THE EDDYSTONE '770U' COMMUNICATIONS RECEIVER

150 Mc/s to 500 Mc/s

FREQUENCY COVERAGE.

The individual ranges are as follows (excluding overlaps) :

Range 1	—	400 Mc/s to 500 Mc/s
Range 2	—	330 Mc/s to 400 Mc/s
Range 3	—	270 Mc/s to 330 Mc/s
Range 4	—	220 Mc/s to 270 Mc/s
Range 5	—	180 Mc/s to 220 Mc/s
Range 6	—	150 Mc/s to 180 Mc/s

VALVE SEQUENCE

The valves used are as follows :

V1 — 6AJ4	(—)	G.G. R.F. Amplifier
Germanium Diode		Mixer
V2 — 6AF4	(—)	Oscillator
V3 — 12AT7	(CV. 455)	Cascode Amplifier at 50 Mc/s
V4 — 6AK5	(CV. 850)	Pentode Amplifier at 50 Mc/s
V5 — 12AT7	(CV. 455)	Frequency Changer
V6 — 6BA6	(CV. 454)	I.F. Amplifiers at 5·2 Mc/s
& V7		
V8 — 6AU6	(CV.2524)	Cathode follower at 5·2 Mc/s
V9 — 6AU6	(CV.2524)	F.M. Limiter
V10 — 6AL5	(CV. 140)	F.M. Discriminator
V11 — 6AU6	(CV.2524)	'S' Meter Control valve
Germanium Diode		A.M. Demodulator
V12 — 12AU7	(CV. 491)	A.F. Amplifier
V13 — 6AM5	(CV. 136)	Audio Output
V14 — 6AL5	(CV. 140)	Noise Limiter and A.G.C.
V15 VR.150/30	(CV. 216)	Voltage Stabiliser
V16 — 5Z4G	(CV.1863)	Power Rectifier

TUNING MECHANISM AND SCALES

The tuning mechanism is gear driven and has a reduction ratio of approximately 140 to 1. The scale is calibrated directly in frequency to an accuracy within 0·2 per cent on all ranges. The vernier bandspread device opens out the length of each scale to the equivalent of thirty four feet.

INTERMEDIATE FREQUENCY.

The first I.F. is 50 Mc/s and the second 5·2 Mc/s. On ranges 3, 4, 5 and 6 the oscillator operates on a frequency 50 Mc/s higher than the signal, but is 50 Mc/s lower in frequency on ranges 1 and 2.

INPUT IMPEDANCE.

The nominal input impedance is 75 ohms unbalanced, the coaxial socket being located directly on the turret assembly.

OUTPUT IMPEDANCE

The output stage delivers 0·5 watts to the 2·5 ohm speaker terminals and to the balanced 600 ohm line terminals. A jack on the side of the front panel takes high resistance telephones. Audio input terminals are fitted to enable the audio amplifier stages to be used separately. Response is level within 6 db from 100 cycles to 10,000 cycles.

POWER SUPPLY.

The mains transformer, output transformer and smoothing choke are of the high efficiency 'C' core type. The primary of the mains transformer has provision for series/parallel connection and accepts mains voltages of 100/125 or 200/250, 40/60 cycles.
Consumption is approximately 90 volt-amperes.

ELECTRICAL CHARACTERISTICS.

Sensitivity : better than 10 microvolts on all ranges, for a 15 db signal-to-noise ratio and 50 milliwatts output.

Selectivity : 3 db down 15 kc/s off resonance
6 db ,, 20 ,, ,, ,,
20 db ,, 50 ,, ,, ,,
40 db ,, 100 ,, ,, ,,

Image ratio : 25 db at 400 Mc/s
40 db at 200 Mc/s

A.G.C. : The audio level does not change by more than 12 db when the input is varied 60 db above 10 microvolts.

DISCRIMINATOR.

The discriminator is designed for a narrow band F.M. deviation of 15 kc/s. The characteristic is shown in the graph.

OPERATION

GENERAL.

As despatched, the mains transformer is connected for 230/240 volt operation, as indicated on the plate covering the tuner unit. Reference should be made to the diagram when the need arises to adjust to other voltages.

The type of aerial used with the '770U' will be governed by the service in which the receiver is employed. In some circumstances, the aerial will be a directional beam covering a moderate frequency range, whilst in others a broad-band aerial will be desirable. The polarisation should agree with that of the incoming signals it is desired to receive, whilst the impedance should be arranged to match into 75 ohm coaxial cable. If this is not possible (e.g. if a random length of wire is used as an aerial), the socket should be terminated with a 75 or 100 ohm resistor to maintain a sensibly constant impedance. The lower end of the latter is attached to the plug supplied and connected to the coaxial socket, at the rear of the tuner unit assembly.

A speaker of 2·5 to 3 ohms impedance is connected to the appropriate terminals or alternatively, a pair of high resistance telephones plugged into the jack on the side of the front panel. An output at 600 ohms is also provided for passing the signals to line.

WAVECHANGE.

The large left-hand knob controls the position of the turret. A positive lock ensures the turret contacts are in the correct position and movement of the knob automatically disengages the locking mechanism. At the side of the dial are miniature lamps and the appropriate one lights up to indicate the range selected.

SIGNAL MODE.

On the extreme left is a switch which controls the type of signal acceptable.

