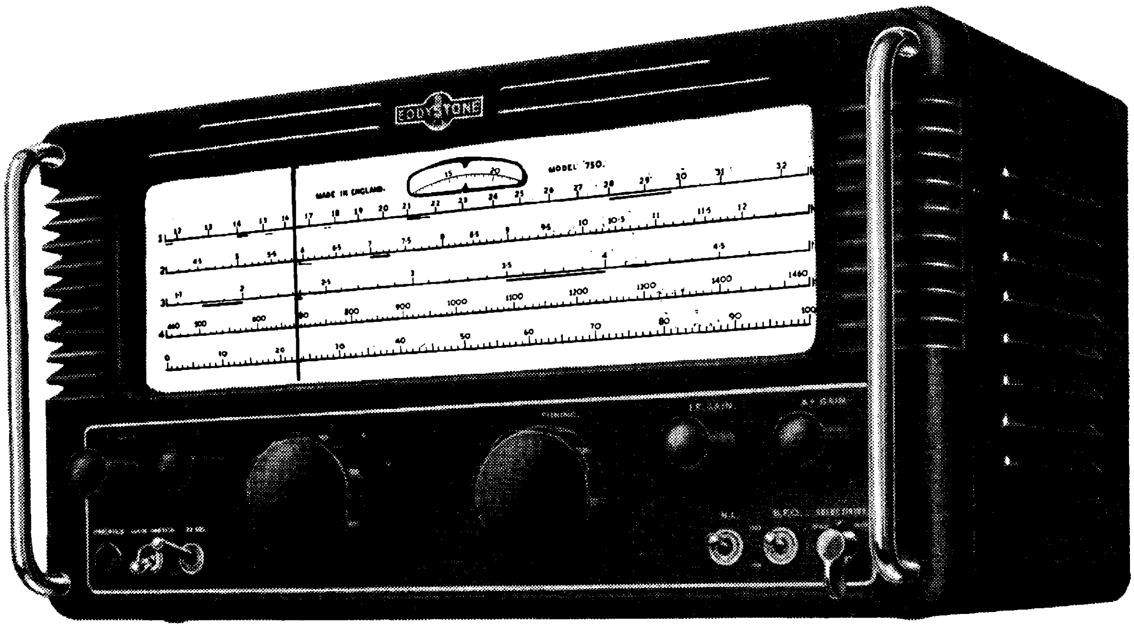


EDDYSTONE

COMMUNICATIONS RECEIVER

Model "750"

Instruction Manual

The Eddystone " 750 " receiver is of the double superhetrodyne type and combines high sensitivity with an unusually good signal-to-noise ratio. All but two of the eleven valves are of the miniature type, details being provided with the circuit diagram. The selectivity is continuously variable over wide limits and this feature, in conjunction with the separate RF, IF and AF gain controls, enables maximum results to be secured under varying conditions of operation.

The four ranges are as follows :

Band 1	...	32 Mc/s. to 12 Mc/s.
Band 2	...	12 Mc/s. to 4·5 Mc/s.
Band 3	...	4·5 Mc/s. to 1·7 Mc/s.
Band 4	...	1450 kc/s. to 480 kc/s.

The fifth position of the wavechange switch desensitises the RF section of the receiver to permit a pick-up to be used without break-through.

It should be noted that the scale markings (all in frequency) are linear and also that the International Distress frequency of 500 kc/s. is covered.

INSTALLATION and OPERATION

The receiver has been carefully aligned and calibrated, and thoroughly tested before despatch. The only adjustment that may be necessary is the mains input voltage. The plug in the selector panel on the transformer is fitted normally in the 230 volt position, where it should remain for voltages between 220 and 250 volts. If the mains voltage is between 195 and 215 volts, the plug should be changed to the 200 volt position. The 110 volt tap is suitable for mains supplies between 100 and 125 volts.

D.C. mains supplies are entirely unsuitable and if connected will cause serious damage. **Ensure** that the **octal plug is in place** in the octal socket " B " (nearest the side of the cabinet) as shown in the drawing, Fig. 2.

A loudspeaker of 2·5 to 3 ohms impedance should be connected to the two upper terminals at the rear (the Eddystone Cat. No. 688 is especially recommended for use with this receiver), or alternatively high resistance (2,000 to 4,000 ohms) telephones plugged into the jack at the left of the front panel.

The fuse fitted between the H.T. secondary centre tap and chassis is a " Magnickel " delayed type. A standard type of fuse is liable to blow if the receiver is switched off (mains switch) and immediately switched on again without giving the rectifier valve time to cool.

AERIAL CONNECTIONS.

If a single long wire is used or any aerial with a single wire type of feeder, connection is made to the rear terminal marked " A," the other terminal marked " AE " remaining strapped to the chassis. A good earth connected by a short lead to the second terminal will improve results, particularly on the lower frequencies, but if there is any doubt about the efficiency of the earth, it may be better to leave it off.

For optimum performance, both as regards bringing in weak signals and for keeping noise down to a minimum, an aerial cut to resonate over the frequency band in which the user is mainly interested is strongly recommended. The lengths for dipole aerials to give optimum results at certain frequencies are tabulated below. For details of other types of aerials and feeder systems, the reader is advised to consult the various Handbooks which deal with these specialised subjects.

	Broadcast							Amateur		
Wavelength (Metres) ..	49	31	25	19	16	13	11	40	20	10
Frequency (Megacycles) ..	6·1	9·6	11·8	15·1	17·8	21·5	26	7	14	28
Length of each arm (feet)	40	26	20	15·5	13	10·5	9	33	16·5	8·25

RECEPTION OF TELEPHONY.

With the BFO switch in the " off " position, the automatic gain control circuits become operative and for full effectiveness, both RF and IF gain controls should be set at maximum (full clockwise rotation) and the volume controlled with the audio gain potentiometer on the extreme right. On very strong signals, particularly with a large aerial and on medium waves, it is possible for overloading to occur and it then becomes necessary to reduce the RF gain.

To begin with, the variable selectivity control should be to the extreme right, giving minimum selectivity. In this position, reasonably good quality of speech and music will be obtained but, as the selectivity is still considerably higher than that of an average receiver, a certain amount of side-band cutting occurs and high fidelity reproduction is not to be expected. A minor point to be noted is that the loudspeaker or telephones should be capable of responding to low audio frequencies (down to 100 or 150 cycles), otherwise the middle audio register is likely to be unduly emphasised.

