



THE EDDYSTONE MODEL "750"

A FINE BRITISH MADE COMMUNICATIONS RECEIVER OF
ADVANCED DESIGN AND FIRST-CLASS CONSTRUCTION

The new Eddystone "750" Receiver employs the latest technique in double superheterodyne circuits and combines high selectivity and sensitivity with excellent signal-to-noise ratio. The tuning range is continuous from 32 Mc/s. to 480 Kc/s., except for a small gap around the 1st intermediate frequency of 1620 Kc/s. The horizontal scales on the unusually wide, full vision dial are calibrated in frequency, these calibrations all being linear. The tuning mechanism is a fine example of precision engineering. It incorporates a flywheel loaded high reduction ratio gearing and an auxiliary vernier tuning scale which gives adequate bandspread.

Separate RF, IF and AF gain controls combined with selectivity variable over wide limits, ensure maximum performance under all conditions of operation.



manufactured
by

STRATTON & CO LTD
EDDYSTONE WORKS · BIRMINGHAM · ENGLAND
CABLES: STRATNOID BIRMINGHAM

SPECIFICATION OF MODEL 750, 1950

SPECIFICATION OF THE EDDYSTONE

CIRCUIT.

The receiver is an eleven valve double superheterodyne as follows :

Valve Position	Type.	Function.
V1	6BA6	R.F. Amplifying Stage.
V2	ECH42	Mixer (S.F. to 1620 Kc/s.)
V3	6AM6	Oscillator
V4	ECH42	Frequency Changer. (1620 Kc/s. to 85 Kc/s.).
V5	6BA6	I.F. (85 Kc/s.).
V6	6AT6	2nd Det., A.G.C. and A.F.
V7	6AL5	N.L. and "S" Meter diodes.
V8	N78	Output Amplifier.
V9	6BA6	Beat Frequency Oscillator.
V10	5Z4	Rectifier.
V11	VR/150/30	Stabiliser.

All the valves, with the exception of the rectifier and stabiliser, are of the miniature all glass type, with either B7G or B8A bases.

INPUT IMPEDANCE.

The aerial circuit is arranged to match into 400 ohm feeder lines, but good results are obtained with aerials of widely varying impedance.

TUNING RANGE.

The receiver is provided with four wave bands, the first three overlapping and covering from 32 to 1.7 Mc/s. and the fourth covering 1465 to 480 Kc/s. Each band is selected by a low capacity switch. The actual ranges are :

- (1) 32 Mc/s. to 12 Mc/s.
- (2) 12 Mc/s. to 4.5 Mc/s.
- (3) 4.5 Mc/s. to 1.7 Mc/s.
- (4) 1465 Kc/s. to 480 Kc/s.

N.B.—Range 4 includes the 500 Kc/s International Distress frequency.

TUNING.

Tuning is by a gear-driven flywheel-controlled mechanism having a mean reduction ratio of approximately 150-1. The scales are calibrated in frequency on all ranges. Accuracy of calibration is within plus or minus 0.5%.

BANDSPREAD.

The ingenious mechanical bandspread mechanism gives an almost linear scale equivalent to about 32 feet on each tuning range. The figures that follow apply to bandspread coverage on the bands allocated to amateurs at the Atlantic City Conference. Variation in the width of each amateur band necessarily affects the degree of coverage and against each band we have shown the number of vernier divisions required to tune over the corresponding number of kilocycles for each separate band width.

Band Width	Tuning Coverage on Vernier Scale	Vernier Divisions of Bandspread	Kilo-cycles in Band
29.7 Mc/s. to 28 Mc/s.	34-375"	208	1700
21.45 Mc/s. to 21 Mc/s.	7.5"	45.5	450
14.35 Mc/s. to 14 Mc/s.	6.45"	39	350
7.3 Mc/s. to 7 Mc/s.	15"	91	300
4.0 Mc/s. to 3.5 Mc/s.	61"	364	500
2.0 Mc/s. to 1.8 Mc/s.	30"	182	200

INTERMEDIATE FREQUENCY STAGES.

The first IF is 1620 Kc/s and the second, 85 Kc/s. This combination results in high adjacent channel selectivity and negligible image interference. The transformers are robustly constructed and permeability tuned.

BEAT FREQUENCY OSCILLATOR.

This is constructed as a separate unit to ensure adequate screening and a high degree of stability. The pitch control gives a variation of plus or minus 3 Kc/s.

AUTOMATIC GAIN CONTROL.

The delayed A.G.C. system maintains output level within 15 db for a change of 90 db input above 3 microvolts, at 8 Mc/s. A.G.C. is switched off when the Beat Oscillator is brought into circuit.

NOISE LIMITER.

The series diode limiter is extremely effective. It is controlled by a switch on the front panel. Special care has been taken to avoid hum being introduced into the circuit.

List Price £49 : 10 : 0

Comprehensive instructions and a 12 months



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"750" COMMUNICATIONS RECEIVER

DRIFT.