A.M. Telephony : The 'S' meter gives a comparative reading of carrier strength and functions as a tuning indicator, the tuning being set to give maximum deflection.

Narrow Band F.M. Telephony : The switch is set to 'NFM', the A.M. demodulator diode then being out of circuit, whilst the F.M. stages are brought into operation. This position is intended for communications speech with a deviation of 15 kc/s. The 'S' meter is now used to ensure correct tuning. On passing through a signal, the needle will swing in one direction, then in the other. The centre position between the two peaks and with the needle coincident with the special mark, is the correct tuning point.

SEPARATE INPUT POINT.

On the lower left of the front panel is a coaxial socket into which can be fed an external 50 Mc/s signal, possibly derived from a specially made R.F. unit working on an (input) frequency outside the range of the '770U'. The impedance at this point is approximately 75 ohms.

CATHODE FOLLOWER OUTPUT.

On the right-hand side of the panel is another coaxial socket which is connected to a cathode follower valve and which permits signals to be examined on a cathode ray oscilloscope. The output is at low impedance and at the frequency of the second I.F. section (5·2 Mc/s).

GAIN CONTROLS.

The R.F. stage operates at full gain all the time. Gain of the I.F. stages is adjusted with potentiometer R17. Audio gain is controlled in the usual way by R54.

NOISE LIMITER.

The noise limiter is effective against transient interference which may be experienced when receiving A.M. Signals.

STANDBY SWITCH.

This switch desensitises the receiver but leaves the oscillator valves operative, to avoid frequency drift.

LIMITER GRID JACK.

On the front panel is a jack which is in series with the limiter grid and thus permits the grid current flowing to be measured. If desired, alignment can be carried out using the limiter grid current as an indicator. A further facility is that by inserting a plug shunted with a 50,000 ohm resistor, the I.F. output waveform can be displayed on an oscilloscope.

ALIGNMENT PROCEDURE

I.F. ALIGNMENT.

Switch on the receiver and allow an adequate period for warming up. The controls should be set as follows :

A.F. Gain	..	Maximum
I.F. Gain	..	Maximum
Mode	..	A.M. position
Noise Limiter		Off

Remove the cover on the tuner assembly and also the top and bottom lids of the screened second mixer unit.

Adjust signal generator to 5·2 Mc/s and set modulation depth at 30%. Connect audio meter to the 2·5 ohm speaker terminals.

To begin with, the input lead of the signal generator is connected to the grid of the final I.F. amplifier V7 via a ·01 mfd capacitor, and the attenuator adjusted until a reading is obtained on the output meter. The secondary winding (upper core) of T9 is then set for maximum reading on the meter, reducing the generator input as necessary. This adjustment is repeated with the primary winding (lower core), after which the generator input is transferred to the grid of V6. The windings on T8 are resonated, with the injected signal further attenuated.

Next, the signal generator output is taken to the input grid (not the oscillator grid) of the second mixer valve V5 and the transformer windings (T6 in screening box — see plan view) adjusted for maximum output.

The frequency of the signal generator is now changed to 50 Mc/s (plus or minus 100 kc/s) and T7 (actually the oscillator coil) adjusted for maximum reading on the output meter, so ensuring the second oscillator frequency is correct.

With the signal from the generator applied next to the grid of V4 the core in T5 is rotated to bring the tuned winding to resonance.

The generator output, still at 50 Mc/s, is then taken to the coaxial socket marked 'I.F. Input' (on the front panel) and the cores in T2 and T3 adjusted. These transformers form part of the tuner unit assembly, their positions being shown in the drawing. Transformer T4, on the IF chassis, is also brought to resonance.

There remains transformer T1, which is the one immediately following the diode mixer. No direct connection is permissible and the signal (at 50 Mc/s) is fed into the aerial socket, with

the turret switch set to range 6 and the tuning near the 150 Mc/s mark. Naturally, the signal from the generator will need to be fairly high. The core in T1 is then rotated for maximum output.

The approximate inputs for 50 milliwatts output (gain controls at maximum) are as follows :

Grid V7	16 millivolts	Grid V4	5 microvolts
Grid V6	360 microvolts	Coaxial socket	1 microvolt
Grid V5	37 microvolts		

DISCRIMINATOR ALIGNMENT.

Controls as for I.F. alignment but Mode Switch to 'NFM'.

Signal generator set to 5·2 Mc/s, unmodulated.
Signal generator output at 1 volt.
Generator signal applied to grid of limiter V9.

Connect a centre zero 50-0-50 microampere movement, with a 100K resistor in series with it, across the output of the discriminator double-diode (i.e. from the second cathode of V10 to earth). Should the discriminator be in perfect alignment at 5·2 Mc/s, the centre zero meter will read zero, and if this is so, a check can be made by moving the signal generator frequency either side of 5·2 Mc/s. This should result in equal meter readings on either side. If they are unequal, adjustment of the primary core (lower core) in transformer T10 should be made for balanced readings.

Should complete alignment of the discriminator be required, set the secondary core of T10 so that the top of the core is flush with the top of the discriminator can, adjust primary core (lower) for maximum deflection on meter — and then adjust secondary core for zero reading on meter. Move generator frequency either side of 5·2 Mc/s and check balance ; if unbalanced, adjust primary core.

NOTE : Peak deflection should be approximately 25 microamperes.

