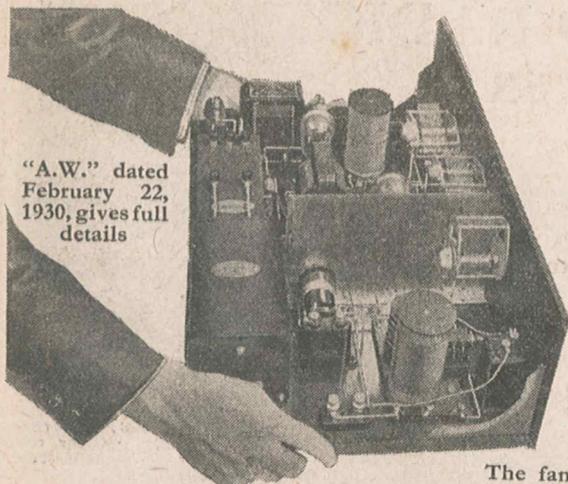


Unconventional construction—but amazingly good results on all short waves.

BLUEPRINT A.W.229,
PRICE 1s., POST FREE

A Famous "James" Set Electrified!

Everybody's All-Electric 3



"A.W." dated February 22, 1930, gives full details

In this Set W. James has overcome all the snags of mains operation. The three valves provide great volume from dozens of stations.

A.W. 221
BLUE-PRINT,
PRICE
1s., POST
FREE

COMPONENTS REQUIRED

Ebonite or bakelite panel, 21 in. by 7 in. (Trolitax, Camco, Lissen, Raymond, Trelleborg).

Two .0005-microfarad variable condensers, with slow-motion movement (Polar "Ideal," J.B., Lissen, Dubilier, Ormond, Igranic, Lotus, Burton).

.00025-microfarad reaction condenser (Polar type Q.J., Lotus, Bulgin).

Variable resistance, 100 ohms to 5 megohms (Clarostat "Standard," Volustat, Regenstat).

Pair of Brookmans coils, aerial and anode (Wearite).

Upright 5-pin A.C. valve holder (W.B., Lotus, Junit).

Flat 5-pin A.C. valve holder (W.B., Lotus, Junit; Wearite).

Four-pin valve holder (Lotus, Igranic, Formo, Brownie).

.0002-microfarad fixed condenser (upright type), with series clips (Dubilier, type 620, T.C.C., Graham-Farish, Lissen).

The famous James Dual-range coil is used



.0001-microfarad fixed condenser (upright type) (Dubilier type 620, T.C.C., Graham-Farish, Lissen).

Low-frequency transformer (Lissen, Varley, Telsen, Igranic, Ferranti, Lewcos, Marconiphone).

Two 20,000-ohm wire-wound resistances, with holders (Ready Radio, Lissen, Dubilier, Varley).

Two 1-microfarad fixed condensers (Dubilier, T.C.C., Lissen, Hydra).

2-microfarad fixed condenser (Dubilier, T.C.C., Lissen, Hydra).

2-megohm grid leak (Dubilier, Lissen, Watmel).

Output choke, 20 henries, 100 milliamperes (Varley, Ferranti, Igranic, Bulgin, Wearite).

Two terminal blocks, marked: Aerial and Earth, and L.S.+ , L.S.- (Lissen, Junit).

Special power box (Regentone No. 1).
Filter Compact (Regentone No. 1).

Screen, 9 in. by 6 in., with hole for S.G. valve (Parex, Ready Radio, Raymond).

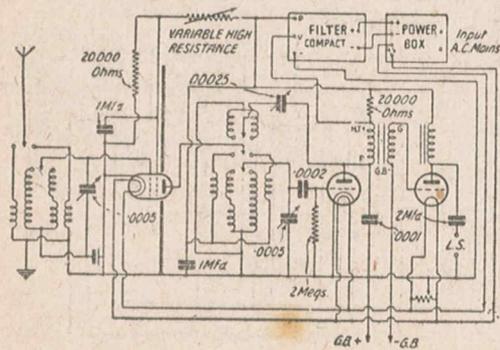
15-ohm baseboard-mounting potentiometer (Wearite).

Panel brackets (Ready Radio).
Baseboard, 21 in by 13 in. (Picketts).

2 yards thin flex (Lewcoflex).
11-volt grid cell (Siemens, type G.T.).

Two wander plugs, marked: G.B.+ , G.B.- (Belling-Lee, Ealex, Clix).

Connecting wire (Glazite).



Circuit of the set; note the filter compact and power box for A.C. mains working.

Good Volume and Fine Quality at Small Expense!

HOME-BUILDER'S

PLEATED-PAPER

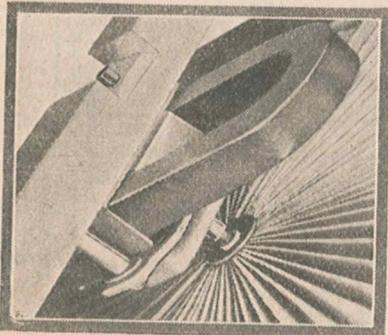
LOUD-SPEAKER

With a modern driving unit of the balanced-armature type, the pleated-paper diaphragm provides considerable volume with very good quality.