When heterodyne interference is experienced, the selectivity should be increased by rotating the control to the left, thereby reducing the bandwidth and weakening the strength of the interfering whistle. It is not advisable to operate on telephony with the selectivity control at maximum (except perhaps on a very crowded amateur band) because sideband cutting then becomes severe and speech quality deteriorates in consequence.

Because of the high selectivity, it is important to tune carefully to the centre of the received carrier. It should be remembered also that the AGC action results in the sensitivity increasing as the receiver is tuned slowly away from the centre of the carrier, giving rise to distortion and apparently reducing the actual selectivity. The Cat. No. 669 " S " Meter is a valuable adjunct when the main interest lies in telephony reception since it aids correct tuning and also gives a comparative idea of the strength of the received carrier.

RECEPTION OF CW SIGNALS.

Switching on the BFO (also thereby cutting out AGC) applies H.T. to the beat oscillator valve (V9) and reception of CW Morse signals is then possible.

The adjustment of the controls depends on a number of factors including the strength of incoming signals, amount of interference present and the efficiency of the aerial. If the latter is poor, it will be advisable to use maximum RF gain at all times but, if good, often the RF gain can be reduced somewhat with advantage, particularly on strong signals.

A certain amount of skill will be called for in adjusting the IF gain and selectivity controls. When receiving telephony, the IF gain is automatically controlled according to the strength of the signal but, with CW, manual control of IF is important.

The IF gain varies to some extent with the setting of the selectivity control and is greatest when selectivity is minimum. It will rarely be desirable to employ full IF gain with minimum selectivity. As the degree of selectivity is increased, gain should be maintained by advancement of the IF gain control.

It is advantageous to employ a high degree of selectivity because the noise output from the receiver is partly dependent on the IF bandwidth and the narrower this is made, the less the noise for the same amount of gain. When the receiver is operated with the selectivity control at maximum, signals very close to one another can be separated and weak signals made to stand out clearly against the extraordinarily quiet background. Naturally the tuning control must be handled gently under such conditions.

Another control which calls for attention is the BFO pitch. This gives a swing of 3 kc/s. each side of the centre point (white spot at the top). Normally it will be set to give a beat note of 1,000 cycles (or near) but careful handling of this control will often enable a desired signal to be separated from an interfering one. Also, it is sometimes of benefit to rotate the knob from one side of zero beat to the other when interference comes up on a signal.

BANDSPREAD.

The mechanical bandspread device is available over the whole range covered by the receiver. The vernier logging scale gives an effective length per range of approximately 34 feet. This scale is graduated from 0 to 100 divisions and is read in conjunction with the lowest scale on the main dial, the latter being marked off with 25 major divisions, each representing 100 divisions of the vernier scale (i.e., one complete revolution).

The actual amount of bandspread on the amateur bands depends of course on the width of each individual band. The following details apply :

Band (Mc/s.)	*Vernier Scale Length (inches)*	*Number of Vernier Divisions*
29·7 — 28	34·375	208
21·45 — 21	7·5	45·5
14·35 — 14	6·45	39
7·3 — 7	15	91
4·0 — 3·5	61	364
2·0 — 1·8	30	182

NOISE LIMITER.

In a quiet situation, it will not be necessary to make use of the noise limiter but when electrical interference of a staccato nature is experienced (on telephony or CW), switching on the noise limiter will effectively remove a high percentage of the interfering noise, with little effect on the strength of the signal and without introducing distortion. The noise limiter must not be expected to act effectively with noise of a mushy type, as generated by vacuum cleaners and other electrical equipment incorporating motors — these should be filtered with suppressors at the source.

In a noisy location, it is well to erect an aerial well in the clear and as far as possible from electric light wiring. The stronger the incoming signal, the more the gain of the receiver can be reduced (automatically on telephony, manually on CW) thereby reducing also the effect of any interference being picked up.

USE OF THE STANDBY SWITCH.

The Standby switch, in the " off " position, desensitises the receiver very considerably. This system is considered preferable to cutting the H.T. supply, for several reasons. The oscillator valves continue to operate under normal conditions, thereby preventing any change of frequency during standby periods and, since the audio stages remain " alive," a monitor signal can be fed into the pick-up terminals and become audible on the loudspeaker or telephones.

The receiver itself also becomes available as a monitor of the outgoing signal. It is necessary to prevent excessive RF voltage reaching the receiver aerial terminals during transmission and the wires to these terminals should be kept as short as possible. If a separate aerial is used for reception, arrangements should be made for disconnecting or earthing it during periods of transmission.

CONNECTION OF " S " METER.

The Eddystone Cat. No. 669 " S " Meter is recommended for use with the " 750 " Receiver. It incorporates a sensitive moving-coil meter of 200 microamperes full scale deflection.

The flexible lead from the meter terminates in an octal plug which should be inserted in the socket marked " A " in Fig. 2 at the rear of the receiver.

Reference to the circuit diagram of the receiver will show that one half of the double-diode V7 is in series with the meter movement. This prevents reverse current flowing through the meter when the balance is disturbed and the meter can be left in circuit under all conditions of operation without likelihood of damage. The bottom bend characteristic of the diode results in sluggish action at low signal strengths and, to overcome this, the needle of the meter is purposely offset below the zero mark on the scale by means of the mechanical adjuster.

With the receiver controls set for reception of telephony, the aerial and earth terminals (or doublet terminals) should be shorted and the " S " Meter needle made to coincide with zero by adjustment of the electrical balance control at the rear of the meter. On removing the short, the meter will indicate comparative carrier strength.

OPERATION FROM 6 VOLT ACCUMULATOR.

The " 750 " receiver may be operated from a 6 volt accumulator, in conjunction with a special Vibrator Power Unit, Cat. No. 687/1, which is fitted with leads and plugs ready for immediate use. Installation details are provided with the Power Unit.

STRATTON & Co., Ltd., West Heath, Birmingham, 31

Cables : "STRATNOID" Birmingham   Telephone : PRIory 2231-2-3-4

Printed in England

EDDYSTONE "750"

ALIGNMENT INSTRUCTIONS

It is assumed that test instruments are available — in particular, a Signal Generator covering 85 kc/s. to 32 Mc/s. and provided with internal modulation (30%) and a calibrated attenuator ; and an audio output meter, calibrated in milliwatts and decibels and adjustable to match an impedance of 2·5 ohms. Trimming should be carried out with a non-metallic tool such as the Eddystone Cat. No. 122T.