R.F. ALIGNMENT.

The only operation likely to be required is adjustment of the miniature trimmer capacitors associated with the aerial, mixer and oscillator circuit. The procedure is as follows.

Range 6 (lowest frequency scale) is selected. A signal generator with appropriate frequency coverage is connected to the aerial input socket. A crystal calibrator, with 1 Mc/s and 10 Mc/s crystals, is connected in parallel with the 75 ohm load of the signal generator, to provide accurate calibration points.

A test is first made at 180 Mc/s, tuning in first the 10 Mc/s crystal signal, then the 1 Mc/s signal. Bearing in mind the specified accuracy of calibration is plus or minus 0·2% (400 kc/s at 200 Mc/s), the setting of the pointer on the receiver should be noted, and if appreciably off the proper mark, the oscillator trimmer (C106) is adjusted and the calibration checked along the entire scale. The mixer trimmer (C105) and the aerial trimmer (C103) are then adjusted for optimum performance at 180 Mc/s. The sensitivity should be checked at 150 Mc/s and at 180 Mc/s (i.e. extreme ends of Range 6).

The procedure is repeated on the other ranges, selecting the calibration points given in the next paragraph. It may be noted that no aerial or mixer trimmer is fitted on Range 1.

COMPLETE RE-ALIGNMENT.

Complete re-alignment should be necessary only in very rare instances and the following instructions are supplied for the sake of completeness.

All the inductance strips in the tuner unit are removed, with the exception of Range 6 (lowest frequency). The signal generator and crystal calibrator are connected as in the foregoing paragraph and checks made of the calibration accuracy at each end of the scale — 150 Mc/s and 180 Mc/s. If the discrepancy is appreciable, the trimmer (C106) is adjusted at the high frequency end (180 Mc/s) and the inductance at the low frequency end (150 Mc/s.) When the calibration is satisfactory, the aerial and mixer trimmers are adjusted at 180 Mc/s. It is extremely unlikely the inductance will require adjustment but, if thought essential, the setting should be made with the receiver tuned to 150 Mc/s.

A similar procedure is carried out on the other ranges, replacing the strips one at a time and using the following alignment points. It should be remembered that any alteration of inductance has an effect on the setting of the associated trimmer and the alignment should be checked

several times where the inductance has been varied.

Range 1	..	400 Mc/s and 500 Mc/s
Range 2	..	330 Mc/s and 400 Mc/s
Range 3	..	270 Mc/s and 330 Mc/s
Range 4	..	220 Mc/s and 270 Mc/s
Range 5	..	180 Mc/s and 220 Mc/s
Range 6	..	150 Mc/s and 180 Mc/s

When alignment is complete and correct, a signal of less than 10 microvolts should produce an output of 50 milliwatts for a 15 db signal-to-noise ratio.

ADJUSTMENT OF PRE-SET CONTROLS.

ZERO AM. (Note this control must be adjusted first).

Set controls as follows :

Signal Mode	..	A.M.
I.F. Gain	..	Max.
A.F. Gain	..	Max.
N.L. ..	..	Off.

Tune to centre of scale on any range and shunt the aerial coaxial socket with a 75 ohm resistor. Adjust 'Zero-AM' control so that needle of tuning meter reads zero.

CENTRE ZERO F.M.

Connect signal generator to the aerial socket, switch to A.M. position and tune in an unmodulated signal on any convenient frequency. Tune this signal in by means of the 'S' meter, ensuring that signal is tuned for maximum reading — switch to F.M. and without touching the tuning knob, adjust 'Centre Zero F.M.' for a centre zero deflection on the meter.

EXTERNAL POWER SUPPLY.

Provision is made for feeding in LT and HT supplies from external sources. The circuit diagram gives details of the connections to the octal plug used for the purpose. The HT voltage should be approximately 230 and the current drawn will be of the order of 110 milliamperes.

Sole Manufacturers : STRATTON & CO. LTD., BIRMINGHAM, 31

Cables : Stratnoid, Birmingham

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770U RECEIVER

Voltage Values

Controls set as follows :

Band selector to Range 6

I.F. Gain at maximum

A.F. Gain at minimum

Standby switch 'on' (except for point 'J')

N.L. 'Off'.

Signal Mode Switch 'A.M.'

Aerial coaxial socket suitably terminated.

Values given are for a mains input of 240 volts, 50 cycles. Voltage readings are taken between points indicated and chassis, and are D.C. except for 'P–' and 'Q–'.

The actual voltage indicated depends on the particular meter employed and a tolerance of plus or minus 5% should be allowed.

Circuit Ref.	20,000 ohms per volt	AVO. 40
A.	106	92·5
B.	0·86	0·68
C.	34	28·5
D.	0·88	0·51
E.	165	155
F.	1·81	1·17
G.	215	214
H.	1·44	0·88
J.	143	140
K.	95	46
L.	1·35	0·82
M.	221	216
N.	4·21	3·5
P.	27·5	2·3
Q.	210	204
R.	84	49·1
S.	0·72	0·54
T.	203	196
U.	93	57·1
V.	0·9	0·68
W.	109	77·5
X.	0·37	0·29
Y.	27	18·6
Z.	165	101
A-	1·82	0·76
B-	71	15
C-	4	1·3
D-	80	17
E-	4·3	1·2
F–	210	205
G–	197	184
H–	8·6	7·0
J–	32	11 Switch in stand-by position.
K–	1·32	0·65
L–	150	150
M–	3·8	2·7
N–	225	223
P–	226	217
Q–	226	217
R–	256	250

A.C. load current 320mA.
Total HT current 110 mA.