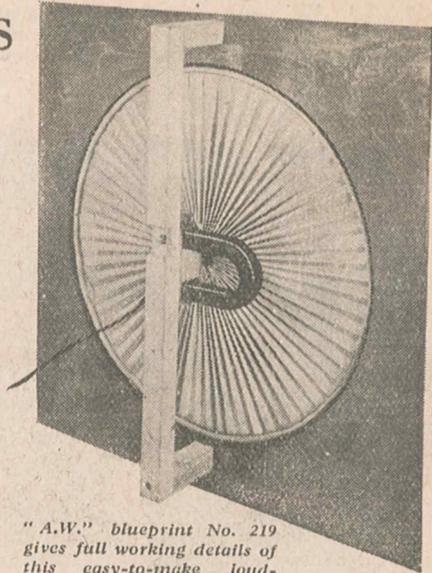
NOTES FOR THE CONSTRUCTOR

This loud-speaker has been designed to provide home-constructors with the simplest possible method of assembly. It can easily be made up in an hour, by anyone who can handle a screw-driver and a pair of pliers.

The basic principle is a circular diaphragm of pleated paper. The 6d. blueprint No. 219 gives all the necessary dimensions of the wooden baffle-board support for the diaphragm and balanced-armature driving unit,



This "close-up" shows how the driving rod is attached to the diaphragm.



"A.W." blueprint No. 219 gives full working details of this easy-to-make loud-speaker.

which is mounted on a cross-bar behind the main structure.

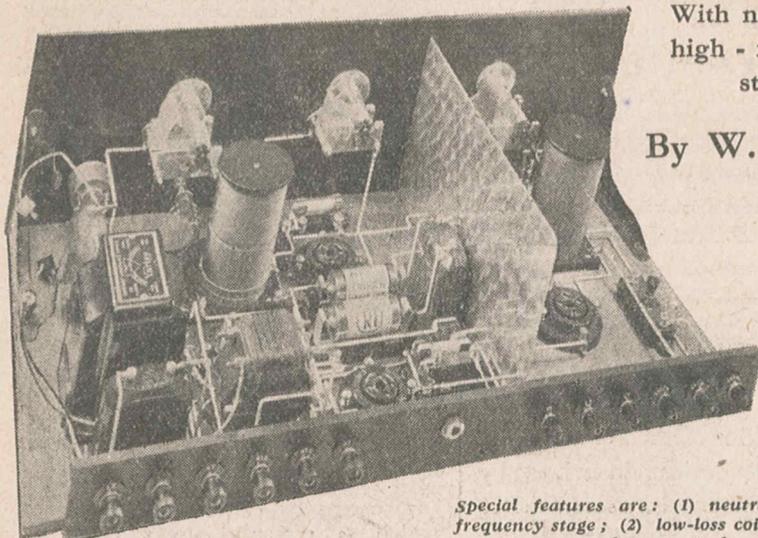
The type of paper to use for the diaphragm is Kraft; or the whole pleated diaphragm can be bought ready made.

The two ends of the pleated paper should be glued together with Le Page adhesive, obtainable from an iron-monger's.

The driving button at the centre of the diaphragm consists of a Clix socket and two ivorine washers as used for terminal marking. One washer is slipped over the Clix socket; the socket is pushed through the glue-moistened centre of the diaphragm, and the second washer and the securing nut of the Clix socket finally fitted. See "A.W.," Feb. 8th, 1930.

W. James's Latest Three-Electrode Design

THE LODESTONE FOUR



With neutralised
high - frequency
stage.

By W. JAMES

Fully described in
the May,
1930, issue
of
"Wireless
Magazine"

Special features are: (1) neutralised high-frequency stage; (2) low-loss coils; (3) good volume control.

COMPONENTS

20-henry low-frequency choke (Varley type EP12, Wearite, Igranite).

Two 1930 Binowave coils (Wearite types A and D).

.0002-microfarad fixed condenser (Trix, T.C.C., Watmel).

.005-microfarad fixed condenser (Trix, T.C.C., Watmel).

Three 2-microfarad fixed condensers (Hydra, T.C.C., Ferranti).

Two .0005-microfarad variable condensers, with slow-motion control (Utility, Polar).

.0003-microfarad variable condenser, with vernier (Utility, Polar).

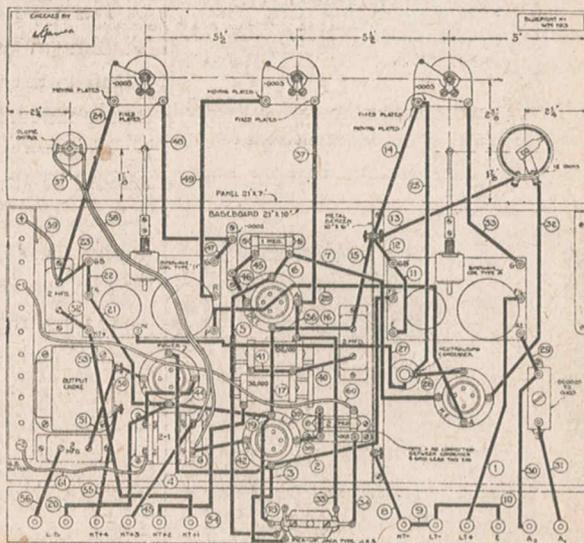
Neutralising condenser (Gambrell, Jackson, Keystone).

Pre-set condenser (Formodenser type J, Igranite, Ormond).

Ebonite panel, 21 in. by 7 in. (Trolitax, Lissen, Pilot).

Ebonite terminal strip, 21 in. by 2 in.

Four antimicrophonic valve holders (W.B., Lotus, Igranite).



Price 1s. 6d., post free, the blueprint, No. W.M.193, gives full working details of this set.

Successor to the Famous Touchstone Set!

COMPONENTS FOR W. JAMES' LODESTONE 4

Three plugs, marked : G.B.+ , G.B.-1, G.B.-2
(Belling-Lee, Clix, Eelex).