IF STAGES.

The controls should be set as follows :

RF Gain minimum	Band Selector Range 1.
IF Gain maximum	BFO Off.
AF Gain maximum	Noise Limiter Off.
Selectivity maximum.	

A 30% modulated input, at 85 kc/s., is applied between chassis and the grid of V4* (the second frequency changer), and the four cores in the IF transformers marked "2nd" and "3rd" in Fig. 1 adjusted to give maximum output, as indicated on the output meter. The attenuator of the S.G. should be adjusted as necessary to prevent the needle of the output meter going off the scale. An input of about 280 microvolts will normally be required to give 50 milliwatts at the speaker terminals.

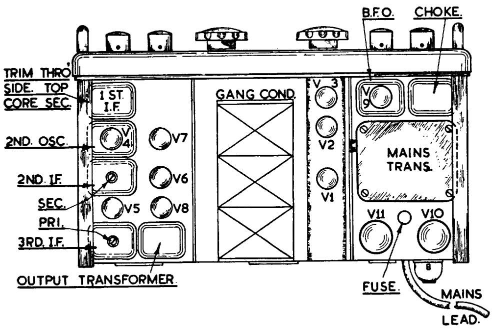


Fig. 1

Leaving the controls and connections undisturbed, the input ~~frequency should be changed to 1620 kc/s. and the second oscillator~~ adjusted, by moving the core in the V4 screening can (see Fig. 3), until output is maximum. Because of the slight loss in conversion, a greater input (by some 2 or 3 db) will be required to give 50 milliwatts output. The change to 85 kc/s. can be obtained with the oscillator on either the high or the low side of 1620 kc/s. and two positions of oscillator core will give output — the lower frequency position, with the core furthest in, is the correct one.

The band selector switch should now be moved to "G" and the 1620 kc/s. input applied between chassis and the stator of the centre section of the gang condenser. The primary and secondary cores in the first IF transformer (see Fig. 1) are then adjusted to give maximum output and a further very slight and very careful adjustment of the V4 oscillator core may give an improvement. The final IF sensitivity should be such that 50 milliwatts output is produced for an input (at 1620 kc/s.) of between 5 and 10 microvolts.

BFO ADJUSTMENT.

With the BFO switch at "off," a modulated signal should be applied and tuned in accurately on the receiver. The modulation is switched off, the BFO switched on and, with the pitch control at half-mesh (white spot at top), the core in the BFO unit (see Fig. 3) is set to give zero beat.

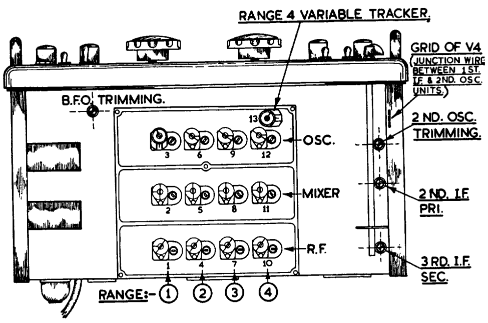


Fig. 3

RF ALIGNMENT.

The controls remain as before but with the RF gain also turned to maximum. Should it be found necessary to correct discrepancies in the scale calibration, the output from a Crystal Frequency Standard should be applied to the aerial terminals (the calibration of most Signal Generators is not accurate enough). Adjustment is then made to the cores and trimmers appropriate to each range, in the oscillator

ceramic tracker condenser shown in Fig. 3 has been very carefully adjusted for proper tracking on Range 4 and it is not advisable to touch it.

Range 1.	13 Mc/s. and	31 Mc/s.
Range 2.	5 Mc/s. and	11 Mc/s.
Range 3.	2 Mc/s. and	4 Mc/s.
Range 4.	500 kc/s. and	1400 kc/s.

To proceed with the alignment of the RF and Mixer stages, the BFO is switched off, the crystal oscillator removed and the modulated output from the Signal Generator connected to the aerial and earth terminals, via the dummy aerial. The attenuator is set to give an output of between 10 and 20 microvolts.

A signal on 13 Mc/s. should be injected and tuned in on Range 1 of the receiver. The CORES in the RF and Mixer stages are then adjusted for maximum output as indicated by the output meter. Next, the S.G. is set to 30 Mc/s. and the output peaked by adjustment of the TRIMMER CONDENSERS. Adjustment is again made at 13 Mc/s. and the procedure repeated until no further improvement is possible.

The other ranges are aligned in the same way, using the following high and low frequency alignment points on each range :

Range	*Trimmer Frequency*	*Core Frequency*	*RF Coil*	*Mixer Coil*
1	30 Mc/s.	13 Mc/s.	1	2
2	11 Mc/s.	4·7 Mc/s.	4	5
3	4·2 Mc/s.	2 Mc/s.	7	8
4	1350 kc/s.	550 kc/s.	10	11

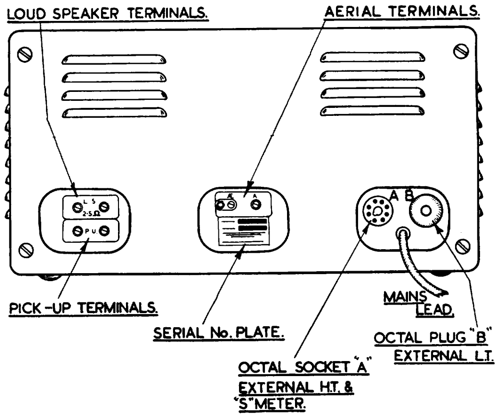


Fig. 2

VOLTAGE VALUES

The voltages are between the point indicated and the chassis. Set the receiver at 28 Mc/s. on Range 1 with the aerial shorted out, IF and RF controls set at maximum. AF gain control set at minimum with BFO on. Two sets of values are given using different meters as shown. It will be evident that the actual voltage indicated depends on the meter employed. A tolerance of plus or minus 5% should be allowed on the values given.