U.H.F. COMMUNICATIONS RECEIVER TYPE 770U.

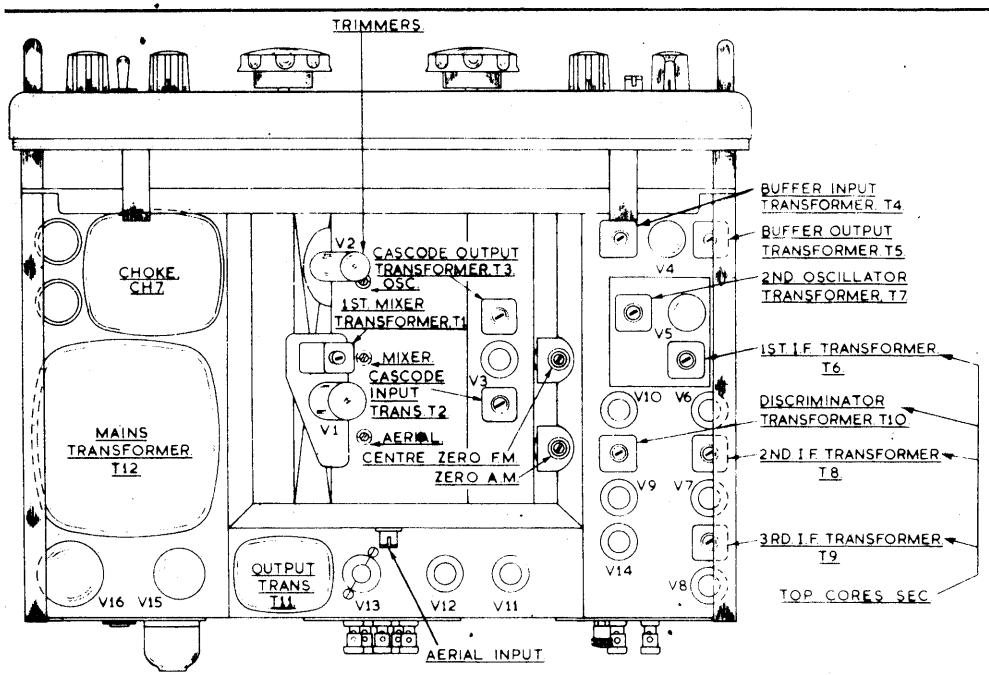
CIRCUIT NO. BP. 874.

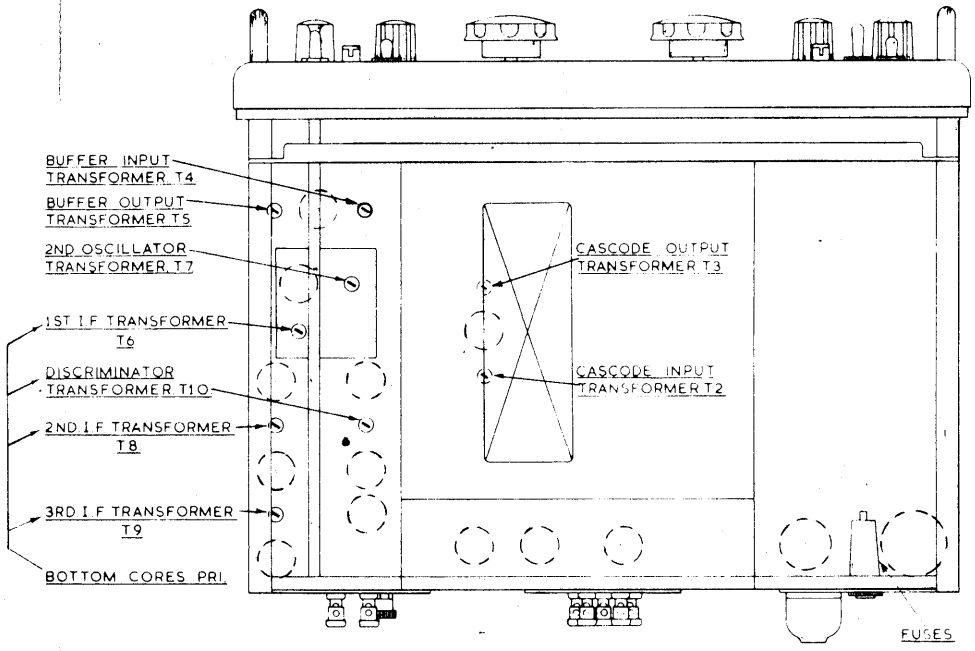
COMPONENT VALUES.

