

Set of Super-het. coils suitable for incorporating in a receiver making use of a separate oscillator valve; as specified for the following receivers:—

- "Super 60" "Wireless Magazine," March, 1931 and following two issues.
 A.C. "Super 60" June, 1931 and following issue.
 "Century Super" "Amateur Wireless," April 18th and 25th, 1931, and following two issues.
 A.C. "Century Super" June 13th, 1931, and following issues.

Price per set of four units, 50/-.

Specifications:—Oscillator unit, type O. 2.—3½ in. long by 2⅝ in. diameter. Weight 7 ozs.
 Bandfilters.—See other side of page.

Waverranges of O. 2 unit, using .00055 mfd. (500 cm.) tuning condenser:—

Ultra-short waveband,	19—60 metres, approx.	(15,760—5,000 kc.).
Medium	190—610	(1,576—490 kc.).
Long	850—2,100	(352—143 kc.).

(4) The Bandfilters for the portable set are not fitted with flex leads, as they are normally situated at right-angles to the S.G. valves. A "P" pin is provided on the bases of the units for the anode connections.

(5) Those Bandfilters which include the flex leads also have the "P" pins on the bases, and it should be noted that where connection is made to one, the other may be ignored, as the lead is common internally.

(6) Three complete sets of coils are available, as illustrated on this folder, while single Bandfilters can be supplied on request at a charge of 10/6 each. O. 2 Oscillator, 18/6 each.

(7) The coils are suitable for use with any normal type of Super-het., and may be employed with A.C. and D.C. indirectly-heated valves in a very satisfactory manner. Modifications of Super-hets. designed for battery valves to A.C. and vice-versa, are definitely not advised.

(8) Type O. 2 and certain O. 1 Oscillator units now supplied are without flex leads, but include special moulded insets, coloured similarly to the leads replaced. Sterling silver connecting lugs project through the insets and allow constructors to attach flex or stiff leads of lengths suited to the particular back of panel layouts adopted.

(9) The waverrange covered by the O. 2 Oscillator unit on the ultra-short waveband considerably exceeds 60 metres, using a nominal .0005 mfd. tuning capacity, but owing to the high capacity to inductance ratio, oscillation ceases before the condenser is half-interleaved. A modification can be made by including a .0003 or .0005 mfd. fixed condenser in series with the fixed vanes of the variable condenser, thus reducing the effective capacity to .00025 mfd., or less. The fixed condenser must be short-circuited on the medium and long wavebands.

(10) Using an exact .0005 mfd. (450 cm.) tuning capacity with the types O. 1 and O. 2 Oscillator units, it is possible to receive up to approximately 590 metres (509 kc.) on the medium waveband, and 1,950 (154 kc.) metres on the high waveband. With a .00055 mfd. capacity (500 cm.), the waverranges are increased up to 610 (490 kc.) and 2,100 (143 kc.) metres respectively.

The minimum wavelengths on each waveband will, naturally, depend on the self-capacity of the wiring and tuning condensers. With efficient condensers the minimums will be low, as the residual capacity and dielectric losses are confined to small limits.

WRIGHT & WEAIRE, LTD.,
 740, HIGH ROAD, TOTTENHAM, N.17.

Telephone: TOTTENHAM 3847-3848.
 (Int.-int.) "Wrightweir," TOTTENHAM.
 Telegrams (Foreign) "Wrightweir," LONDON.

WEARITE
 COMPONENTS

FOLDER—5631 S/H.