Jack (Lotus type JK/s).

Plug (Lotus type JP/1).

30,000-ohm fixed resistance, with holder (R.I., Ferranti, Varley).

100,000-ohm fixed resistance, with holder (R.I., Ferranti, Varley).

1-megohm fixed resistance, with holder (Ediswan, Lissen, Dubilier).

2-megohm fixed resistance, with holder (Ediswan, Lissen, Dubilier).

Variable resistance (Clarostat standard, Regentstat, Volustat).

12-ohm rheostat (Gecophone, Lissen, Varley).

Screen, 10 in. by 6 in. (Parex, Ready Radio, Peto-Scott).

Insulated wire for connecting (Glazite).

Panel brackets (Ready Radio).

Short length of rubber-covered flex.

Twelve terminals, marked : L.S.+ , L.S.- , H.T.- , H.T.+1, H.T.+2, H.T.+3, H.T.+4, L.T.- , L.T.+ , Earth, Aerial 1, Aerial 2 (Igranic, Belling-Lee, Burton).

Low-frequency transformer, 2 to 1 ratio (B.T.H.).

Grid-bias (Kolster-Brandes 16½-volt type BG16, Lissen, Ever Ready).

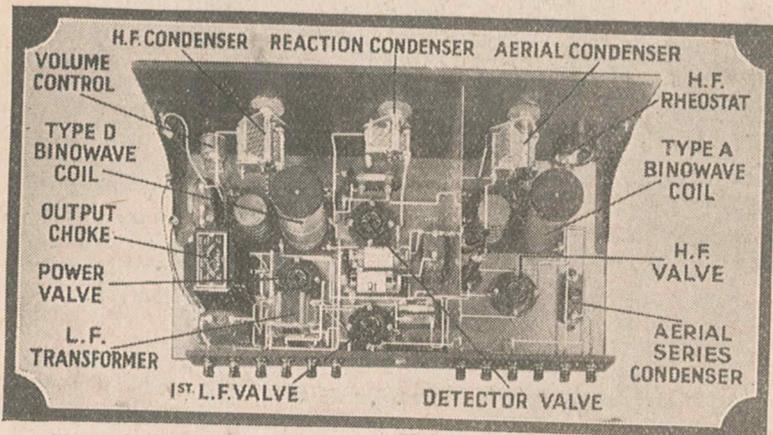
Two H.T. batteries (Kolster-Brandes 60-volt type BL60, Siemens, Ever Ready).

2-volt accumulator (Lissen type LN502, Exide, Oldham).

Valves

3—Marconi HL210, Osram HL210, Six-Sixty 210HF.

1—Marconi DEP215, Osram DEP215, Six-Sixty 220P.



Plan view of the "Lodestone Four," showing how well the parts are arranged.

IT WILL PAY YOU TO READ WIRELESS MAGAZINE

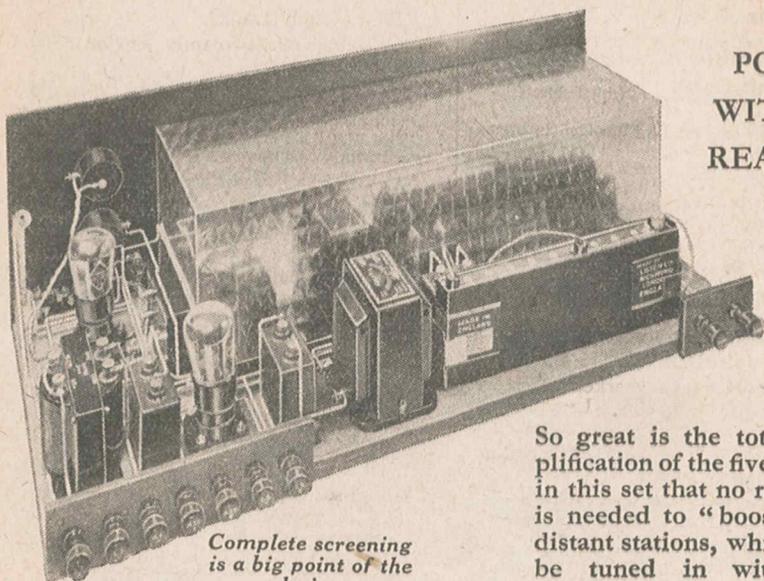
which is on sale about
the 25th of each month

Each issue contains between 50
and 60 profusely illustrated features

THE BEST SHILLINGSWORTH IN RADIO!

A "DX" Set for the Connoisseur

THE DUAL-SCREEN FIVE



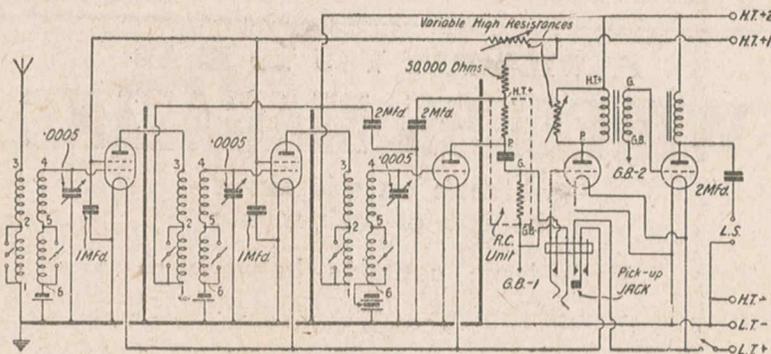
**POWER
WITHOUT
REACTION**

SEE
"WIRELESS
MAGAZINE"
DATED
MARCH, 1930

*Complete screening
is a big point of the
design.*

So great is the total amplification of the five valves in this set that no reaction is needed to "boost up" distant stations, which can be tuned in with the greatest possible ease of operation.