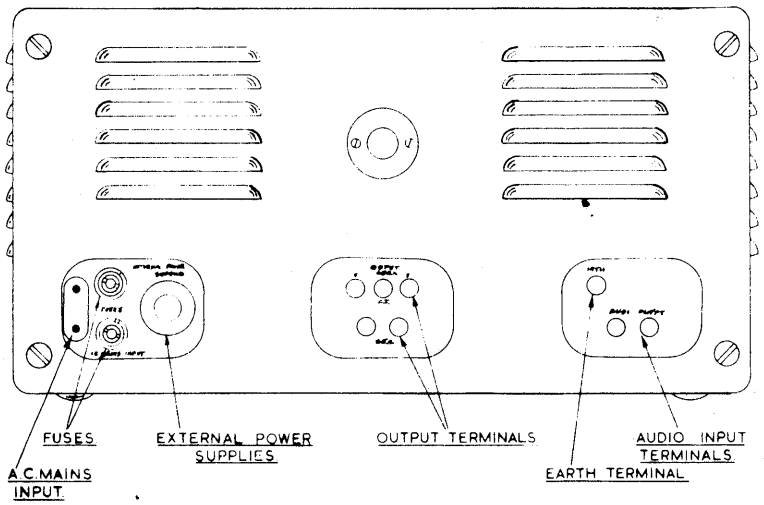
CAPACITORS.

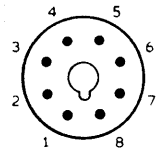
		REF.
C1.	2–8 pF Nominal 3 gang.	A4 &5
C2.	2–8 pF Nominal 3 gang.	B4 &5
C3.	2–8 pF Nominal 3 gang.	C4 &5
C4.	15 pF Nominal	B4 &5
C5.	15 pF Nominal	C4 & 5
C6.	20 pF Ceramic.	A3
C7.	20 pF Ceramic.	A3
C8.	6 pF Silvered Mica.	B3
C9.	10 pF Ceramic.	B4
C10.	10 pF Ceramic.	C2
C11.	20 pF Ceramic.	C3 & 4
C12.	50 pF Ceramic.	C4
C13.	22 pF Vitreous or Ceramic.	C3
C14.	91 pF Feed Through	D1
C15.	·0005 mfd Tub. Paper	D & E1 & 2
C16.	·0005 mfd Tub. Paper	D & E5
C17.	·0005 mfd Tub. Paper	E3
C18.	·0005 mfd Tub. Paper	E4
C19.	91pF Feed Through	E5
C20.	·0005 mfd Tub. Paper	E5
C21.	·0005 mfd Tub. Paper	F5
C22.	·0005 mfd Tub. Paper	F2
C23.	91pF Feed Through	F1
C24.	·0005 mfd Tub. Paper	F3
C25.	·003mfd Tub. Paper	F5
C26.	·0005 mfd Tub. Paper	F4
C27.	50 pF Ceramic	G2
C28.	91 pF Feed Through	G5
C29.	·0005 mfd Tub. Paper	G3
C30.	·0005 mfd Tub. Paper	G5
C31.	100 pF Silvered Mica	G2
C32.	91 pF Feed Through	G1
C33.	91 pF Feed Through	G4
C34.	·0005 mfd Tub. Paper	G3
C35.	100 pF Silvered Mica	G2
C36.	91 pF Feed Through	H1
C37.	·0005 mfd Tub. Paper	H2
C38.	100 pF Silvered Mica	H2
C39.	·01 mfd Tub. Paper	H2
C40.	50pF Ceramic	H2
C41.	20pF Silvered Mica	H3
C42.	50pF Silvered Mica	H4
C43.	·01 mfd Tub. Paper	H5
C44.	·01mfd Tub. Paper	H3
C45.	·01mfd Tub. Paper	H5
C46.	100pF Silvered Mica	J2
C47.	100pF Silvered Mica	J2
C48.	·01 mfd Tub. Paper	J2
C49.	·01 mfd Tub. Paper	J5
C50.	100 pF Silvered Mica	K2
C51.	50 pF Ceramic	J2
C52.	·01 mfd Tub. Paper	J3
C53.	100 pF Silvered Mica	J & K4
C54.	100 pF Silvered Mica	J & K/4 & 5
C55.	·1 mfd Tub. Paper	K4 & 5
C56.	·01 mfd Tub. Paper	K2
C57.	·01 mfd Tub. Paper	L2
C58.	100 pF Silvered Mica	L2
C59.	50 pF Silvered Mica	L & M2
C60.	50 pF Ceramic	L2
C61.	50 pF Ceramic	L2
C62.	·01 mfd Tub. Paper	L3
C63.	·01 mfd Tub. Paper	L4
C64.	10 pF Ceramic	L4
C65.	·01 mfd Tub. Paper	L5
C66.	100 pF Ceramic	M3
C67.	100 pF Ceramic	M & N.4
C68.	·01 mfd Tub. Paper	P3
C69.	·01 mfd Tub. Paper	N4
C70.	·01 mfd Moulded Mica	P4
C71.	30 mfd 15V Wkg. Tub. Elect	P4
C72.	4 mfd Tub. Elect.	Q1 & 2
C73.	·01 mfd Moulded Mica	P2
C74.	·01 mfd Moulded Mica	Q2
C75.	·01 mfd Moulded Mica	R3
C76.	30 mfd 15V Wkg. Tub. Elect.	Q5
C77.	·01 Mfd Tub. Paper	K6
C78.	·01 mfd Tub. Paper	L6
C79.	·01 mfd Tub. Paper	L6
C80.	50 mfd Tub. Elect.	M6
C81.	50 mfd Tub. Elect.	N6
C82.	20 pF Ceramic	A6
C83.	20 pF Ceramic	A6
C84.	1–5 pF Air Trimmer	B & C6
C85.	2–11 pF Air Trimmer	C6
C86.	100 pF Ceramic	C6
C87.	1–5 pF Air Trimmer	D6
C88.	1–5 pF Air Trimmer	E6
C89.	2–11 pF Air Trimmer	F6
C90.	100 pF Ceramic	F6
C91.	1–5 pF Air Trimmer	G6
C92.	1–5 pF Air Trimmer	G6
C93.	2–11 pF Air Trimmer	A7
C94.	100 pF Ceramic	A7
C95.	1–5 pF Air Trimmer	B7
C96.	1–5 pF Air Trimmer	B & C7
C97.	25 pF Silvered Mica	C7
C98.	2–11 pF Air Trimmer	C7
C99.	100 pF Ceramic	D7
C100.	1–5 pF Air Trimmer	D7
C101.	1–5 pF Air Trimmer	E7
C102.	25 pF Silvered Mica	E7
C103.	2–11 pF Air Trimmer	F7
C104.	100 pF Ceramic	F7
C105.	1–5 pF Air Trimmer	G7
C106.	1–5 pF Air Trimmer	G7
C107.	25 pF Silvered Mica	H7
C108.	·01 mfd Tub. Paper	G1
C109.	·0005 mfd Tub. Paper	E3
C110.	·01 mfd Tub. Paper	H3
C111.	·01 mfd Tub. Paper	H5
C112.	22 pF Vitreous or Ceramic	C3
C113.	25 pF Silvered Mica	H6
C114.	·01 mfd Tub. Paper	G1
C115.	1pF Ceramic	G2
C116.	1 pF Ceramic	D & E7
C117.	1 pF Ceramic	G7