Circuit Reference	Weston 1,000 *ohms/Volt*	Avo *Model* 40
A	225 volts	225 volts
B	98 ,,	90 ,,
C	1·0 ,,	·95 ,,
D	82 ,,	80 ,,
E	235 ,,	236 ,,
F	1·6 ,,	1·5 ,,
G	98 ,,	73 ,,
H	78 ,,	75 ,,
J	232 ,,	230 ,,
K	1·4 ,,	1·2 ,,
L	85 ,,	80 ,,
M	235 ,,	235 ,,
N	85 ,,	80 ,,
P	0·9 ,,	0·9 ,,
Q	65 ,,	13 ,,
R	1·0 ,,	0·7 ,,
S	235 ,,	235 ,,
T	227 ,,	225 ,,
U	4·2 ,,	4·1 ,,
V	150 ,,	150 ,,
W	235 ,,	235 ,,
X	275	272

It is assumed that test instruments are available — in particular, a Signal Generator covering 85 kc/s. to 32 Mc/s. and provided with internal modulation (30%) and a calibrated attenuator ; and an audio output meter, calibrated in milliwatts and decibels and adjustable to match an impedance of 2·5 ohms. Trimming should be carried out with a non-metallic tool such as the Eddystone Cat. No. 122T.

IF STAGES.

The controls should be set as follows :

RF Gain minimum	Band Selector Range I.
IF Gain maximum	BFO Off.
AF Gain maximum	Noise Limiter Off.
Selectivity maximum.	

A 30% modulated input, at 85 kc/s., is applied between chassis and the grid of V4* (the second frequency changer), and the four cores in the IF transformers marked " 2nd " and " 3rd " in Fig. I adjusted to give maximum output, as indicated on the output meter. The attenuator of the S.G. should be adjusted as necessary to prevent the needle of the output meter going off the scale. An input of about 280 microvolts will normally be required to give 50 milliwatts at the speaker terminals.

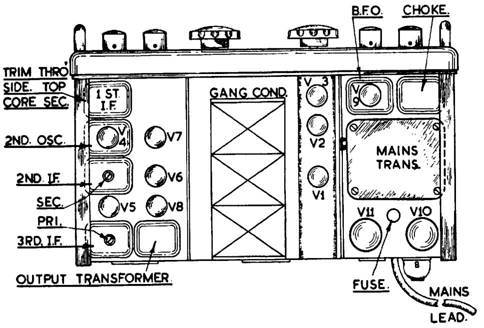


Fig. 1

Leaving the controls and connections undisturbed, the input ~~frequency should be changed to 1620 kc/s. and the second oscillator~~ adjusted, by moving the core in the V4 screening can (see Fig. 3), until output is maximum. Because of the slight loss in conversion, a greater input (by some 2 or 3 db) will be required to give 50 milliwatts output. The change to 85 kc/s. can be obtained with the oscillator on either the high or the low side of 1620 kc/s. and two positions of oscillator core will give output — the lower frequency position, with the core furthest in, is the correct one.

The band selector switch should now be moved to " G " and the 1620 kc/s. input applied between chassis and the stator of the centre section of the gang condenser. The primary and secondary cores in the first IF transformer (see Fig. I) are then adjusted to give maximum output and a further very slight and very careful adjustment of the V4 oscillator core may give an improvement. The final IF sensitivity should be such that 50 milliwatts output is produced for an input (at 1620 kc/s.) of between 5 and 10 microvolts.

BFO ADJUSTMENT.

With the BFO switch at " off," a modulated signal should be applied and tuned in accurately on the receiver. The modulation is switched off, the BFO switched on and, with the pitch control at half-mesh (white spot at top), the core in the BFO unit (see Fig. 3) is set to give zero beat.

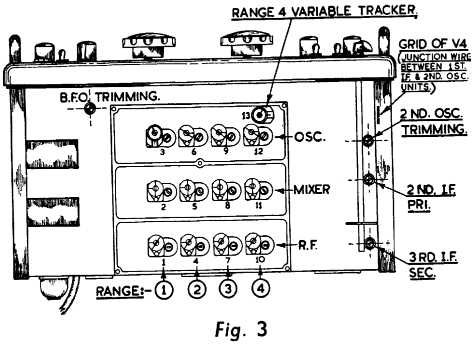


Fig. 3

RF ALIGNMENT.

The controls remain as before but with the RF gain also turned to maximum. Should it be found necessary to correct discrepancies in the scale calibration, the output from a Crystal Frequency Standard should be applied to the aerial terminals (the calibration of most Signal Generators is not accurate enough). Adjustment is then made to the cores and trimmers appropriate to each range, in the oscillator section of the coil box (see Fig. 3). Checks and adjustments should be made at the frequencies given below, using the TRIMMER CONDENSER at the higher frequency end of the scale and the CORE at the lower frequency end. The BFO should be switched on for these tests, with the pitch control at " 12 o'clock." The ceramic tracker condenser shown in Fig. 3 has been very carefully adjusted for proper tracking on Range 4 and it is not advisable to touch it.

Range I.	13 Mc/s. and	31 Mc/s.
Range 2.	5 Mc/s. and	11 Mc/s.
Range 3.	2 Mc/s. and	4 Mc/s.
Range 4.	500 kc/s. and	1400 kc/s.

To proceed with the alignment of the RF and Mixer stages, the BFO is switched off, the crystal oscillator removed and the modulated output from the Signal Generator connected to the aerial and earth terminals, via the dummy aerial. The attenuator is set to give an output of between 10 and 20 microvolts.

A signal on 13 Mc/s. should be injected and tuned in on Range I of the receiver. The CORES in the RF and Mixer stages are then adjusted for maximum output as indicated by the output meter. Next, the S.G. is set to 30 Mc/s. and the output peaked by adjustment of the TRIMMER CONDENSERS. Adjustment is again made at 13 Mc/s. and the procedure repeated until no further improvement is possible.