Designed by the "Wireless Magazine" Technical Staff, this five-valve set provides a very great range of reception without reaction. The two S.G. valves give enormous H.F. amplification. They are completely screened.



This is the circuit of the Dual-screen Five-valver, a powerful reactionless receiver. Two screen-grid H.F. valves precede an anode-band detector. There are two L.F. stages. A choke-capacity output is provided.

Great Range of Power without Reaction!

COMPONENTS FOR THE DUAL-SCREEN FIVE

Low-frequency choke (Varley type DP12, Climax, Formo).

Three high-frequency transformer coils (Colvern type T2R)

Two 1-microfarad fixed condensers (T.C.C., Dubilier, Lissen).

Three 2-microfarad fixed condensers (T.C.C., Dubilier, Lissen).

Three .0005-microfarad variable condensers, with pointer dials (Ormond type R/375, Jackson, Polar).

Ebonite panel, 24 in. by 8 in. (Lissen, Ready Radio, Becol).

Two ebonite terminal strips, 7½ in. by 2 in. and 3 in. by 2 in.

Five valve holders (Benjamin Vibrolders, Lotus, Burton).

Three wander plugs, marked: Grid+, Grid-1, Grid-2 (Belling-Lee, Eelex, Clix).

Resistance-capacity coupling (Edison Bell type R/380, Dubilier, Varley).

50,000-ohm fixed resistance, with holder (Graham-Farish, Ready Radio, Ediswan).

Two variable resistances (Harlie Volustats, Clarostats, Regenstats).

Copper screening box (Parex, Ready Radio, Keystone).

Insulated wire for connecting (Glazite).

Length of rubber-covered flex.

Pair Panel brackets (Keystone).

Three switches, jack type (Lotus No. JS8).

Jack switch (Lotus No. JK5).

Plug Switch (Lotus).

On-off switch (Benjamin, Burton, Gripso).

Nine insulated terminals, marked: Aerial, Earth, L.S.+ , L.S.- , H.T.+1 , H.T.+2 , H.T.- , L.T.+ , L.T.- (Belling-Lee, Clix, Burton).

Low-frequency transformer, shrouded type (Ediswan, Sifam, Formo).

Three H.T. batteries (Ever Ready 54-volt type W33, Siemens, Obeta).

Grid bias battery (Ever Ready 16-volt type GB2, Siemens, Obeta).

Two 1½-volt cells (Siemens type GT, Ever Ready).

4½-volt cell (Siemens type Gr, Ever Ready).

2-volt accumulator 60-ampere hour (Lissen, Young, C.A.V.).

Cabinet, upright type (Ready Radio).

Loud-speaker (Ultra double-diaphragm type U14, Brown, Blue Spot).

Valves.

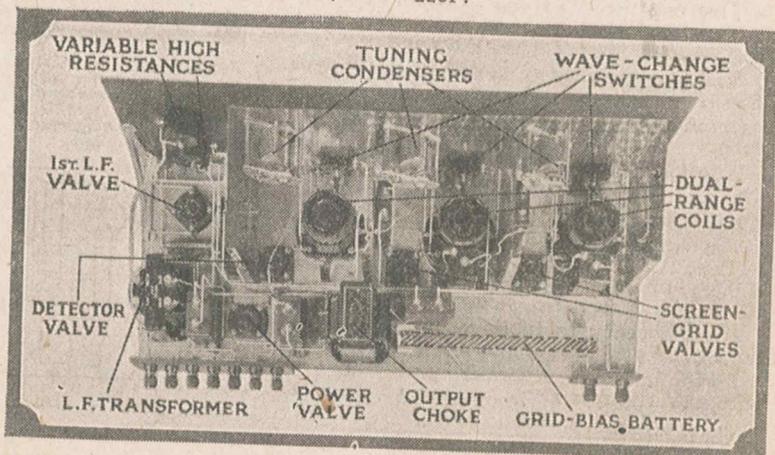
2—Marconi S215, Mazda 215SG, Cossor 220SG.

1—Marconi HL210, Mazda HL210, Cossor 210HF.

1—Marconi L210, Mazda L210, Cossor 210LF.

1—Marconi P240, Mazda P220, Cossor 220P.

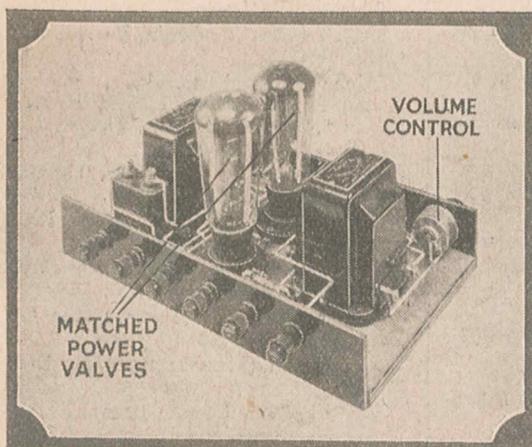
W.M.
185
BLUE-
PRINT
PRICE
1/6
POST
FREE



Showing the disposition of the components used in the Dual-Screen Five

This Amplifier can be added to any Set!

PUSH-PULL AMPLIFIER



SPECIALLY
DESIGNED BY
THE "W.M."
STAFF

No matter whether your high-tension supply gives 120 or 400 volts, you will get excellent results from this amplifier.

This simple amplifier will give your set extra "punch."