RESISTORS.		REF.
R1.	3,300 ohms	B4
R2.	22,000 ohms	C3
R3.	150 ohms	C3
R4.	6,800 ohms	D1
R5.	2,200 ohms	E1
R6.	10,000 ohms	E2
R7.	200 ohms	E3
R8.	6,800 ohms	E4
R9.	200 ohms	E5
R10.	2,200 ohms	E1
R11.	1,000 ohms	F1
R12.	270,000 ohms	F4
R13.	200 ohms	F4
R14.	33,000 ohms	F2
R15.	100,000 ohms	G3
R16.	100,000 ohms	G4 & 5
R17.	10,000 ohms. Pot.	G5
R18.	1,000 ohms	N4
R19.	2,200 ohms	G3 & 4
R20.	2,200 ohms	G1
R21.	2,200 ohms	H1 & 2
R22.	22,000 ohms	H2
R23.	270,000 ohms	H3
R24.	10,000 ohms	G & H/4 & 5
R25.	68 ohms	H4 & 5
R26.	2,200 ohms	H1
R27.	47,000 ohms	H1
R28.	270,000 ohms	J4
R29.	2,200 ohms	J1
R30.	47,000 ohms	J1
R31.	68 ohms	J4
R32.	100,000 ohms	K4
R33.	100,000 ohms	K5
R34.	47,000 ohms	J5
R35.	1 Megohm	K4
R36.	2 Megohm	K5
R37.	100,000 ohms	K4
R38.	270,000 ohms	K5
R39.	22,000 ohms	K1
R40.	100,000 ohms	L1
R41.	22,000 ohms	L2
R42.	68 ohms	K4
R43.	270,000 ohms	L4
R44.	270,000 ohms	L5
R45.	100,000 ohms	M3
R46.	22,000 ohms	M & N3
R47.	100,000 ohms	M4
R48.	600 ohms. Pot.	N4
R49.	47,000 ohms	N1
R50.	22,000 ohms	N1
R51.	330 ohms	N4
R52.	600 ohms. Pot.	N4
R53.	1 Megohm	P3
R54.	500,000 ohms. Pot.	P4 & 5
R55.	10,000 ohms	P1
R56.	220,000 ohms	P1 & 2
R57.	220,000 ohms	P1 & 2
R58.	3·3 Megohms	Q2
R59.	470,000 ohms	Q3
R60.	6,800 ohms	P4
R61.	6,800 ohms	P4
R62.	470,000 ohms	Q4
R63.	680 ohms	Q4
R64.	47,000 ohms	R4
R65.	4,700 ohms	R4
R66.	270,000 ohms	J6
R67.	1,800 ohms. W.W.	M5
R68.	270,000 ohms	M5
R69.	6,800 ohms	M6
R70.	68 ohms	A6
R72.	68 ohms	C6
R73.	10,000 ohms	E6
R74.	68 ohms	F6
R75.	6,800 ohms	G & H6
R76.	68 ohms	A7
R77.	10,000 ohms	C7
R78.	68 ohms	C & D7
R79.	10,000 ohms	E7
R80.	68 ohms	F7
R81.	10,000 ohms	G & H7
R82.	470,000 ohms	A3
R83.	470,000 ohms	C3
R84.	470,000 ohms	G4
R85.	6,800 ohms	Q1

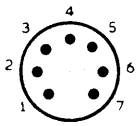




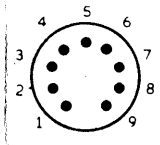




OCTAL SERIES.