BETTER SETS
 ARE BUILT BY
 COMPONENTS
 BEARING THIS
 MARK—

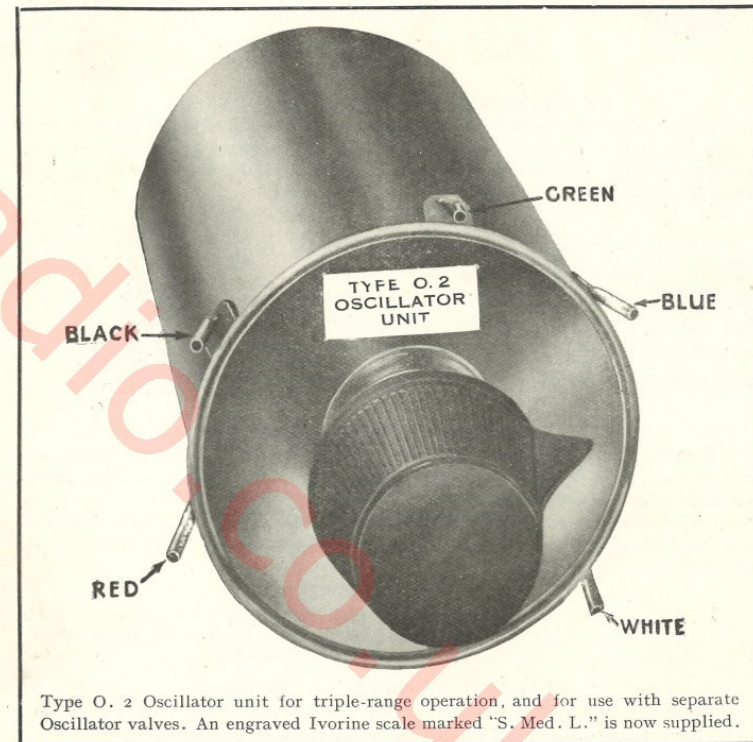
WEARITE
 COMPONENTS

SUPER-HETERODYNE COILS.

These coils are covered by various patents and patent applications in most countries of the world.

BRITISH PATENT NO. 349403.

The revival and ever-growing popularity of the Super-Heterodyne receiver has led us to introduce Intermediate Frequency Transformers operating on the band-pass filter principle, which are the result of five years' research and study, being made under the most exacting conditions, and practically revolutionising the design of these receivers.



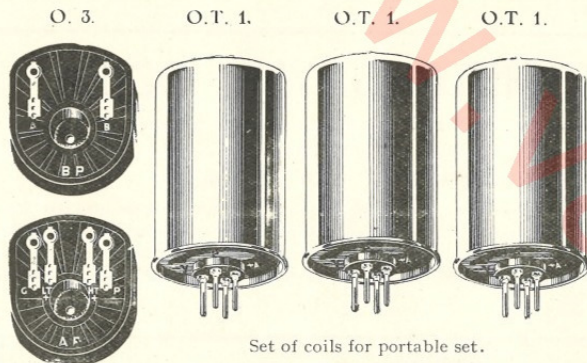
Type O. 2 Oscillator unit for triple-range operation, and for use with separate Oscillator valves. An engraved Ivorine scale marked "S. Med. L." is now supplied.

We are the sole concessionaires for the production and sale of Super-het. Coils under the above British Patent, and these carry the usual "Wearite" guarantee.

A NEW MANUFACTURING SYSTEM.

Here are a few of the main points in the design of the units:—

The coils are wound with a special wire, which is insulated in such a manner that the insulation and capacity losses are confined to very small limits. By a certain heating process during winding, the layers of the coil are amalgamated mechanically and the electrical insulation increased in efficiency. The treated wire, on cooling, forms a solid unit which cannot change its characteristics under varying atmospherical conditions.



Price 50/-.

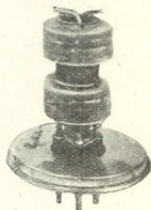
Specifications:—
O.T. 1 units.— $3\frac{1}{2}$ in. long, plus an extra $\frac{1}{8}$ in. for the split pins by $2\frac{1}{16}$ in. over-all diameter. Weight, 5 ozs. Frequency, 126 kc. (2,380 metres approx.).

Oscillator units O3. $2\frac{1}{2}$ in. by $2\frac{1}{4}$ in. by 9-16 in. thick over tags. Wave-ranges approx.:—
190—580 metres (1,576—520 kc.);
900—1,880 metres (333—159 kc.).

NO EXTERNAL BALANCING CONDENSERS.

Instead of using external balancing capacities in the form of small, fixed or pre-set condensers, the "Wearite" Bandfilters include the necessary tuning devices which are constructed from the special wire mentioned above, and included in the bodies of the coils on the "Bi-filar" system.

There is no need to open your Bandfilters! Here is a photograph showing the construction of an O.T. 1 unit. The O.T. 2 is similar, but with the addition of a flex lead, which is common to the "P" pin. The copper cover and base are "earthed" via the "—V" lead.



IMMUNITY FROM ATMOSPHERICAL CHANGES.

Each complete "Wearite" Super-het. coil represents a solid unit impregnated and encased in a special compound, which offers a complete protection against mechanical damage and changes in temperature, and humidity.

Owing also to the method of construction, the coil units retain their fixed frequency characteristics, and are unaffected by changes of temperature up to 185° F.: the units are, therefore, ideal for use in the tropics.

LOW LOSSES.

