



EDDYSTONE COMMUNICATIONS RECEIVERS

From 10 kc/s. to 1000 Mc/s.

STRATTON & CO., LTD. have been manufacturing special types of radio communications receivers since 1923, and the trade-mark "EDDYSTONE" has become famous throughout the World. The very considerable value of this long experience is reflected in our current range of receivers which are designed, developed and produced to combine high performance, reliability and ease of control. Finish, workmanship and general construction reach the highest standards.

We are now in a position to offer communications receivers covering from 10 kc/s to 1000 Mc/s, in a wide range of models. Each of these incorporates facilities considered necessary for the majority of applications likely to arise, bearing in mind that these include practical communications, monitoring, field survey work, laboratory research and development, interference investigations and other special uses. All are available as table models or for mounting in standard racks.

The brief details given in this booklet relate to those receivers mainly intended for professional and commercial use, and amplified information on a specific model is readily available on request.

We shall welcome your enquiries, either direct or through our Distributors, and can promise they will receive full and prompt attention.

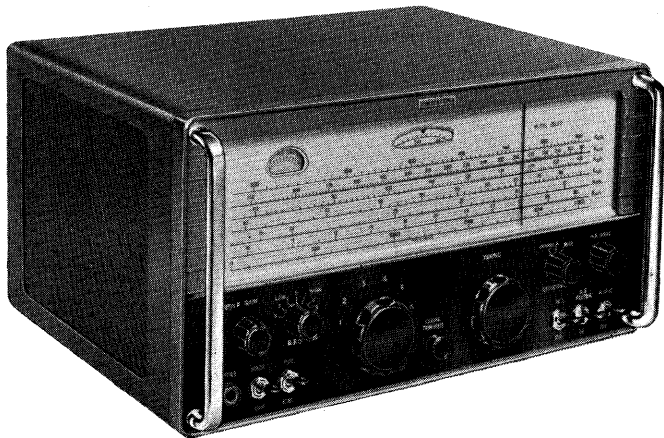
Sole Manufacturers :

STRATTON & CO. LTD.

ALVECHURCH ROAD : BIRMINGHAM 31 : ENGLAND

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Cables: STRATNOID, BIRMINGHAM



"850/2" LOW FREQUENCY COMMUNICATIONS RECEIVER

The Eddystone "850/2" receiver is a special low frequency model possessing complete coverage from 10 kc/s to 600 kc/s and giving a high performance throughout. It accepts all signals normal to this range of frequencies. Eleven preferred type valves are used in the single superheterodyne circuit, and normal communications facilities are provided. Three selectivity positions, two having crystal filters, meet the majority of requirements. In addition, an efficient audio filter brings the bandwidth down to approximately 100 c/s.

FREQUENCY COVERAGE	Range 1 .. 300 to 600 kc/s.	Range 4 .. 40 to 85 kc/s.
	Range 2 .. 150 to 310 kc/s.	Range 5 .. 19 to 40 kc/s.
	Range 3 .. 80 to 160 kc/s.	Range 6 .. 10 to 20 kc/s.
CIRCUIT AND VALVES	RF Amplifier : Frequency changer : two IF amplifiers : AM & CW detectors : noise limiter : IF output stage : audio amplifier and output : stabiliser : rectifier.	
TUNING DRIVE AND SCALES	Geared drive mechanism with 140/1 reduction ratio, having smooth precise movement. Horizontal scales are clearly marked in kilocycles to an accuracy within 0.5% above 100 kc/s, and within 2.5% below 100 kc/s. A secondary logging scale is provided	
CONTROLS	Tuning : Wavechange : Aerial Trimmer : RF Gain : IF Gain : AF Gain : Selectivity : CW/AM : BFO on/off and Pitch : AGC : Noise Limiter : AF Filter : Mains : Meter zero adjuster.	
	A carrier level meter is fitted and terminals at the rear permit desensitising when necessary. A low impedance IF outlet (720 kc/s) is provided and an AGC connection is brought out to terminals at the rear.	
SENSITIVITY	The CW sensitivity is better than 5 uV for a 15 dB signal/noise ratio throughout. An equally good performance obtains on AM signals.	
SELECTIVITY (IF)	Position 1 (crystal) 400 c/s. Position 2 (crystal) 1500 c/s. Position 3 6 kc/s. With audio filter in circuit, approximately 100 c/s. (figures are overall bandwidths at 6 dB points).	
IMAGE REJECTION	Better than 75 dB at 600 kc/s and progressively greater at lower frequencies.	
AGC	Increasing input level 80 dB above 10 uV (at 600 kc/s) results in a change of output not exceeding 10 dB.	
AUDIO OUTPUTS	1 watt maximum into 2.5 ohms ; 10 mW into 600 ohm lines ; telephone jack. Audio response is within 6 dB from 100 c/s to 6 kc/s.	
IF OUTPUT	Approximately 100 mV into 75 ohms for an input of 5 uV.	
DIMENSIONS AND WEIGHT	Width 16 $\frac{7}{8}$ " (43 cm.).	Height 8 $\frac{3}{4}$ " (22.2 cm.).
	Depth 15" (38.1 cm.).	Weight 50 lbs. (22.6 kgs.).
FINISH	Two-tone grey ; chromium plated handles ; anodised finger plate. Available in table and standard rack mounting versions.	