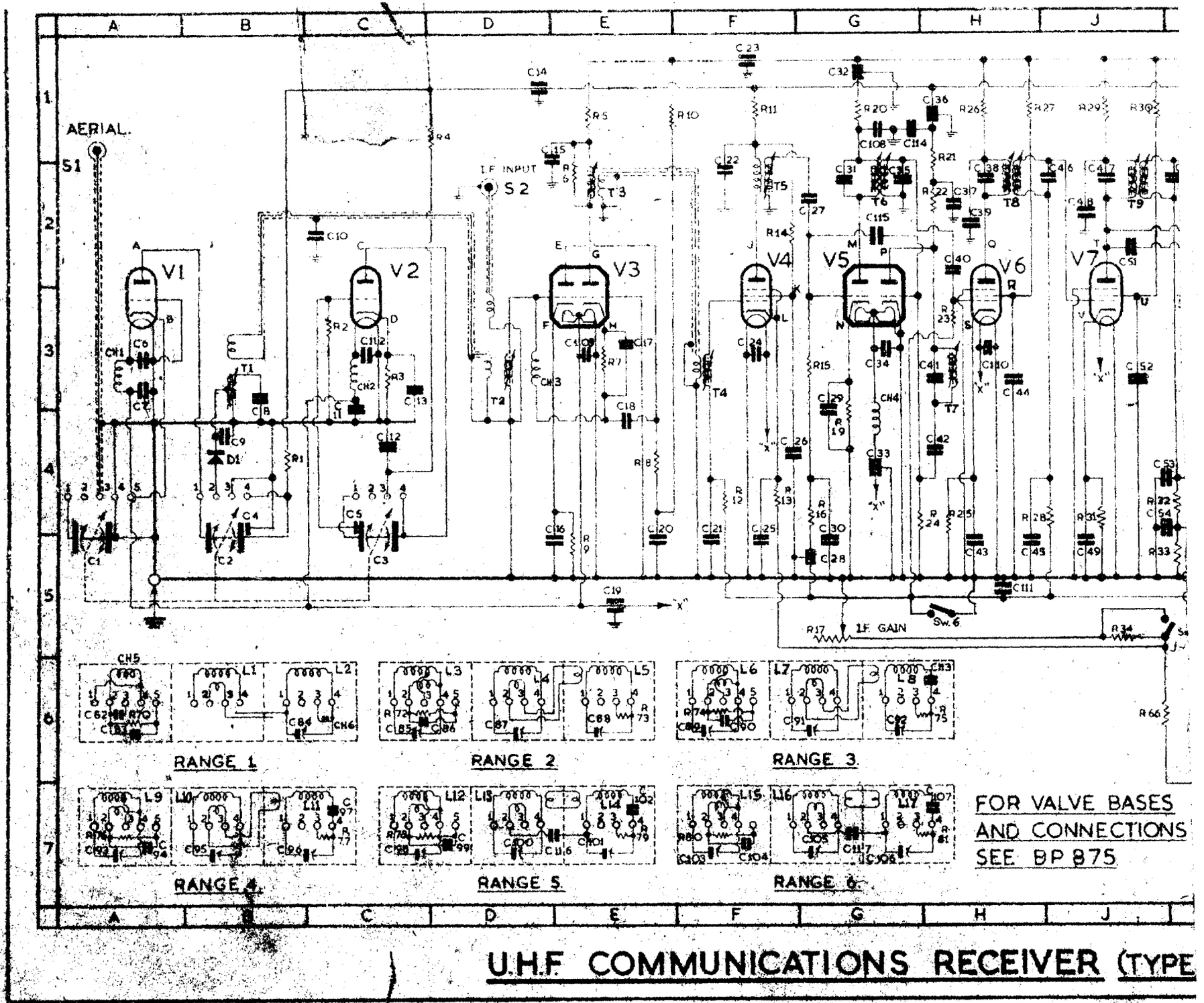
B7G SERIES.