It has been scientifically established that Super-het. coils wound with silk or cotton insulation have high losses. Data collected in the research laboratories on "Wearite" Super-het. coils show that losses are extremely low.

EXTREME ACCURACY OF TUNING.

The tuning of the "Wearite" Super-het. coils is effected by adjusting the number of turns after construction, and also by the condensers incorporated.

Accuracy of wave-range is determined by special production methods, and checked by means of wavemeter and bridge tests. Where "mis-matching" is often tolerated up to 10 per cent. on some Super-Heterodyne coil productions, only a fraction

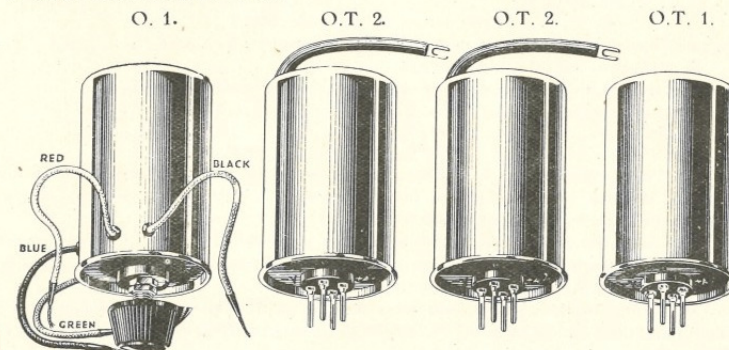
of 1 per cent. is allowed on the "Wearite" units. In other words, the method employed in constructing these coils allows for laboratory accuracy which has hitherto been unobtainable.

Apart from wave-range tests during course of manufacture, the Bandfilters are tested on weak foreign transmissions immediately before despatch. The interesting experiment has been made of taking single Bandfilters from batches made at monthly intervals, and testing them collectively in Super-hets.; the results have more than justified the claims made for them.

The frequency of the Bandfilters is 126 kilo-cycles (2,380 metres approx.), and all sets of units include Oscillators, or in the case of the coils for portable receivers, two Oscillator units. (See illustrations on opposite page.)

A four-lead Oscillator coil is supplied with the second set of Bandfilters illustrated below, and is intended primarily for use with a special Double-Grid valve (not S.G.). The Oscillator unit, as supplied with this kit, is of the dual-range type, and covers the usual medium and long wave-bands.

In the third set of Bandfilters illustrated on the next page, a five-lead Oscillator is shown, since this is for use with a separate Oscillator valve and for triple-range operation (ultra-short, medium and long wave-bands). Flex leads are provided on two of the Bandfilters in each of the second and third kits, so as to facilitate connections to the anodes of the S.G. Valves.



Set of coils for double-grid (combined Oscillator—1st Detector valve) Super-hets.; also for Super-hets. with other combinations not making use of a "pick-up" winding on the Oscillator coil. Price per set of four units, 50/-.

Note.—The O. 1 Oscillator unit may, in certain cases, be supplied with flex leads, as illustrated above, or with sterling silver contacts, as shown on the frontispiece. The leads, or moulded insets, are similarly coloured, the system of connection remaining the same.

Specifications:—

Oscillator unit, type O. 1.— $3\frac{1}{2}$ in. long by $2\frac{1}{16}$ in. diameter. Weight, 7 ozs.

Waveranges of O.1 unit employing a .00055 mfd. (such as "Polar") tuning condenser (500 cm.):—Medium waveband, 190—580 metres (1,576—520 kc.), approx. Long waveband, 900—1,880 metres (333—159 kc.) approx.

Bandfilters, type O.T. 2.— $3\frac{1}{2}$ in. long, plus $\frac{1}{8}$ in. extra for split pins by $2\frac{1}{16}$ in. overall diameter. Weight, 6 ozs.

Bandfilter, type O.T. 1.— $3\frac{1}{2}$ in. long, plus $\frac{1}{8}$ in. extra for split pins, by $2\frac{1}{16}$ in. overall diameter. Weight, 5 ozs.

Further points of interest are as follows:—

(1) The Bandfilters are fitted with 4-pin bases for use with standard solid valveholders. The normal plate pin is marked "G" and the grid pin "P," so that those valveholders accommodating the Bandfilters may be wired from point to point without entailing crossed leads with the valveholders containing the valves themselves.

(2) The Oscillator units are single-bush fixing, and include their own switching devices.

(3) Since all coils are enclosed in round copper screening boxes, no further external screening should prove necessary.