"880/2" HIGH STABILITY HF COMMUNICATIONS RECEIVER

This model is of most advanced design and offers a number of definite advantages. Of particular note are the extremely high frequency stability and the precise frequency setting ability, combined with ease of operation. The first oscillator is crystal controlled and the second tunable oscillator is specially designed for high thermal, mechanical and voltage stability. In effect, the "880/2" gives the equivalent of crystal control whilst permitting continuous coverage from 30.5 Mc/s to 500 kc/s. Other advantages are a very low level of radiation, and ease of connecting receivers in diversity with common oscillator control. The standard table model is easily converted to rack mounting.

CIRCUIT AND VALVES	Two fully tuned RF stages : mixer : crystal controlled oscillator : tunable IF, mixer and oscillator : three stage 500 kc/s amplifier with filters : noise limiter : AM and CW/SSB detectors : AF amplifiers and separate stages for line and speaker : voltage stabilisers : silicon diode HT rectifiers. In all, 23 preferred type valves plus diodes.
INTERMEDIATE FREQUENCIES	The first IF tunes over either 2500 to 3500 kc/s, or 3500 to 4500 kc/s, as automatically selected by the range switch. The second IF is 500 kc/s, with variable selectivity. Two crystal filters are fitted, one of which gives a 3 kc/s bandwidth for s.s.b. signals.
SENSITIVITY	For 15 dB signal/noise ratio, better than 3 microvolts above 1.5 Mc/s, and averaging 5 microvolts on Range 1 (500 to 1500 kc/s).
SELECTIVITY	Five positions provided. Bandwidths range from 400 c/s to 14 kc/s, at 6 dB points. Audio filter gives a bandwidth of approximately 100 c/s.
STABILITY	After four hours running, with ambient temperature and mains supply constant, the frequency drift is in the order of ± 20 cycles.
SPURIOUS RESPONSES	Attenuated 90 dB below 15 Mc/s, (except Range 1) and greater than 60 dB elsewhere.
TUNING ACCURACY	Calibration and re-setting better than 1 kc/s.
AGC	Three time-constants provided — fast, slow and s.s.b.
AUDIO OUTPUTS	0.75 watts for speaker (internal monitor speaker is fitted). 100 mW to 600 ohm line terminals, with independent channel and level control. Jack for 2000 ohm telephone headset.
AERIAL INPUT	75 ohms unbalanced.
RADIATION	Does not exceed 5 uV into 75 ohms.
DIMENSIONS	<i>Rack Mounted Version</i> : Width 19" (48.3 cm.). Depth 20½" (52.1 cm.). Height 8¾" (22.2 cm.). <i>Table Mounted Version</i> : Width 19½" (49.5 cm.). Depth 20½" (52.1 cm.). Height 9⅞" (32.9 cm.).
WEIGHT	<i>Rack Mounted Version</i> : 87 lbs. (39.5 kgs.). <i>Table Mounted Version</i> : 99 lbs. (44.9 kgs.).
FINISH	Modern styling and presentation in two-tone grey finish.
OTHER FEATURES	100 kc/s. crystal calibrator : fine tuning control (panel and remotely) : output at second IF : carrier level meter : provision for diversity operation ; desensitising.



