



HF SSB Mobile Radio-Telephone (10 W) Type H 4100

THE great advantages of single-sideband HF communication are made available to the mobile user in the Type H 4100 radio-telephone. Its power output of 10 watts p.e.p. is equivalent in effect to at least 80 watts from a normal double-sideband set.

As well as power economy SSB provides the additional advantages of improved reception quality, less selective fading and 50% conservation of frequency space.

Features

- Four crystal-controlled channels.
- Lowest possible battery drain.
- Simple to instal in any vehicle or vessel.
- Suitable for seismic exploration.
- Can be used in any part of the world.

EQUIPMENT

The equipment consists of three separate units, the main transmitter/receiver unit, the control unit and an aerial matching unit. The small control unit can be mounted under a dash-board or in a deck-house etc., while the main transmitter/receiver is stowed in a suitable out-of-the-way position, such as in the boot of a vehicle. Accessibility and ease of maintenance have been emphasized in the design, and operation is very simple.

Modern circuit techniques have been employed. The power pack is transistorized and transistors are also used extensively in the AF stages to ensure maximum battery economy.

Special attention has been paid to the need for shot-blast synchronization in seismic exploration, and a suitable circuit has been included.

Data Summary

GENERAL

- Frequency range:** 3–12 Mc/s.
- Channels:** Channels 1 & 2 3–6 Mc/s.
Channels 3 & 4 6–12 Mc/s.



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Types of emission and reception:

Telephony – SSB, suppressed or full carrier.

Sideband: Lower. (Upper to special order.)

Overall AF response: Within 3 dB, 500–3000 c/s.

Aerials: Whip aerials less than $\frac{1}{4}$ wavelength at highest operating frequency can be employed.

Power supply: 12 V DC.

Power consumption: 36 W (max.)

TRANSMITTER

Power output: 10 watts p.e.p.

Unwanted sideband suppression: 50 dB.

Carrier suppression: 50 dB.

Frequency stability: 5 parts in 10^6 .

RECEIVER

Sensitivity: Better than $5 \mu\text{V}$ for 0.5 W output.

Signal-to-noise ratio: Better than 30 dB for $5 \mu\text{V}$ input.

Image ratio: Better than 50 dB.

Selectivity:

2.8 kc/s at –6 dB.

4 kc/s at –40 dB.

Audio output: 1 W (loudspeaker) and 10 mW (phones).

Dimensions (approx.):

Transmitter/receiver unit:

Height	Width	Depth	Weight
9 in.	16½ in.	13 in.	25 lb
(23 cm)	(42 cm)	(33 cm)	(11 kg)

Control unit:

4 in.	8 in.	9 in.	8 lb
(10 cm)	(20 cm)	(23 cm)	(3.6 kg)

Aerial matching unit:

9 in.	Diameter 6½ in.	5 lb
(23 cm)	(17 cm)	(2.3 kg)

NOTE. Performance details are subject to confirmation at the time of ordering.

This equipment is designed and manufactured for Marconi's by Racal Engineering Ltd.

Marconi

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