

**OF MAJOR INTEREST TO ALL RADIO ENTHUSIASTS**



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## **THE EDDYSTONE EC10**

### **Transistorised Communications Receiver**

#### **RUGGED • COMPACT • LIGHT**

The Eddystone "EC10" Receiver is a transistorised communications model of compact dimensions and intended for operation from its own internal battery supply. Five ranges give continuous coverage from 550 kc/s to 30 Mc/s, and included are the medium wave broadcast band, the marine band from 1500 kc/s to 3000 kc/s, and all the short wave broadcast bands. Also available are six amateur bands from 160 metres to 10 metres.

The "EC10" accepts normal AM signals and CW telegraphy, a special filter being provided to increase selectivity in the latter mode. Although not designed for single sideband operation, signals in this mode can be received by appropriate setting of the BFO for carrier insertion. The sensitivity is high and an excellent and consistent performance is realised on all ranges.

Features standard to Eddystone receivers are incorporated in this new model. The flywheel-loaded tuning knob controls a finely engineered gear drive with a reduction ratio of 110 to 1, resulting in smooth precise tuning. The main scales occupy a length of nine inches and are clearly marked directly in fre-

quency to an accuracy of calibration within 1%. Tuning to a given frequency is therefore relatively easy and an auxiliary logging scale permits dial settings of preferred stations to be recorded for future reference.

Alternative aerial sockets are provided, allowing the use of a really good aerial system where circumstances permit, or of a short rod or wire where nothing better can be arranged. An internal speaker is fitted and a telephone headset can be used where preferred.

Power is derived from six U2 type cells housed in a separate detachable compartment. Current drain—and hence battery life—is dependent on the audio output. For long life, it is recommended that the HP2 heavy duty type of cell be fitted. An alternative mains-operated power supply unit is also available.

The receiver is housed in a metal cabinet and, with robust construction throughout, it will stand up to hard usage over a long period with a high degree of reliability. Chromium plated handles are fitted on the panel and the finish is an attractive two tone grey.

**FOR PROFESSIONAL AND AMATEUR USE**

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# TECHNICAL SPECIFICATION OF THE "EC 10"

**Frequency Coverage** (550 kc/s to 30 Mc/s) as follows:—

Range 1	18.0 Mc/s to	30.0 Mc/s.
Range 2	8.5 Mc/s to	18.0 Mc/s.
Range 3	3.5 Mc/s to	8.5 Mc/s.
Range 4	1.5 Mc/s to	3.5 Mc/s.
Range 5	550 kc/s to	1500 kc/s.

## Transistor Complement

Ref	Type	Circuit Function
TR1	OC171	RF Amplifier
TR2	OC171	Mixer
TR3	OC171	Local Oscillator
TR4	OC171	1st IF Amplifier
TR5	OC171	2nd IF Amplifier
TR6	OC171	Beat Frequency Oscillator
TR7	OC71	Audio Amplifier
TR8	OC83	Audio Driver
TR9/10	2 x OC83	Push-Pull Audio Output
D1	OA70	AGC Attenuator diode
D2	OA90	Detector and AGC
D3	OAZ203	Voltage Stabiliser

**Power Supply** is derived from six U2 type cells housed in a separate detachable compartment which is readily accessible from the rear. Current drain depends on the audio output, being 36mA quiescent, 77mA at 50 milliwatts output, and 180mA at 500 milliwatts.

The dial lamps add an additional 90mA to the normal current drain. Voltages to parts of the circuit are stabilised with a Zener diode.

**Operation from AC mains.** The Cat. No. 924 Power Supply Unit is interchangeable with the standard battery unit and operates from 100/125 or 200/250 volt AC mains. The unit delivers 9 volts (stabilised) at up to 200 mA.

**Tuning Arrangements.** The scales are horizontal, occupying a length of approximately nine inches. Frequencies are clearly marked to a calibration accuracy within 1%. The tuning control is flywheel-loaded and operates a gear drive with a reduction ratio of 110 to 1. A logging scale and auxiliary vernier allow dial settings to be recorded.

**Controls.** Independent RF and AF gain controls enable the gain to be balanced to suit strong or weak signals. As shown in the illustration, some of the controls are of the push-button type. Points are indicated for setting the BFO pitch control for reception of upper and lower sideband signals.

## Aerial Input Impedance

Ranges 1 to 4 75 ohms (nominal) balanced or unbalanced.

Range 5 400 ohms (nominal) balanced or unbalanced.

A high impedance input connection is provided for use on all ranges and is suitable for use with a short rod or whip aerial.

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**Sensitivity** for 15dB s/n ratio is better than 5 microvolts on Ranges 1 to 4 and better than 15 microvolts on Range 5 (550-1500 kc/s).

**I.F. Selectivity.** The intermediate frequency is 465 kc/s. The selectivity is fixed to give a bandwidth of 5 kc/s at the 6 dB points and 25 kc/s at the 40 dB points.

**Spurious Responses.** The image rejection is approximately 50 dB at 2 Mc/s and 20 dB at 18 Mc/s. Breakthrough at the intermediate frequency is greater than 85 dB down on ranges 1 to 4, and greater than 65dB down on range 5.

**AGC Characteristic.** The audio output level does not change by more than 15dB when the input level is increased by 80 dB above 6 microvolts. (Taken at 2 Mc/s on range 4).

**Audio Output** approaches 1 watt maximum. A 5" diameter speaker is built in, and a jack is provided on the panel for telephones. Recommended headsets are the Eddystone Cat. No. LP 2924 and LP 2921

Frequency response is level over the normal audio

frequency range, except when the audio filter is in use. This filter is intended for CW reception, and resonates at 1000 c/s, the bandwidth being approximately 180 c/s at 6 dB points.

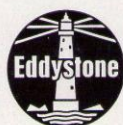
**Construction.** The receiver is housed in a metal cabinet and construction is robust throughout. Chromium plated handles are fitted and the finish is an attractive two-tone grey. High quality components and printed circuit techniques are incorporated, and the receiver is suitable for use in all parts of the world.

## Dimensions and Weight

Height	6 $\frac{3}{8}$ in. (16.2 cm)	Weight (less batteries)
Width	12 $\frac{1}{2}$ in. (31.7 cm)	12 $\frac{3}{4}$ lb. (5.8 kg)
Depth	8 in. (20.3 cm)	Weight (with batteries)
		14 lb. (6.3 kg)

**Instruction Manual and Guarantee.** A comprehensive instruction manual is supplied and our usual 12 month guarantee applies.

*In the interests of continued improvement, we reserve the right to amend this specification without notice.*



Printed in England

Manufacturers

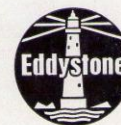
**EDDYSTONE RADIO LTD.**

ALVECHURCH ROAD, BIRMINGHAM 31

Telephone: PRIORY 2231

Cables: EDDYSTONE, BIRMINGHAM

Telex: 33708



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