MODEL "730/4" HF COMMUNICATIONS RECEIVER

A high grade receiver, developed to meet military specifications, and intended for continuous operation under all normal conditions. The controls are sensibly arranged for greatest operating convenience, and the wide clearly calibrated scale allows accurate frequency setting.

The variations allow for crystal control on spot frequencies and for inclusion of a medium frequency range. Standard finish is light grey. Normally supplied for standard rack mounting.

FREQUENCY COVERAGE	Range 1 30 Mc/s to 12.3 Mc/s. Range 2 12.5 Mc/s to 5.3 Mc/s. Range 3 5.7 Mc/s to 2.5 Mc/s. <i>Alternatives :</i> 730/6 Ranges as above but in addition four crystal controlled channels between 2 Mc/s and 20 Mc/s can be selected by a panel switch. 730/8 Range 5 covers 200 kc/s to 410 kc/s, instead of 1120/480 kc/s. Crystal control facility included.	Range 4 2.5 Mc/s to 1.11 Mc/s. Range 5 1120 kc/s to 480 kc/s.
CIRCUIT	Single superheterodyne with two fully tuned RF stages ; two IF stages with crystal filter ; crystal calibrator ; noise limiter ; BFO ; output stages.	
POWER SUPPLY	Internal AC Mains power unit utilises ' C ' cored components. Standard voltages. Socket at rear for connection of alternative external supplies.	
TUNING SYSTEM	Five accurately calibrated scales, plus mechanical bandsread auxiliary scale. Pointer correction device for use with internal crystal calibrator.	
SENSITIVITY	CW (A1) sensitivity better than 2 microvolts for 15 dB signal / noise ratio. AM (A2/A3) sensitivity better than 5 uV for 15 dB signal / noise ratio, 30% modulation, 50 mW.	
SELECTIVITY	Five positions. Bandwidth variable from 500 c/s with crystal filter in use, to 12 kc/s at widest (all 6 dB points). In addition, the efficient audio filter has a bandwidth of approximately 100 c/s.	
TWO SIGNAL TESTS	The performance as regards cross - modulation, blocking and inter - modulation is exceptionally good.	
OSCILLATOR STABILITY	Total drift does not exceed 150 parts in 10 ⁶ over a period of one hour, after two hours warm-up. This figure relates to a steady ambient temperature and a stable mains voltage.	
IMAGE REJECTION	Better than 45 dB at 18 Mc/s and increasing to 90 dB at 2 Mc/s.	
AUDIO OUTPUT	Maximum of 1 watt at 2.5 ohms. 600 ohms balanced for line. Jack on front panel for telephones.	
PHYSICAL DETAILS	Width .. 16 $\frac{3}{4}$ inches (42.5 cm.). Height .. 8 $\frac{3}{4}$ inches (22.2 cm.).	Depth .. 13 $\frac{3}{4}$ inches (34.9 cm.). Weight .. 57 lbs. (26 kgs.).
INTER-SERVICES REF No.	ZA.51262.	



"960" TRANSISTORISED HF COMMUNICATIONS RECEIVER

A fully transistorised superheterodyne receiver, giving continuous coverage from 500 kc/s to 30 Mc/s and offering all normal communications facilities. The "960" is capable of a good all-round performance and is ready for immediate operation, being independent of a mains supply of any type. Printed circuit techniques are used and operation is from a 12 volt battery, internal or external.

FREQUENCY COVERAGE CIRCUIT AND SEMI- CONDUCTOR COMPLEMENT

Six switched ranges, covering from 500 kc/s to 30 Mc/s.

RF Amplifier : Mixer : Local oscillator : Three-stage IF Amplifier with band-pass crystal filter : BFO : AGC rectifiers : Audio amplifiers and push-pull output : Zener stabiliser : Noise limiter. In all twelve transistors and seven diodes. A carrier level meter is fitted.