The other ranges are aligned in the same way, using the following high and low frequency alignment points on each range :

Range	*Trimmer Frequency*	*Core Frequency*	*RF Coil*	*Mixer Coil*
I	30 Mc/s.	13 Mc/s.	I	2
2	11 Mc/s.	4·7 Mc/s.	4	5
3	4·2 Mc/s.	2 Mc/s.	7	8
4	1350 kc/s.	550 kc/s.	10	11

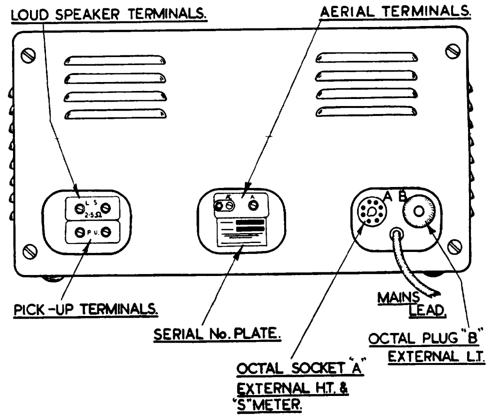


Fig. 2

VOLTAGE VALUES

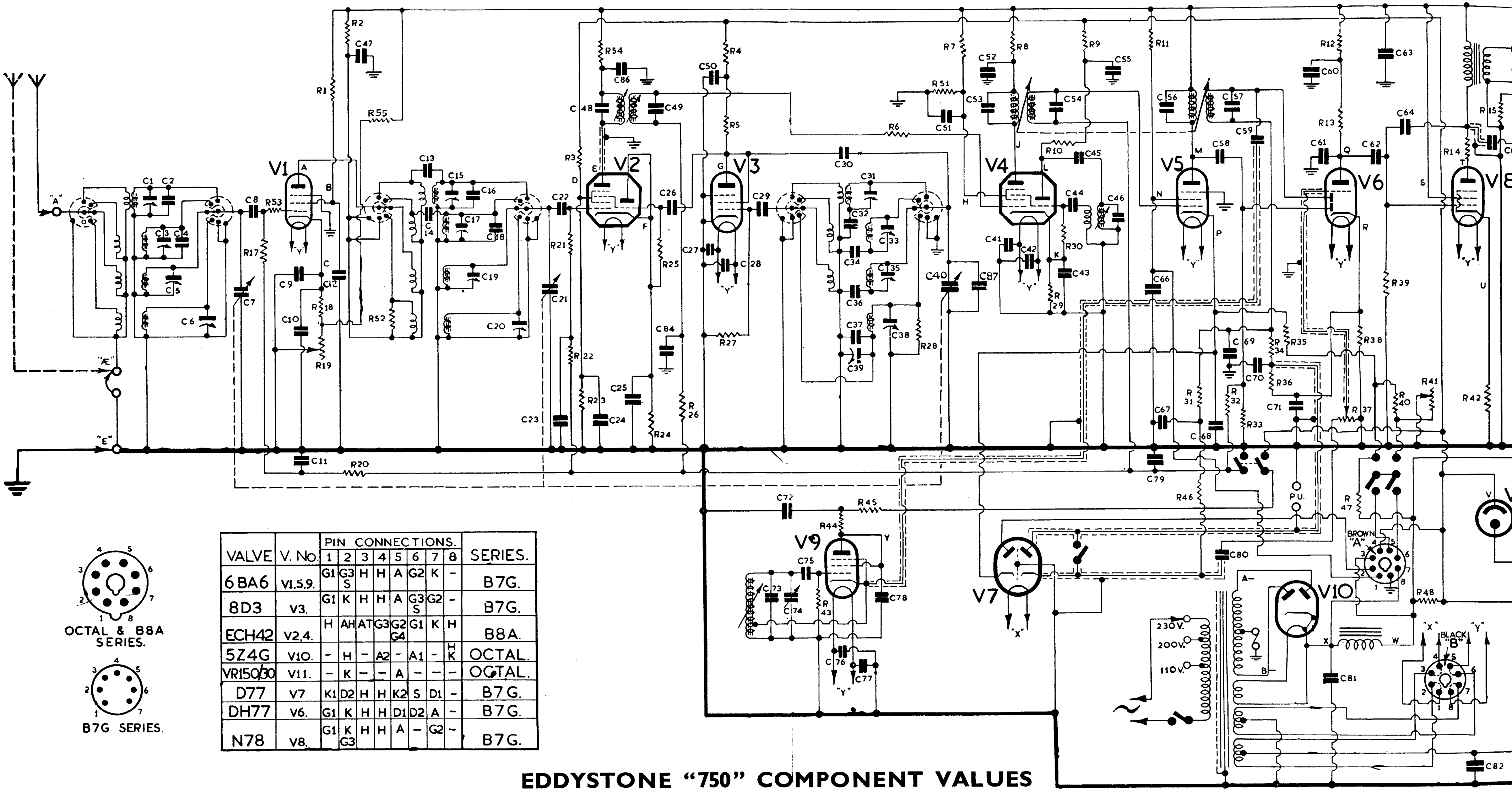
The voltages are between the point indicated and the chassis. Set the receiver at 28 Mc/s. on Range 1 with the aerial shorted out, IF and RF controls set at maximum. AF gain control set at minimum with BFO on. Two sets of values are given using different meters as shown. It will be evident that the actual voltage indicated depends on the meter employed. A tolerance of plus or minus 5% should be allowed on the values given.

Circuit Reference	Weston 1,000 *ohms/Volt*	Avo *Model* 40
A	225 volts	225 volts
B	98 „	90 „
C	1·0 „	·95 „
D	82 „	80 „
E	235 „	236 „
F	1·6 „	1·5 „
G	98 „	73 „
H	78 „	75 „
J	232 „	230 „
K	1·4 „	1·2 „
L	85 „	80 „
M	235 „	235 „
N	85 „	80 „
P	0·9 „	0·9 „
Q	65 „	13 „
R	1·0 „	0·7 „
S	235 „	235 „
T	227 „	225 „
U	4·2 „	4·1 „
V	150 „	150 „
W	235 „	235 „
X	275 „	272 „
Y	75 „	70 „
Z	2·0 „	0·9 „
A—	250 „ A.C.	250 „ A.C.
B—	250 „ A.C.	250 „ A.C.

H.T. Consumption : 96 mA.

Power Consumption : 75 volt-amps.

*Accessible under the chassis (see Fig. 3).



VALVE	V. No.	PIN CONNECTIONS. 1	2	3	4	5	6	7	8	SERIES.
6BA6	V1.5.9.	G1	G3 S	H	H	A	G2	K	-	B7G.
8D3	V3.	G1	K	H	H	A	G3 S	G2	-	B7G.
ECH42	V2,4.	H	AH	AT	G3	G2 G4	G1	K	H	B8A.
5Z4G	V10.	-	H	-	A2	-	A1	-	H K	OCTAL.
VR150/30	V11.	-	K	-	-	A	-	-	-	OCTAL.
D77	V7	K1	D2	H	H	K2	S	D1	-	B7G.
DH77	V6.	G1	K	H	H	D1	D2	A	-	B7G.
N78	V8.	G1	K G3	H	H	A	-	G2	-	B7G.