COMPONENTS REQUIRED

2-microfarad fixed condenser (Dubilier, Hydra, Mullard).

Two ebonite terminal strips, 2 in. by 12 in.

Two grid-leak holders (Ediswan, Bulgin, Dubilier).

Two valve holders (Lotus, Formo, Igranic).

Two .25 megohm fixed resistances, grid-leak type (Dubilier, Lissen, Ediswan).

Variable resistance (Clarostat standard type, Regenstat, Volustat).

On-off switch (Lotus type BS/20, Junit, Trix).

Wire for connecting (Glazite).

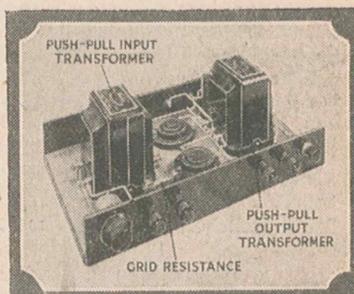
Length of rubber-covered flex.

Baseboard, 12 in. by 7 in. (Pickett).

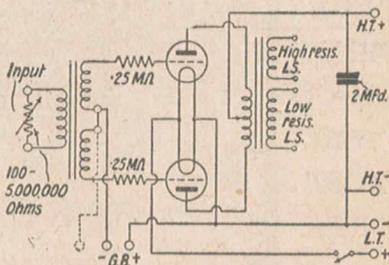
Ten terminals, marked: L.T.+, L.T.-, H.T.+, H.T.-, Grid+, Grid-, L.S.+, L.S.-, Input+, Input- (Belling-Lee, Burton, Igranic).

Low-frequency transformer, push-pull input (Varley type DP6).

Low-frequency transformer, push-pull output (Varley type DP7).



Easily hidden away, there is no need for unsightly wires with this amplifier. Full details of this amplifier were given in the August, 1930, issue of "Wireless Magazine."



Circuit shows the volume control; note the high- and low-resistance outputs.

BLUEPRINT W.M.204, Price 1s.,
POST FREE

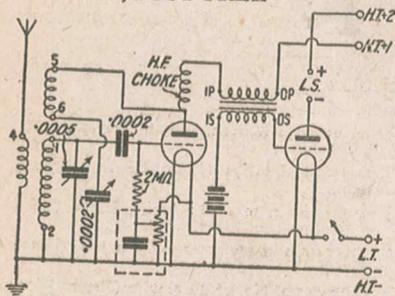
Make This Set for the Family!

THE PROGRAMME TWO

FOR LOW BUILDING
COST AND ECONOMY
OF UPKEEP

Here is a modern design for a two-valve set, giving excellent results under present-day reception conditions.

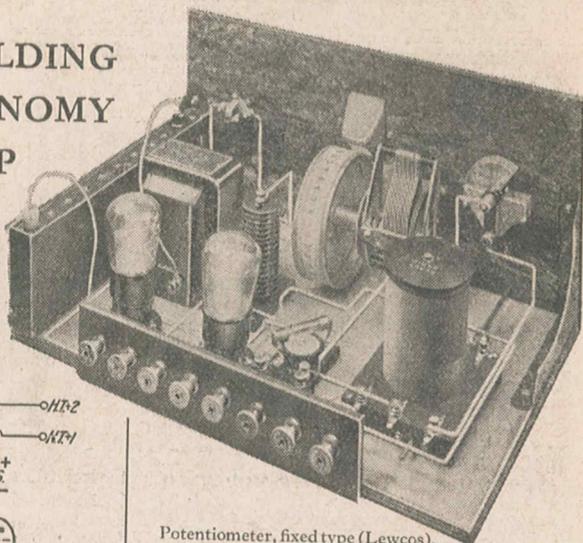
BLUEPRINT W.M.177,
PRICE 1s., POST FREE



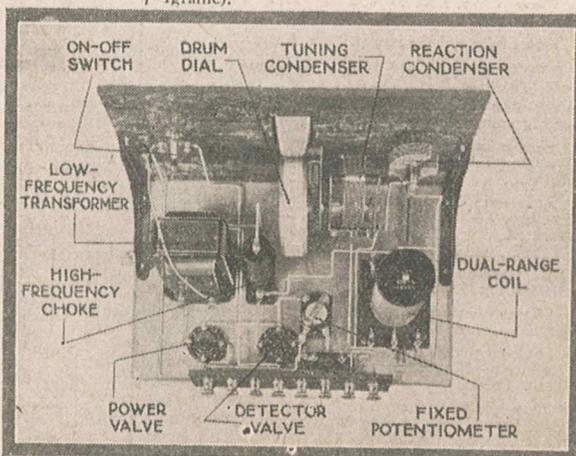
Circuit of "Programme Two."

COMPONENTS REQUIRED

- High-frequency choke (Lewcos, Igranic, Climax).
- Coil (Ready Radio QAT, Lewcos, Wearite).
- .0002-microfarad fixed condenser (Dubilier, Igranic, Ediswan).
- .0005-microfarad variable condenser (Jackson, Igranic, Lotus).
- .0001-microfarad variable condenser (Formo, Keystone, Bulgin).
- Slow-motion drum dial (Keystone, Lotus, Jackson).
- Ebonite panel, 14 in. by 7 in. (Raymond, Becol, Lissen).
- Ebonite terminal strip, 8½ in. by 2 in.
- Two anti-microphonic valve holders (Lotus, Igranic, Formo).
- Two wander plugs, one red and one black (Belling-Lee, Clix, Eelex).



