

## Eddystone Radio Limited

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# Transistorized Marine Communication Receivers

## EC10A2 Series

**General Description** Receivers in the EC10A2 Series are primarily intended for use on small sea-going vessels but are equally suited to many other applications in the maritime field. Full coverage of the HF Band from 1.5MHz to 30MHz is available, together with the 300-550kHz Marine Band. Instant selection of the International Distress and Calling Channel (2182kHz) is provided by a built-in crystal controlled converter unit.

Thirteen transistors and seven diodes are employed in the solid-state single-conversion circuit which includes a BFO, audio filter for CW reception, an efficient AGC system, separate RF and AF gain controls, 600Ω line output to feed a remote listening position and provision for desensitizing when used in conjunction with an associated transmitter.

The receiver can be operated from 12V or 24V DC supplies with positive or negative earthing. Zener regulation is employed throughout.

Three versions of the EC10A2 receiver are currently available, one for bench-mounting and two suitable for installation in standard 19-in racking. Type designations are as follows:

- EC10A2/1: Standard bench-mounting version with integral cabinet loudspeaker.
- EC10A2/2: Standard rack-mounting version with single panel-mounted loudspeaker.
- EC10A2/3: Special rack-mounting version with two panel-mounted loudspeakers, one of which is available for use with ship intercommunications systems, etc. The internal cabinet loudspeaker is retained to facilitate conversion to EC10A2/1 (bench-mounting).

**Solid-state design**

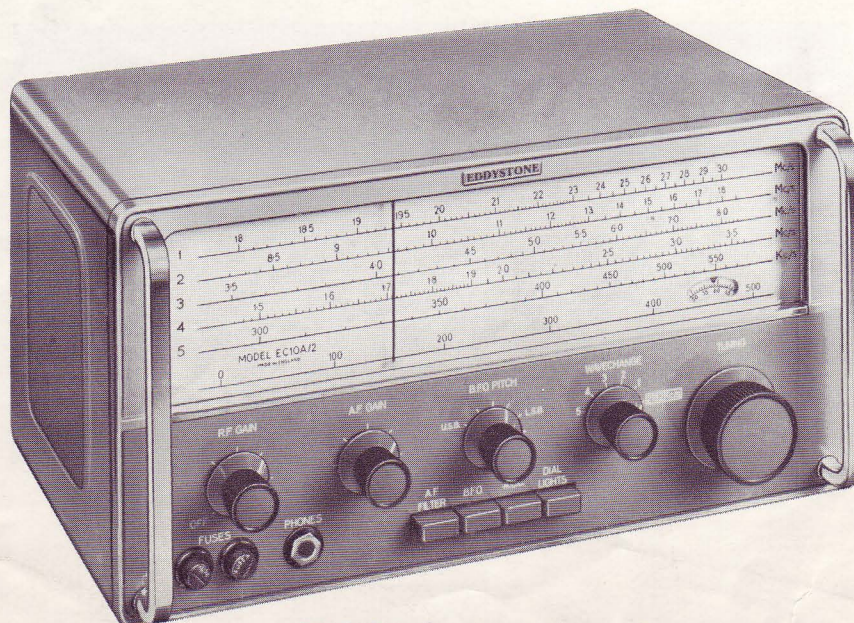
**Compact size**

**Rack or bench  
versions**

**Integral speaker**

**2182kHz facility**

**12V or 24V  
operation**



EC10A2/1: Bench-mounting version

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### Performance Summary

#### Input impedance

Aerial: 75 $\Omega$  except Range 5 (400 $\Omega$ )

#### Frequency coverage

Range 1: 18.0–30.0MHz

Range 2: 8.5–18.0MHz

Range 3: 3.5–8.5MHz

Range 4: 1.5–3.5MHz

Range 5: 300–550kHz

Sixth position of Range Switch selects crystal controlled converter for 2182kHz

#### Stability

1 part in 10<sup>4</sup>/°C. 2 parts in 10<sup>5</sup>/°C at 2182kHz.

#### Calibration accuracy

1% on all ranges.

#### Reception modes

CW–MCW–AM (Audio filter and tunable BFO for CW reception).

#### Sensitivity

Ranges 1–4 and 2182kHz: 5 $\mu$ V for 15dB S/N.

Range 5: 15 $\mu$ V for 15dB S/N.

#### Image rejection

25dB at 18MHz, 55dB at 2MHz.

#### IF rejection

85dB on Ranges 1–4 and 2182kHz.

65dB on Range 5.

#### Intermediate frequency

720kHz.

#### Selectivity

7kHz B/W at –6dB, 30kHz at –40dB.

#### AGC characteristic

Less than 12dB change in output for 80dB increase in input level.

#### Audio output

Loudspeaker (3 $\Omega$ ): 1W max. 800mW at 10% distortion.

Line: 600 $\Omega$  (balanced or unbalanced).

Headset: Low/medium-Z.

Response: Within 6dB 300Hz–8kHz.

CW Filter: 6dB B/W of 180Hz.

#### Power supplies

Integral voltage converter unit to suit external DC supply of 12V or 24V (pos. or neg. earthing).

#### Controls

Tuning, Range Switch, RF Gain/Supply Switch, AF Gain, BFO Pitch, BFO On/Off, AGC, AF Filter, Dial Light Switch.

#### Overall dimensions

EC10A2/1

Width: 12.5in (31.7cm)

Height: 6.375in (16.2cm)

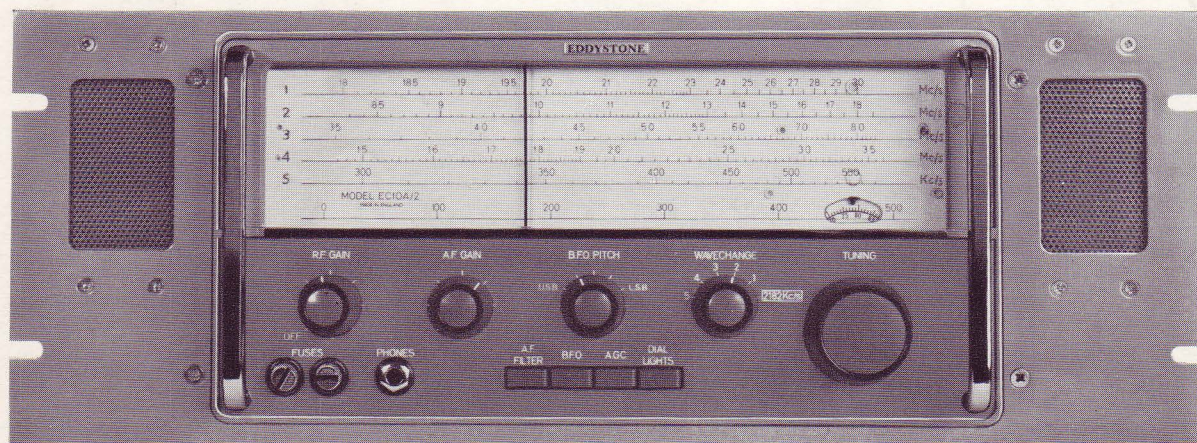
Depth: 8in (20.3cm)

Weight: 14lb (6.3kg)

EC10A2/2 and EC10A2/3

Panel: 19in  $\times$  7in (48.2  $\times$  17.7cm)

Weight: 16.25lb (7.4kg)



EC10A2/2: Rack-mounting version