OCTAL & B8A SERIES.

B7G SERIES.

EDDYSTONE "750" COMPONENT VALUES

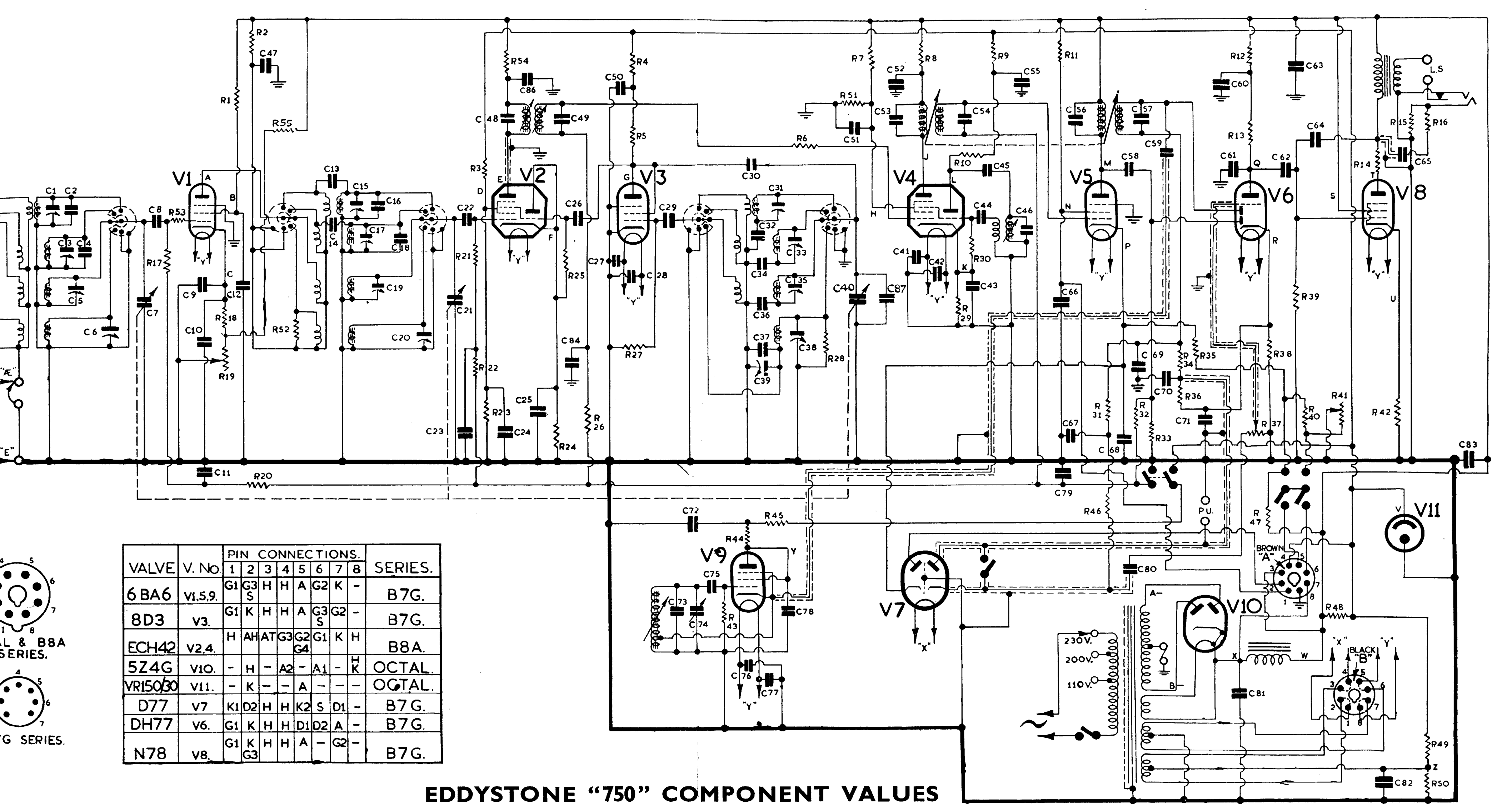
RESISTORS.

R1	33,000 ohms.	1W.
R2	1,000 ohms.	Type 16.
R3	10,000 ohms.	$\frac{1}{2}$W.
R4	1,000 ohms.	Type 16.
R5	10,000 ohms.	Type 16.
R6	12 ohms.	$\frac{1}{2}$W.
R7	27,000 ohms.	1W.
R8	1,000 ohms.	Type 16.
R9	1,000 ohms.	Type 16.
R10	10,000 ohms.	Type 16.
R11	33,000 ohms.	1W.
R12	27,000 ohms.	Type 16.
R13	270,000 ohms.	Type 16.
R14	47 ohms.	$\frac{1}{2}$W.
R15	1,000 ohms.	$\frac{1}{2}$W.
R16	33,000 ohms.	$\frac{1}{2}$W.
R17	470,000 ohms.	Type 16.
R18	68 ohms.	Type 16.
R19	10,000 ohms.	Potentiometer.
R20	470,000 ohms.	Type 16.
R21	470,000 ohms.	Type 16.
R22	470,000 ohms.	Type 16.
R23	15,000 ohms.	1W.
R24	330 ohms.	$\frac{1}{2}$W.
R25	100,000 ohms.	Type 16.
R26	470,000 ohms.	Type 16.
R27	22,000 ohms.	Type 16.
R28	10,000 ohms.	Type 16.
R29	220 ohms.	$\frac{1}{2}$W.
R30	47,000 ohms.	Type 16.
R31	1,000,000 ohms.	Type 16.
R32	470,000 ohms.	Type 16.
R33	470,000 ohms.	Type 16.
R34	100,000 ohms.	Type 16.
R35	68 ohms.	Type 16.
R36	100,000 ohms.	Type 16.
R37	500,000 ohms.	Potentiometer.
R38	3,000 ohms.	Type 16.
R39	470,000 ohms.	Type 16.
R40	51,000 ohms.	$\frac{1}{2}$W.
R41	10,000 ohms.	Potentiometer.
R42	150 ohms.	$\frac{1}{2}$W.
R43	47,000 ohms.	Type 16.
R44	47,000 ohms.	Type 16.
R45	1,000 ohms.	$\frac{1}{2}$W.
R46	2,000,000 ohms.	Type 16.
R47	100,000 ohms.	Type 16.
R48	2,700 ohms.	$\pm$ 5% WW.
R49	100,000 ohms.	Type 16.
R50	6,800 ohms.	$\frac{1}{2}$W.
R51	27,000 ohms.	1W.
R52	3,900 ohms.	Type 16 or Type T.
R53	12 ohms.	Type T.
R54	1,500 ohms.	$\frac{1}{2}$W.
R55	100,000 ohms.	$\frac{1}{2}$W

CONDENSERS.