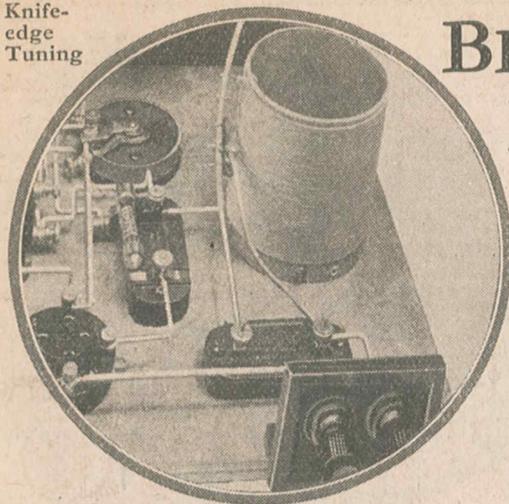
- Potentiometer, fixed type (Lewcos).
- 2-megohm fixed resistance (Watmel, Lissen, Ediswan).
- Insulated wire for connecting up (Glazite).
- Panel brackets (Ready Radio).
- On-off switch (Gripso, Benjamin, Lotus).
- Eight terminals, marked: Aerial, Earth, L.T.+ , L.T.-, H.T.+1, H.T.+2, L.S.+ , L.S.- (Eelex, Belling-Lee, Burton).
- Low-frequency transformer (Varley heavy duty, Igranic).



Simple construction is proved by a glance at this plan view of the Programme Two.

Just the Set for Listeners Near Regional Centres !

Knife-
edge
Tuning



The heart of the receiver—
the by-pass coil.

BROOKMAN'S BY-PASS 3

INCORPORATING ITS OWN
WAVE-TRAP



A pleasing panel layout

COMPONENTS REQUIRED

Ebonite panel, 16 in. by 8 in. (Raymond, Lissen, Trolitax, Trelleborg, Becol).

Baseboard, 16 in. by 9 in. (Pickett, Raymond).

Two .0005-microfarad variable condensers, with dials (Polar, Burton, Lotus, Lissen, Dubilier, Igranic, Formo).

.00025-microfarad reaction condenser (Polar, Burton, Lotus, Lissen, Dubilier, Igranic, Formo).

Three valve holders (Lotus, Trix, Benjamin, Formo, Igranic, Brownie, Wearite).

Two single coil holders (Lissen, Lotus).

2-megohm grid leak (Dubilier, Graham-Farish, Lissen, Watmel).

400-ohm baseboard-mounting potentiometer (Lissen, Igranic, Varley, Wearite, Sovereign).

.0002-microfarad fixed condenser, with series clip (Dubilier, T.C.C., Graham-Farish, Lissen, Ormond, Watmel).

.0001-microfarad fixed condenser (flat) (Dubilier type 610, T.C.C., Graham-Farish, Lissen, Ormond, Watmel).

.0002-microfarad fixed condenser (upright) (Dubilier type 620, T.C.C., Graham-Farish, Lissen, Ormond, Watmel).

Filament switch (Benjamin, Bulgin, Junit, Lotus, Igranic, Claude Lyons).

High-frequency choke (Bulgin, Lissen, Lewcos, Tunewell, Sovereign, Wearite, Varley, Ready Radio, Polar).

Two low-frequency transformers (Cossor, Lewcos, Lissen, Varley, Lotus, Marconiphone, Brownie, Telsen, Igranic, Ferranti).

50,000-ohm wire-wound resistance, with holder (Lissen, Bulgin, Ready Radio, Ferranti, Graham-Farish, Dubilier).

2-microfarad fixed condenser (Lissen, T.C.C., Dubilier, Helsby, Hydra).

Panel brackets (Lissen, Bulgin, Keystone, Raymond, Camco).

Two terminal strips (Junit, Lissen, Keystone, Raymond).

Four terminals, marked: Aerial, Earth, L.S.+ , L.S.— (Belling-Lee, Eelex, Clix).

Coil former, 2 in. diameter and 3 in. long (Pirtoid, or Paxolin).

Two ounces of No. 26 d.s.c. wire (Lewcos).

Complete by-pass coil (Ready Radio, Wright and Weaire, Keystone, H. & B., Harlie, Pares).

Connecting wire (Glazite).

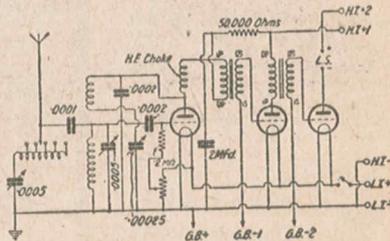
Eight yards of thin flex (Lewcoflex).

Six wander plugs, marked: H.T.—, H.T.+1, H.T.+2, G.B.—1, G.B.—2 (Belling-Lee, Eelex, Clix).

Two spade terminals, marked: L.T.+ , L.T.— (Belling-Lee, Eelex, Clix).

Crocodile clip (Bulgin).

Three dial indicators (Bulgin).