TUNING DRIVE AND SCALES

The 140/1 geared tuning mechanism is smooth, positive and free from backlash. The long horizontal scales are clearly marked in frequency to an accuracy better than 1%. Secondary logging scale.

CONTROLS

Tuning : Wavechange : RF Gain : AF Gain and on/off switch : Crystal : AGC : Noise Limiter : BFO pitch : Standby switch : Battery check switch : Meter zero adjuster.

SENSITIVITY

Sensitivity for a 15 dB signal/noise ratio is better than 6uV over frequencies above 1200 kc/s, and better than 20 uV below 1200 kc/s.

SELECTIVITY

Without crystal, bandwidth is 5 kc/s at 6 dB points. With crystal, 500 c/s at 6 dB points.

OSCILLATOR STABILITY

Better than 1 part in 10^4 per degree C change in ambient temperature.

IMAGE REJECTION

50 dB at 1.6 Mc/s : 20 dB at 18 Mc/s.

AGC

Increase of 90 dB in input level above 5 uV leads to a change not exceeding 16 dB in audio level (at 6 Mc/s).

AUDIO OUTPUT

Maximum output exceeds 1 watt. Internal monitor speaker fitted and terminals for external speaker. Jack for telephones on front panel. 600 ohm line connections.

AERIAL INPUT

Nominally 75 ohms.

BATTERY CONSUMPTION (at 12 volts)

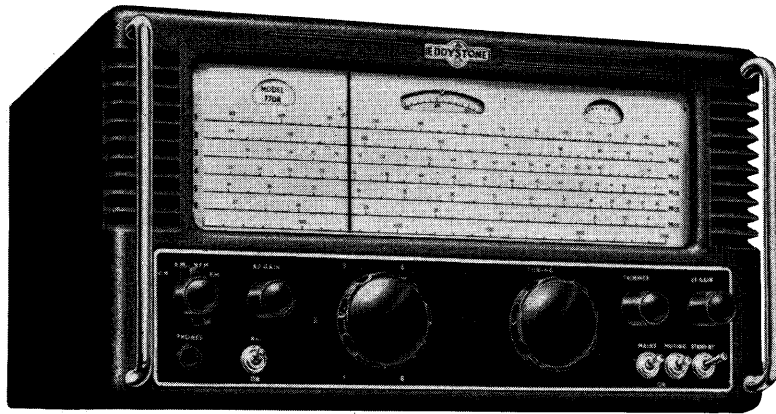
Quiescent	..	35 mA.	50mW output	..	65 mA
1 watt output	..	210 mA			

DIMENSIONS

Width $16\frac{7}{8}$ inches (43 cm.) : Depth 11 inches (28 cm.) : Height $8\frac{3}{4}$ inches (22.2 cm.). Weight is approximately 32 lbs. (14.5 kgs.).

FINISH

Modern styling and appearance. Two-tone grey finish.



MODEL "770R" VHF COMMUNICATIONS RECEIVER

Fully tunable over the range 19 Mc/s to 165 Mc/s, and having many applications in the communications and instrument fields.

The combination of six scales and a precision slow motion drive, with a reduction ratio of 140/1, permits relatively fine tuning. Many specially designed units are incorporated and an excellent performance results, throughout the range. Operation is from standard AC mains supplies.

FREQUENCY COVERAGE

Six position, diecast turret tuning assembly contains coils to give the following ranges :

Range 1	114 Mc/s to 165 Mc/s.	Range 4	39 Mc/s to 54 Mc/s.
Range 2	78 Mc/s to 114 Mc/s.	Range 5	27 Mc/s to 39 Mc/s.
Range 3	54 Mc/s to 78 Mc/s.	Range 6	19 Mc/s to 27 Mc/s.

CIRCUIT AND VALVES

The circuit is a single superhet, with a fully tuned RF stage. In all, nineteen preferred type valves and three germanium diodes are used.