C1	3-23 pF.	Air Trimmer.
C2	20 pF.	Silvered Mica.
C3	3-23 pF.	Air Trimmer.
C4	6 pF.	Silvered Mica.
C5	3-23 pF.	Air Trimmer.
C6	3-23 pF.	Air Trimmer.
C7	10-386 pF.	(RF Sect. Gang Cond.)
C8	100 pF.	Silvered Mica.
C9	·1 mfd.	Tub. Paper.
C10	·01 mfd.	Tub. Paper.
C11	·01 mfd.	Tub. Paper.
C12	·1 mfd.	Tub. Paper.
C13	20 pF.	Silvered Mica.
C14	6 pF.	Silvered Mica.
C15	3-23 pF.	Air Trimmer.
C16	20 pF.	Silvered Mica.
C17	3-23 pF.	Air Trimmer.
C18	6 pF.	Silvered Mica.
C19	3-23 pF.	Air Trimmer.
C20	3-23 pF.	Air Trimmer.
C21	10-386 pF.	(Mixer Sect. Gang Cond.)
C22	100 pF.	Silvered Mica.
C23	·01 mfd.	Tub. Paper.
C24	·1 mfd.	Tub. Paper.
C25	·1 mfd.	Tub. Paper.
C26	10 pF.	Ceramic.
C27	·0005 mfd.	Moulded Mica.
C28	·0005 mfd.	Moulded Mica.
C29	50 pF.	Silvered Mica.
C30	200 pF.	$\pm$ 2% Silvered Mica.
C31	3·5-20 pF.	Ceramic Trimmer negative temp. coefficient.
C32	2,100 pF.	$\pm$ 1% Silvered Mica.
C33	3-23 pF.	Air Trimmer.
C34	900 pF.	$\pm$ 1% Silvered Mica.
C35	3-23 pF.	Air Trimmer.
C36	385 pF.	$\pm$ 1% Silvered Mica.
C37 *	80 pF.	Silvered Mica.
C38	3-23 pF.	Air Trimmer.
C39	3-23 pF.	Air Trimmer
C40	10-386 pF.	(Osc. Sect. Gang Cond.)
C41	·01 mfd.	Tub. Paper.
C42	·01 mfd.	Tub. Paper.
C43	·01 mfd.	Tub. Paper.
C44	100 pF.	Silvered Mica.
C45	100 pF.	Silvered Mica.
C46	200 pF.	$\pm$ 2% Silvered Mica.
C47	·1 mfd.	Tub. Paper.
C48	200 pF.	$\pm$ 2% Silvered Mica.
C49	200 pF.	$\pm$ 2% Silvered Mica.
C50	·1 mfd.	Tub. Paper.
C51	·1 mfd.	Tub. Paper.
C52	·1 mfd.	Tub. Paper.
C53	800 pF.	$\pm$ 2% Silvered Mica.
C54	800 pF.	$\pm$ 2% Silvered Mica.
C55	·1 mfd.	Tub. Paper.
C56	800 pF.	$\pm$ 2% Silvered Mica.
C57	800 pF.	$\pm$ 2% Silvered Mica.
C58	20 pF.	Silvered Mica.
C59	20 pF.	Silvered Mica.
C60	8 mfd.	Tub. Elect. 350v. D.C. wkg.
C61	·0005 mfd.	Moulded Mica.
C62	·01 mfd.	Moulded Mica.
C63	·01 mfd.	Moulded Mica.
C64	6 pF.	Silvered Mica.
C65	·01 mfd.	Mo
C66	·1 mfd.	Tu
C67	·1 mfd.	Tu
C68	·1 mfd.	Tu
C69	100 pF.	Sil
C70	100 pF.	Sil
C71	30 mfd.	Ele
C72	·01 mfd.	Tu
C73	400 pF.	$\pm$
C74	BFO	Pit
C75	100 pF.	Sil
C76	·01 mfd.	Tu
C77	·01 mfd.	Tu
C78	·01 mfd.	Tu
C79	·1 mfd.	Tu
C80	·01 mfd.	Mo
C81	50 mfd.	Ele
C82	30 mfd.	Ele
C83	50 mfd.	Ele
C84	·01 mfd.	Tu
C86	·01 mfd.	Tu
C87	10 pF.	Ce

* The 80 pF. may be silvered-mica or a ceramic condenser or a combination of both connected in parallel to obtain the correct temperature co-efficient for drift compensation.



VALVE	V. No.	PIN CONNECTIONS. 1	2	3	4	5	6	7	8	SERIES.
6BA6	V1,5,9.	G1	G3 S	H	H	A	G2	K	-	B7G.
8D3	V3.	G1	K	H	H	A	G3 S	G2	-	B7G.
ECH42	V2,4.	H	AH	AT	G3	G2 G4	G1	K	H	B8A.
5Z4G	V10.	-	H	-	A2	-	A1	-	H K	OCTAL.
VR150/30	V11.	-	K	-	-	A	-	-	-	OCTAL.
D77	V7	K1	D2	H	H	K2	S	D1	-	B7G.
DH77	V6.	G1	K	H	H	D1	D2	A	-	B7G.
N78	V8.	G1	K G3	H	H	A	-	G2	-	B7G.

EDDYSTONE "750" COMPONENT VALUES

1W.
Type 16.
½W.
Type 16.
Type 16.
½W.
1W.
Type 16.
Type 16.
Type 16.
1W.
Type 16.
Type 16.
½W.
½W.
½W.
Type 16.
Type 16.
Potentiometer.
Type 16.
Type 16.