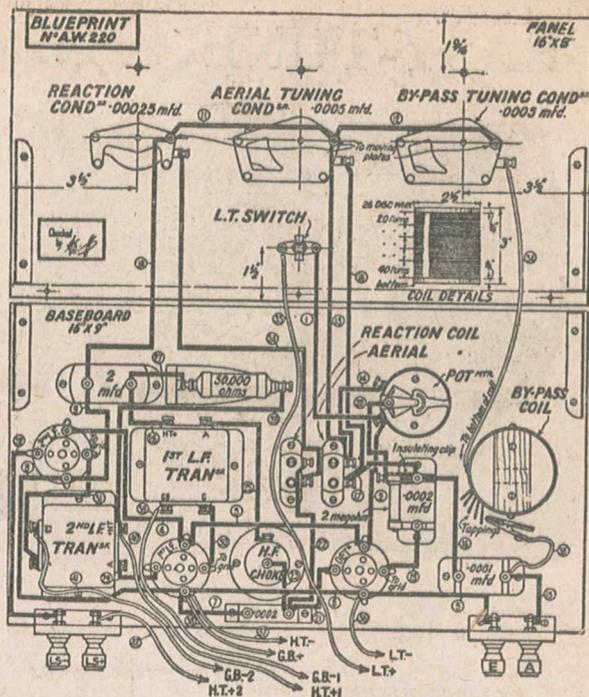
*A detector and two transformer-coupled
low-frequency valves are in the circuit.*

Cuts Out the Local Station With Ease!

BROOKMAN'S BYPASS 3

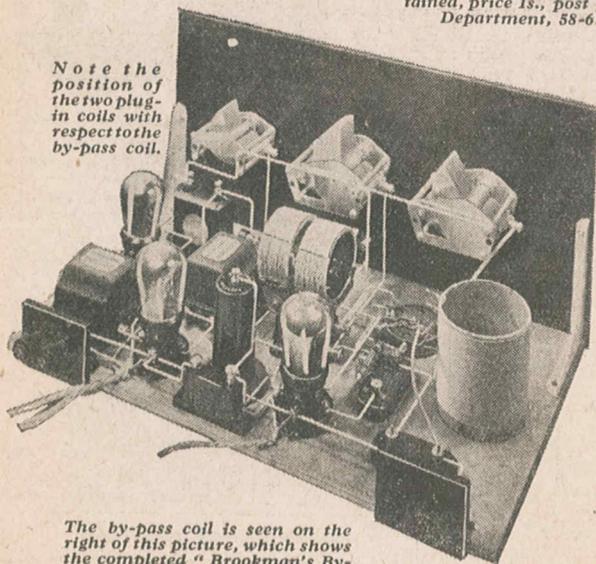
Here is a straightforward three-valve set, having special selective properties, due to the inclusion of a well-designed wave-trap. This system is highly useful for listeners worried by interference from a near-by transmitting station, such as Brookman's Park or Daventry.

As there are two transformer-coupled low-frequency stages, the overall magnification is so great that many distant stations can be tuned in at great strength—while the trap coil effectively by-passes the unwanted home station or stations.



A full-size blueprint, No. A.W.220, can be obtained, price 1s., post free, from the Blueprint Department, 58-61, Fetter Lahe, E.C.4.

Note the position of the two plug-in coils with respect to the by-pass coil.



The by-pass coil is seen on the right of this picture, which shows the completed "Brookman's Bypass Three."

Simple plug-in coils are used for the normal tuning of this set.

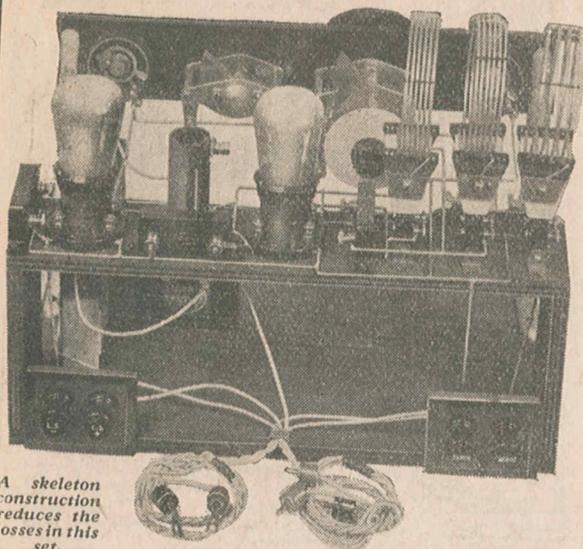
An anti-motor-boating device is included to prevent instability.

The detector is very sensitive, due to the inclusion of a potentiometer.

Construction is very simple with the full-size blueprint.

Another Set for World-wide Reception!

EASY-TUNE SHORT-WAVE TWO



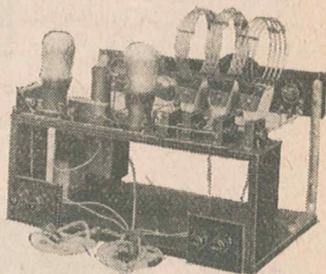
A skeleton construction reduces the losses in this set.

This easy-to-tune two-valver has been designed with the object in view of inducing broadcast listeners to discover for themselves the pleasure of short-wave reception. A special tuning arrangement is incorporated and the circuit is so designed that the control does not need very delicate adjustment.

COMPONENTS REQUIRED

- Ebonite strip, 12 in. by 2 in. (Becol).
- Panel brackets (Bulgin, Ready Radio).
- Special short-wave tuning condenser (Polar).
- .001-microfarad reaction condenser with slow-motion movement (Polar, Jackson, Lissen, Lotus, Bulgin, Burton, Formo).
- 400-ohm panel-mounting potentiometer (Wearite, Igranice, Lissen, Varley).
- 7-ohm rheostat (Wearite, Lissen, Igranice, Varley).
- Three single coil holders (Lotus, Lissen, Igranice).
- Two valve holders (W.B., Lotus, Benjamin, Formo, Burton, Lissen, Igranice, Trix).
- Three fixed condensers, two .0001-microfarad and one .005-microfarad (Lissen, Dubilier, T.C.C., Graham-Farish, Watmel, Atlas).

A low-loss layout is adopted. Note the careful spacing of the short-wave coils.