After 20 minutes from switching on, drift does not exceed 300 cycles for a plus or minus 5% change in mains voltage.

SENSITIVITY.

The sensitivity is better than 5 μ V for a 20 db signal-to-noise ratio at all frequencies.

SELECTIVITY.

Variable from 30 to 60 db down for 5 Kc/s off resonance.

IMAGE RATIO.

Better than 40 db at 30 Mc/s., and correspondingly higher at lower frequencies.

OUTPUT IMPEDANCE.

At the rear of the receiver are terminals for the connection of a speaker of 2.5 ohms impedance and on the front panel is mounted a jack to take high resistance telephones. Insertion of the latter automatically disconnects the speaker. The audio output exceeds 3.5 watts. Pick-up terminals are fitted.

"S" METER.

A socket is fitted at the rear of the receiver, into which an external "S" Meter Unit — Cat. No. 669 — can be connected.

ILLUMINATION.

The scale is illuminated by 6 volt 1.8 watt bayonet fitting lamps.

GENERAL CONSTRUCTION.

Aluminium diecastings are used for the front panel and tuner unit chassis. These provide an extremely rigid foundation for the whole receiver. The power unit and I.F. output chassis are of heavy gauge brass, heavily nickel-plated and securely attached to the main castings. The cover is of steel, fitted with lift-up lid, and heavily rust-proofed. The most reliable of tropically finished component parts are used.

FINISH.

The exterior is finished a fine ripple black. The controls are mounted on an appropriately marked finger plate. Chromium plated handles are fitted to front panel.

CONTROLS.

The controls are :

Tuning	B.F.O. Switch and A.G.C.
Band Selector	Noise Limiter on/off.
R.F. Gain	Standby Switch (with long dolly).
I.F. Gain	Mains on/off Switch.
A.F. Gain	Selectivity Control.
B.F.O. Pitch.	

VENTILATION.

Ventilation has been carefully arranged to avoid undue temperature rise in the cabinet.

ACCESSIBILITY.

The receiver chassis can be taken out of the cabinet by the removal of four fixing screws. The chassis is fitted with protecting rails so that, when removed from the cabinet, it may be inverted without damage to valves or components.

WEIGHT AND DIMENSIONS.

The weight is 40-lbs. The dimensions are : Overall width, 16 $\frac{3}{4}$ " ; Depth, 10" ; Height, 8 $\frac{3}{4}$ ".

POWER SUPPLY.

Inputs of 110 volts and 200/240 volts, 40/60 cycles, are catered for, the power consumption from mains being approximately 70 watts.

The oscillator anodes and necessary screens are fed from a stabilised high tension supply.

A socket is provided at the rear to enable the receiver to work from a 6 volt battery in conjunction with an external Vibrator Unit — Cat. No. 687/1.

(No Purchase Tax)

Guarantee accompany each receiver.



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Printed in England

EDDYSTONE

ACCESSORIES FOR USE WITH THE "750" RECEIVER



DIECAST LOUDSPEAKER

This efficient speaker consists of a 5" permanent magnet unit mounted in a diecast housing 7" in diameter.

A special acoustic baffle is fitted and the tone is exceptionally good. Impedance 2.5 ohms. Finished ripple black with chromium plated feet. Supplied complete with lead.

Cat. No. 688.

£2 . 17 . 6

SIGNAL STRENGTH METER

This "S" meter is designed for use with the "750" Receiver. It is contained in a neat diecast housing, finished a fine ripple black. The necessary resistors, including the zero adjuster, are fitted inside. The meter, which has a 200 microampere full scale deflection, is calibrated in "S" units and decibels above S9, on the basis of a 4db increase in carrier strength for each "S" point. The leads terminate in an octal plug, which, in the case of the "750", permits direct connection to the socket at the rear of the Receiver.



Cat. No. 669.

£5 . 5 . 0

VIBRATOR POWER UNIT

This unit permits the "750" Receiver to be operated from a 6 volt accumulator. It comprises a transformer, non-synchronous vibrator, rectifier valve (6X5G), on/off switch, and the necessary filters which effectively prevent RF interference over the whole range covered by the receiver. Smoothing is not included, since the choke and condensers in the receiver perform this function. A heavy cable is provided for connecting to the battery and leads terminating in octal plugs for attachment to the receiver. The unit is totally enclosed in a metal cabinet finished ripple black to match the receiver.

Cat. No. 687/1

£7 . 15 . 0

DOUBLET AERIAL

The Eddystone Doublet Aerial is a distinct improvement upon the single wire type of aerial. The two arms forming the aerial proper can be strung in any convenient position (as high as possible) and the flexible insulated feeder brought in through a small hole without the necessity of additional insulation. Pick-up of electrical interference is minimised with a consequent reduction in background noise.

Cat. No. 731 (50 ft. feeder)

£2 . 12 . 6

Cat. No. 731/1 (100 ft. feeder)

£2 . 17 . 6

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