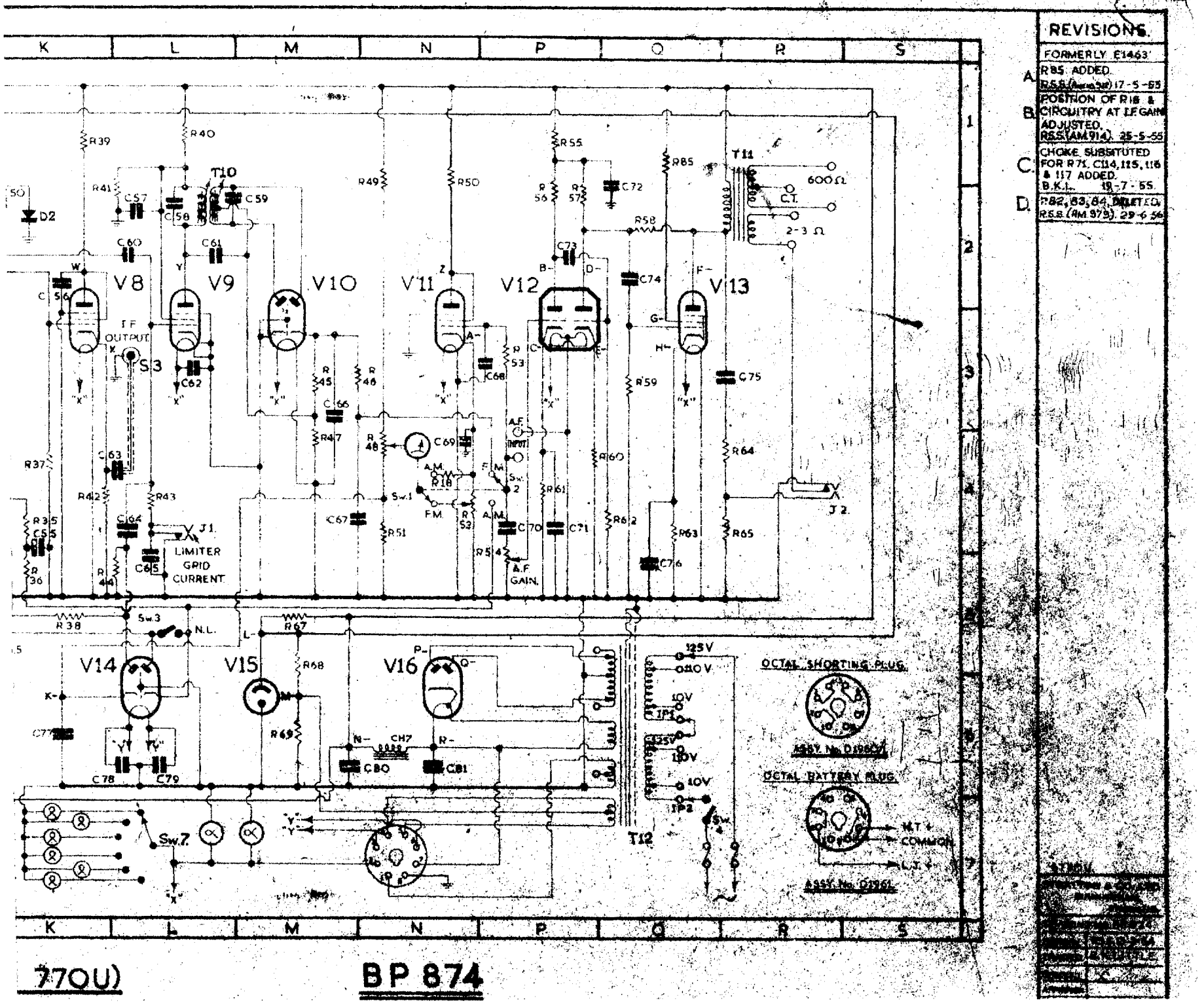


B9A SERIES.

VALVE	V.No	PIN CONNECTIONS 1	2	3	4	5	6	7	8	9	SERIES	SERVICE NUMBERS
6AJ4	V1	G	K	G	G	A	G	H	H	G	B9A (NOVAL)	——
6AF4	V2	A	G	H	H	K	G	A	—	—	B7G	——
12AT7	V3,5	A2	G2	K2	H	H	A1	G1	K1	H TAP	B9A (NOVAL)	CV455
6AK5 (EF95)	V4	G1	K	H	H	A	G2	K	—	—	B7G	CV850
6BA6	V6,7	G1	G3 S	H	H	A	G2	K	—	—	B7G	CV454
6AU6	V8,9 & 11	G1	G3 S	H	H	A	G2	K	—	—	B7G	CV2524
6AL5	V10 & 14	K1	A2	H	H	K2	S	A1	—	—	B7G	CV140
12AU7	V12	A2	G2	K2	H	H	A1	G1	K1	H TAP	B9A (NOVAL)	CV491
6AM5	V13	G1	G3 K	H	H	A	—	G2	—	—	B7G	CV136
VR150/30	V15	—	K	—	—	A	—	—	—	—	OCTAL	CV216
5Z4G	V16	—	H	—	A2	—	A1	—	K H	—	OCTAL	CV1863

FOR USE WITH CIRCUIT NUMBER BP 874


AERIAL.
S1
I.F. INPUT
S2
V1
V2
V3
V4
V5
V6
V7
I.F. GAIN
Sw.6
"X"
RANGE 1
RANGE 2
RANGE 3
RANGE 4
RANGE 5
RANGE 6
FOR VALVE BASES AND CONNECTIONS SEE BP 875
U.H.F. COMMUNICATIONS RECEIVER (TYPE


REVISIONS.
FORMERLY E1463'
A. R85 ADDED. R.S.B. (Amend No) 17-5-55
B. POSITION OF R18 & CIRCUITRY AT I.F. GAIN ADJUSTED. R.S.B. (AM 914). 25-5-55
C. CHOKE SUBSTITUTED FOR R71, C114, 115, 116 & 117 ADDED. B.K.L. 19-7-55.
D. R82, 83, 84, DELETED. R.S.B. (AM 979). 29-6-56
V8
V9
V10
V11
V12
V13
V14
V15
V16
T10
T11
T12
D2
S3
J1
J2
600Ω
C.T.
2-3Ω
I.F. OUTPUT
LIMITER GRID CURRENT
A.F. GAIN
A.F. INPUT
A.M.
F.M.
N.L.
125V
110V
40V
OCTAL SHORTING PLUG
ASSY No. D1860
OCTAL BATTERY PLUG
ASSY No. D1961
H.T.+
COMMON
L.T.+
K L M N P Q R S
1 2 3 4 5 6 7

770U)

BP 874