- 3-megohm grid leak (Lissen, Watmel, Graham-Farish, Dubilier, Ediswan).
- Grid-leak holder (Lissen, Bulgin, Ediswan, Dubilier).

Short-wave high-frequency choke (Igranice, Lissen, Dubilier, Bulgin, Wearite, Polar).

Low-frequency transformer (Voltron, Telsen, Lissen, Igranice, Burton, Varley, Lotus, R.I., Ferranti).

Two terminal blocks (Junit, Lissen).

Four terminals, marked: Aerial, Earth, L.S.+ (Belling-Lee, Clix, Eelex, Igranice).

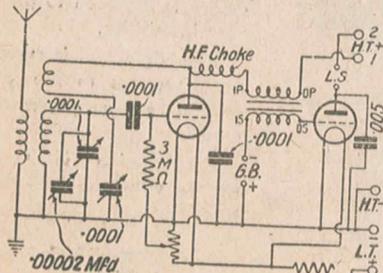
Five wander plugs, marked: G.B.+ (Belling-Lee, Clix, Eelex, Igranice).

Two spade terminals, marked: L.T.+ (Belling-Lee, Clix, Eelex, Igranice).

Four yards of thin flex (Lewcoflex).

Grid-bias battery clips (Bulgin).

Connecting wire (Glazite).

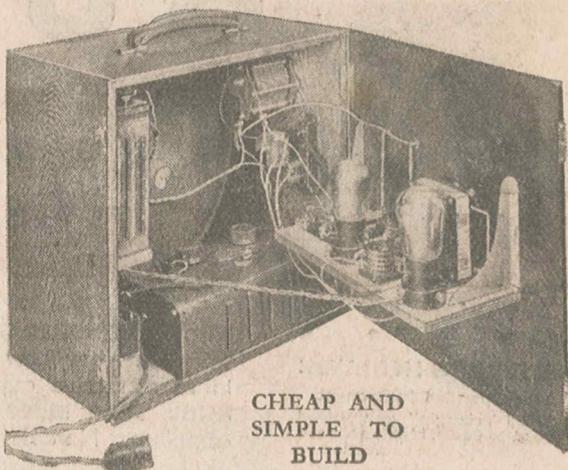


A detector and one stage of low-frequency amplification comprise the circuit.

BLUEPRINT A.W.242,
PRICE 1/-. POST FREE

THE PEDLAR PORTABLE

Full details were given in the May, 1930, issue of "Wireless Magazine." A useful full-size blue-print, W.M.195, price 1s., post free, can be had on application.



COMPONENTS REQUIRED

High-frequency choke (Polar, Ready Radio, Bulgin).

Two .0001-microfarad fixed condensers, vacuum type with holders (Ediswan).

.0003-microfarad fixed condenser, vacuum type with holder (Ediswan).

1-microfarad fixed condenser (T.C.C., Lissen, Hydra).

.0005-microfarad variable condenser (Burton, Ready Radio, Lissen).

.0001-microfarad reaction variable condenser (Bulgin, Keystone, Lissen).

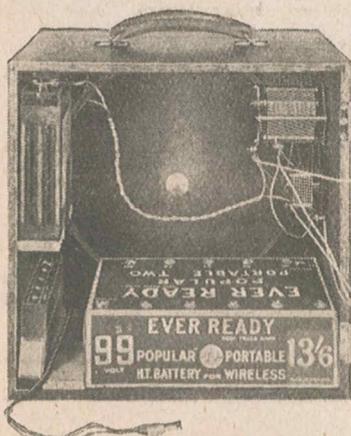
Slow-motion dial (Brownie, Lotus, Ormond).

Two antimicrophonic valve holders (Burton, Igranic, Edison Bell).

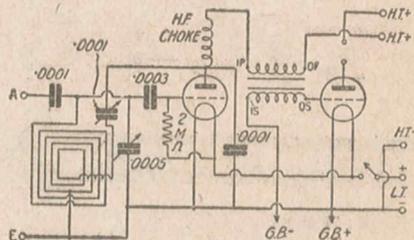
Seven wander plugs, marked: Aerial, Earth, H.T.+1, H.T.+2, H.T.-, G.B.+ , G.B.- (Clix, Belling-Lee, Igranic).

CHEAP AND SIMPLE TO BUILD

- Two spade terminals, red and black (Clix).
- Two sockets (Clix).
- 20,000-ohm fixed resistance, with holder (Ediswan).
- 2-megohm fixed resistance, with holder (Ediswan).
- Insulated wire for connecting (Glazite).
- Length of rubber-covered flex (Lewcos).
- Piece of cone paper (Six-Sixty).
- Turntable (Benjamin).
- Portable aerial and earth kit (Ready Radio).
- On-off switch (Benjamin, Keystone, Lissen).
- Low-frequency transformers (British General Midget).
- Low-frequency transformer (Telsen Radiogrand, Philips, Igranic).
- 9-volt grid-bias battery (Ever Ready Win. 9, Lissen, Obeta).
- H.T. battery (Ever Ready 99-volt type Port. 2).
- 2-volt accumulator (Jelectro type TJ40).
- Cabinet, with rubber feet, metal clip for accumulator, and wound frame aerial (Ready Radio).
- Loud-speaker Unit (Blue Spot type 66K, W.B., Ediswan).



Convenient arrangement of the batteries and loud-speaker.



The circuit of the "Pedlar Portable" has a detector and a transformer-coupled low-frequency amplifying stage.



BUILD

your new 1931 set with
a specially prepared

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KIT "C"	" £13 - 16 - 10	" " " 25/4

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