

TECHNICAL SPECIFICATION

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Frequency range	2MHz to 512MHz
Tuning	Numerical frequency entry. Frequency can also be stepped in pre-programmed steps or fine-tuned with UP/DOWN pushbuttons.
Frequency Standard	Internal 9420 Standard (optional) Frequency: 5MHz Ageing rate: 5×10^{10} per day Warm-up time: 20 minutes Initial accuracy ± 4.2 parts in 10^8 over the temperature range. External: Operators from any sub-multiple of 20MHz, from 5MHz down to and including 100kHz. Input level 0dBm ± 5 dB into 50 ohms.
Modes of Operation	CW (A1A) MCW (A2A) AM (A3E) FM (F3E) SSB (R3E, H3E, J3E, R2A, H2A, J2A)
Antenna Input	(a) Input impedance 50 ohms (b) VSWR 3:1 maximum
Noise Figure	15dB maximum over the frequency range 10MHz to 512MHz.
Audio Output	(a) 200mW for connection to an external 8 ohm loudspeaker. (b) Line output, 1mW into 600 Ohms, balanced. Output level adjustable by internal preset control. (c) Phone output, 1mW into 600 Ohms.

IF Output	<p>(a) 21.4MHz (IF2), 3MHz wide, level dependent on received signal strength and receiver AGC characteristic.</p> <p>(b) 1.4MHz (IF3), filtered, 100mV r.m.s. into 50 ohms not applicable in SSB mode.</p>
Video Output	1 volt peak-to-peak into 75 ohms.
Video Response	Within 6dB from 100Hz to 150KHz.
Hum and Noise	At least 35dB S+N/N ratio for 70% modulated AM signal.
Re-radiation	Not greater than 10 μ V across a 50 ohm termination at the antenna input, up to 1GHz.
Carrier Operated Relay	Operating threshold adjustable by IF GAIN control.
Audio Squelch	Audio output is muted when signal falls below pre-determined level.
Selectivity	<p>The following nominal filter bandwidths are available as standard:</p> <p>300Hz 1.2kHz 3kHz (always selected for SSB) 8kHz 15kHz 30kHz 300kHz</p>
AGC	(a) Range: An increase in antenna input of 100dB shall produce an output change of less than 3dB.

(b) Time constants (nominal):
automatically selected with MODE,
as follows:

AM and FM: Attack 30ms
Decay 300ms

SSB and CW: Attack 5ms
Delay before hang
100ms
Hang 2 seconds
Delay 1 second

Gain Control

Control range 100dB. AGC is operative when the manual IF GAIN control is in use but only operates on signals above the level set by the IF GAIN control. This setting also controls the threshold of COR and squelch functions.

Audio Muting

Reduces audio line output to less than -40dBm by earthing a control line.

BFO

Programmable off-set for CW. Tuneable in 10Hz steps from front panel over the range $\pm 7.79\text{kHz}$.

Intermodulation Products

Third-order intercept point 0dBm.
(10MHz to 512MHz)

Power Supply

24V nominal

Power Consumption

Typically 40 watts

Environmental Requirements

Def. Stan. 07-55 as applicable to wheeled and tracked vehicles, trailers and shelters, for use anywhere in the world.

Temperature

-10°C to +70°C operating
-40°C to +70°C storage

Reduced Specification

-10°C to +45°C to achieve specified frequency stability when an internal standard is fitted.

Relative Humidity

95% at 35°C 12 hours cycling to 20°C
6 hours saturation.

Vibration

5 to 13Hz 6mm displacement 11 to 500Hz
1.5g peak acceleration. Duration 6
hours in vertical axis only.

Dimensions

Height: 204mm (8 in)
Width: 254mm (10 in)
Depth: 381mm (15 in)

Weight

14kg (30 lb) maximum