SIGNAL MODES

The receiver accepts A1 : A2 : A3 and FM. On A1, a fixed BFO gives a preset beat of 1000 c/s. The two FM deviations are 15 kc/s narrow band, and 75 kc/s wide band. The degree of selectivity is automatically adjusted to suit the type of signal.

SENSITIVITY AND NOISE FACTOR

Sensitivity on A3, 50 mW output, 15 dB signal/noise, is better than 5 microvolts on all ranges. Noise factor varies from 5 dB on Range 1 to around 14 dB at high end of Range 6.

SELECTIVITY

AM	6 dB down	15 kc/s. off resonance.
	40 dB down	100 kc/s. off resonance.
FM (narrow band)	6 dB down	40 kc/s. off resonance.
	40 dB down	160 kc/s. off resonance.
FM (wide band)	6 dB down	150 kc/s. off resonance.
	40 dB down	350 kc/s. off resonance.

IMAGE RATIO

Approximately 20 dB at 165 Mc/s and correspondingly greater at lower frequencies.

STABILITY

Less than .003% per degree C and similar for a 5% change of mains voltage.

INPUT IMPEDANCE

75 ohms (co-axial socket).

AUDIO OUTPUT

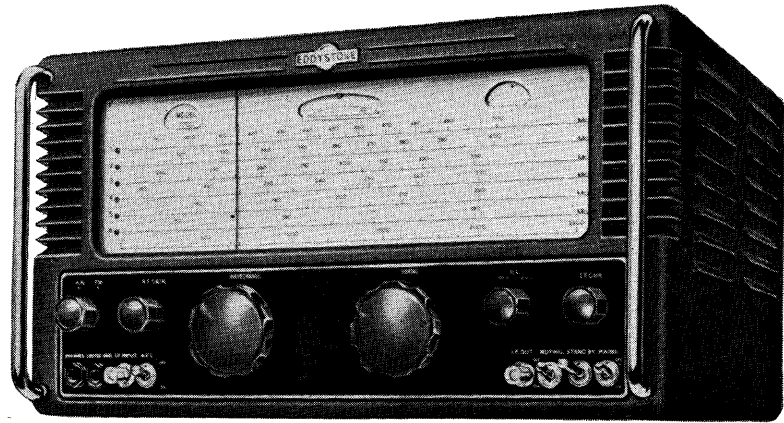
3 watts maximum into 2.5 ohms to terminals. 600 ohms balanced for line. Telephone jack on front panel.

PHYSICAL DETAILS

Weight 60 lbs. (27.3 kgs). Width 16 $\frac{3}{4}$ inches (42.5 cm). Depth 15 inches (38.1 cm). Height 8 $\frac{3}{4}$ inches (22.2 cm). Exterior finish, fine polychromatic wrinkle grey. Available in table mounting and rack mounting styles.

SERVICES REF. Nos.

Air Ministry : Type R.8309 Ref. No. 10D/19644. Admiralty : A.P. 103930.
Inter-Service : ZA 54511.



MODEL "770U" UHF COMMUNICATIONS RECEIVER

A versatile instrument having applications for communications, laboratory work, aerial survey and interference investigations. Coverage is continuous from 150 Mc/s to 500 Mc/s, using a specially developed six-position turret. Available in table and rack-mounting versions.