R22	470,000 ohms.	Type 16.
R23	15,000 ohms.	1W.
R24	·330 ohms.	½W.
R25	100,000 ohms.	Type 16.
R26	470,000 ohms.	Type 16.
R27	22,000 ohms.	Type 16.
R28	10,000 ohms.	Type 16.
R29	220 ohms.	½W.
R30	47,000 ohms.	Type 16.
R31	1,000,000 ohms.	Type 16.
R32	470,000 ohms.	Type 16.
R33	470,000 ohms.	Type 16.
R34	100,000 ohms.	Type 16.
R35	68 ohms.	Type 16.
R36	100,000 ohms.	Type 16.
R37	500,000 ohms.	Potentiometer.
R38	3,000 ohms.	Type 16.
R39	470,000 ohms.	Type 16.
R40	51,000 ohms.	½W.
R41	10,000 ohms.	Potentiometer.
R42	150 ohms.	½W.
R43	47,000 ohms.	Type 16.
R44	47,000 ohms.	Type 16.
R45	1,000 ohms.	½W.
R46	2,000,000 ohms.	Type 16.
R47	100,000 ohms.	Type 16.
R48	2,700 ohms.	± 5% WW.
R49	100,000 ohms.	Type 16.
R50	6,800 ohms.	½W.
R51	27,000 ohms.	1W.
R52	3,900 ohms.	Type 16 or Type T.
R53	12 ohms.	Type T.
R54	1,500 ohms.	½W.
R55	100,000 ohms.	½W

CONDENSERS.

C1	3-23 pF.	Air Trimmer.
C2	20 pF.	Silvered Mica.
C3	3-23 pF.	Air Trimmer.
C4	6 pF.	Silvered Mica.
C5	3-23 pF.	Air Trimmer.
C6	3-23 pF.	Air Trimmer.
C7	10-386 pF.	(RF Sect. Gang Cond.)
C8	100 pF.	Silvered Mica.
C9	·1 mfd.	Tub. Paper.
C10	·01 mfd.	Tub. Paper.
C11	·01 mfd.	Tub. Paper.
C12	·1 mfd.	Tub. Paper.
C13	20 pF.	Silvered Mica.
C14	6 pF.	Silvered Mica.
C15	3-23 pF.	Air Trimmer.
C16	20 pF.	Silvered Mica.
C17	3-23 pF.	Air Trimmer.
C18	6 pF.	Silvered Mica.
C19	3-23 pF.	Air Trimmer.
C20	3-23 pF.	Air Trimmer.
C21	10-386 pF.	(Mixer Sect. Gang Cond.)
C22	100 pF.	Silvered Mica.
C23	·01 mfd.	Tub. Paper.
C24	·1 mfd.	Tub. Paper.
C25	·1 mfd.	Tub. Paper.
C26	10 pF.	Ceramic.
C27	·0005 mfd.	Moulded Mica.
C28	·0005 mfd.	Moulded Mica.
C29	50 pF.	Silvered Mica.
C30	200 pF.	± 2% Silvered Mica.
C31	3·5-20 pF.	Ceramic Trimmer negative temp. coefficient.
C32	2,100 pF.	± 1% Silvered Mica.
C33	3-23 pF.	Air Trimmer.
C34	900 pF.	± 1% Silvered Mica.
C35	3-23 pF.	Air Trimmer.
C36	385 pF.	± 1% Silvered Mica.
C37 *	80 pF.	Silvered Mica.
C38	3-23 pF.	Air Trimmer.
C39	3-23 pF.	Air Trimmer
C40	10-386 pF.	(Osc. Sect. Gang Cond.)
C41	·01 mfd.	Tub. Paper.
C42	·01 mfd.	Tub. Paper.
C43	·01 mfd.	Tub. Paper.
C44	100 pF.	Silvered Mica.
C45	100 pF.	Silvered Mica.
C46	200 pF.	± 2% Silvered Mica.
C47	·1 mfd.	Tub. Paper.
C48	200 pF.	± 2% Silvered Mica.
C49	200 pF.	± 2% Silvered Mica.
C50	·1 mfd.	Tub. Paper.
C51	·1 mfd.	Tub. Paper.
C52	·1 mfd.	Tub. Paper.
C53	800 pF.	± 2% Silvered Mica.
C54	800 pF.	± 2% Silvered Mica.
C55	·1 mfd.	Tub. Paper.
C56	800 pF.	± 2% Silvered Mica.
C57	800 pF.	± 2% Silvered Mica.
C58	20 pF.	Silvered Mica.
C59	20 pF.	Silvered Mica.
C60	8 mfd.	Tub. Elect. 350v. D.C. wkg.
C61	·0005 mfd.	Moulded Mica.
C62	·01 mfd.	Moulded Mica.
C63	·01 mfd.	Moulded Mica.
C64	6 pF.	Silvered Mica.
C65	·01 mfd.	Moulded Mica.
C66	·1 mfd.	Tub. Paper.
C67	·1 mfd.	Tub. Paper.
C68	·1 mfd.	Tub. Paper.
C69	100 pF.	Silvered Mica.
C70	100 pF.	Silvered Mica.
C71	30 mfd.	Elect. 15v. D.C. wkg.
C72	·01 mfd.	Tub. Paper.
C73	400 pF.	± 2% Silvered Mica.
C74	BFO	Pitch Condenser.
C75	100 pF.	Silvered Mica.
C76	·01 mfd.	Tub. Paper.
C77	·01 mfd.	Tub. Paper.
C78	·01 mfd.	Tub. Paper.
C79	·1 mfd.	Tub. Paper.
C80	·01 mfd.	Moulded Mica.
C81	50 mfd.	Elect. 450v. D.C. wkg.
C82	30 mfd.	Elect. 15v. D.C. wkg.
C83	50 mfd.	Elect. 450v. D.C. wkg.
C84	·01 mfd.	Tub. Paper.
C86	·01 mfd.	Tub. Paper.
C87	10 pF.	Ceramic.

* The 80 pF. may be silvered-mica or a ceramic condenser or a combination of both connected in parallel to obtain the correct temperature co-efficient for drift compensation.

* 600Ω TERMINALS TO BE LINKED AS SHOWN FOR ATTENUATED OUTPUT