FREQUENCY COVERAGE	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.
CIRCUIT	The front end consists of a grounded grid RF amplifier; diode mixer ; 6AF4 oscillator on fundamental frequency. Then follow two IF amplifiers at 50 Mc/s; a double triode mixer ; and further I.F. amplification at 5.2 Mc/s. Other stages include FM limiter and discriminator ; muting ; noise limiting ; audio output. In all seventeen preferred type valves and four germanium diodes.	
INPUT IMPEDANCE	75 ohms (co-axial socket).	
SIGNAL MODES	AM (A3) and FM, with a deviation acceptance up to 40 kc/s.	
SENSITIVITY	Better than 10 microvolts, 15 dB signal/noise, 50 mW output, on all ranges.	
SELECTIVITY	6 dB down 20 kc/s off resonance.	40 dB down 100 kc/s off resonance.
IMAGE REJECTION	25 dB at 400 Mc/s.	40 dB at 200 Mc/s.
AUDIO OUTPUTS	0.5 watts into 2.5/3 ohms to terminals at rear. 600 ohm winding for line. Telephone jack on front panel.	
SPECIAL FEATURES	A low impedance output at intermediate frequency (5.2 Mc/s) is available and it is also possible to feed in a signal converted to the first intermediate frequency (50 Mc/s). Limiter grid current can be measured via a jack on the front panel and an "S" meter is included as an aid to tuning. An auxiliary socket permits operation from external power supplies. Normal AC mains power unit in the receiver uses "C" core components.	
PHYSICAL DETAILS	Weight 60 lbs. (27.3 kgs). Depth 15 inches (38.1 cm.) Width 16 3/4 inches (42.5 cm). Height 8 3/4 inches (22.2 cm.) Exterior finish is deep grey polychromatic wrinkle ; Available for rack or table mounting.	
SERVICES REF. Nos.	Air Ministry : Type R8719 Ref. 10D/20718.	Admiralty : A.P.103990.
	Inter-Service : ZA49206.	



MODEL "770S" UHF COMMUNICATIONS RECEIVER

This unique model is tunable over the range 500 Mc/s to 1000 Mc/s, and many advanced design features are included. The circuit is a double superheterodyne with a continuously tuned single-sweep UHF contact-less oscillator, plus a restricted range tunable second oscillator to allow adequate calibration and resolution. The RF stage incorporates a wide-band "Balun" transformer and a butterfly output circuit.

The receiver, which operates from normal mains supplies, accept AM, FM and pulse signals, and has the various outputs needed to cope with these modes of signal. A built-in crystal calibrator ensures a high order of tuning accuracy.

The receiver is strongly made, well finished with modern styling, and is suitable for table mounting or for fitting into a standard rack.

FREQUENCY COVERAGE

Continuous from 500 Mc/s to 1000 Mc/s. One scale is calibrated in tens of megacycles, whilst the larger horizontal scale covers 20 Mc/s. No switching is employed and the UHF oscillator has no variable metal-to-metal contact.

VALVE COMPLEMENT

A total of 30 standard valves is used, plus ten germanium diodes and also eight silicon rectifier diodes.

INPUT IMPEDANCE

50/70 ohms unbalanced to coaxial socket.

INTERMEDIATE FREQUENCIES

The first is centred on 160 Mc/s, but tunable over range 150 Mc/s to 170 Mc/s. Second intermediate frequency is 46.5 Mc/s.

OUTPUTS

First IF : 160 Mc/s \pm 10 Mc/s, 50/70 ohms unbalanced.

Second IF : 46.5 Mc/s, 50/70 ohms unbalanced, 3 Mc/s bandwidth.

Video : 10,000 ohms, low capacitance, 20 c/s to 3 Mc/s.

Audio : 0.5 watts into 2.5 ohms, to internal or external speaker; 600 ohms, balanced or unbalanced; telephone jack.

POWER SUPPLY

Standard AC mains 100/125 volts and 200/250 volts, 40/60 cycles.

SENSITIVITY

Approximately 10 microvolts absolute.

NOISE FACTOR

Of the order 20/25 dB.

IMAGE AND SPURIOUS RESPONSES

Attenuation of 20 dB minimum.

FM DEVIATION

Wide-band up to 1 Mc/s. Second position up to 250 kc/s.

OVERALL DIMENSIONS

Rack Mounting : Width 19" (48.3 cm.). Height 8 $\frac{3}{4}$ " (22.2 cm.).

Depth 20 $\frac{1}{8}$ " (51.1 cm.).

Table Model : Width 19 $\frac{1}{2}$ " (49.5 c.m.). Height 9 $\frac{7}{8}$ " (23.9 cm.).

Depth 20 $\frac{1}{8}$ " (51.1 cm.).

WEIGHT

Rack Mounting : 87 lbs. (39.5 kgs.).

Table Model : 99 lbs. (44.9 kgs.).

FINISH

Two-tone grey; chromium plated handles.