

IMARK

PRODUCT DESCRIPTION



5208R-AC REPEATER

5208R-AC Repeater in 19" 3RU Equipment Cabinet for installation at Repeater Sites
Imark Stock # [930116](#)

Features:

- 3RU Cabinet
- Power Supply with Battery Backup Facility
- Two Kyodo KG108 or KG208 Transceivers
- Can be configured as a Transponder
- Full Local Control

DESCRIPTION:

The Imark 5208R has been specifically designed to provide a low cost versatile repeater or transponder using two 25-Watt mobile radios. It is a self-contained unit incorporating transceivers, power supply, and interface module and only requires the addition of a diplexer, an antenna and feeder cable to be operational. The Power Supply Module incorporates an AC Mains SM Power Supply with battery back-up facility and automatic changeover facility. The 5208R can be supplied without the Power Supply as an option at reduced cost for installation at solar powered equipment sites

The 5208R includes two Kyodo KG108 or KG208 25 Watt mobile transceivers and an audio interface/switching module. The Kyodo KG108/208 transceivers are available for any FM frequency between 66 MHz and 520 MHz, have channel capacities of up to 200 channels, and include CTCSS encoders and decoders that can be programmed for different CTCSS tones on a per channel basis.

The RF Power output can be set anywhere between 1 and 25 watts with two fixed outputs being available on a per channel basis. Thus, the transceivers can be pre-programmed with all likely repeater channels, so that the 5208R can be deployed immediately without wasting time to program the transceivers.

The Audio Interface/Switching Unit is included to provide the correct audio levels between the two transceivers.

The 5208R cabinet is designed for 19" rack mounting and is 3RU in height. The cabinet features all steel construction and is fitted with handles to assist with manoeuvrability and with site location. The Imark 5208R-AC Repeater is normally supplied with the Power Supply, Transceivers for the required frequency band, and the necessary Interface/switching module.

SPECIFICATIONS:	
General	Details
Number of Channels	Up to 200
Channel Spacing	12.5KHz, 20KHz, 25KHz, or 30KHz (5/6.25/10/12.5 KHz PLL steps)
Operation Mode	Repeater or Cross Band Translator
Antenna Impedance	50Ω Unbalanced
Current Consumption	700mA (Standby), 5.9 Amps (Repeat Mode) @ 25 Watts, 1.9 Amps (Repeater Mode) @ 1 Watt, & 12 Volts DC
Transmitter	
RF Power Output	Two settings between 1 and 25 Watts on a per Channel basis
Maximum Frequency Deviation	Wide band: ± 5 KHz, Narrow Band: ± 2.5 KHz, Channel Selectable
Frequency Stability	Wide Band: $\pm 0.0005\%$, Narrow band: $\pm 0.0003\%$
Frequency Response	Within +1, -3dB of 6dB/Octave pre-emphasis from 0.3 to 3.0KHz, 1 KHz reference
Signal To Noise Ratio	Wide Band: More than 50dB at 1 KHz 70% Modulation Narrow Band: More than 45dB at 1 KHz 70% Modulation
Modulation Distortion	Less than 3% at 1 KHz 70% Modulation
Spurious and Harmonics	More than 70dB below rated power

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Receiver	
Intermediate Frequencies	1 st IF: 48.5 MHz, 2 nd IF: 455 KHz
Frequency Stability	Wide Band: $\pm 0.0005\%$, Narrow band: $\pm 0.0003\%$
Sensitivity	Less than 0.4 μ V for 20 dB noise quieting Less than 0.3 μ V for 12 dB SINAD

Receiver (cont.)	
Squelch Sensitivity	Less than 0.25 μ V
Selectivity	More than 70dB at ± 25 KHz
Blocking	More than 90 dB
Intermodulation	More than 70 dB
Spurious Response	More than 70 dB
AF Response	Within +1, -3dB of 6dB/Octave de-emphasis from 0.3 to 3.0 KHz, 1 KHz reference
AF Distortion	Less than 5% at 1 KHz 70% modulation
Signal to Noise Ratio	Wide band: More than 50dB at 1 KHz 70% modulation Narrow Band: More than 45dB at 1 KHz 70% modulation

Power Supply Module	
AC Input Voltage	240 \pm 20% Volts AC 48 - 62 Hz. (Others available upon request)
Output Voltage	13.65 Volt DC
Power Supply Current	10 Amps at 13.65 \pm 2% Volts DC
Over Voltage Protection	14.5 - 16.5 Volts
Over Current Protection	10.55A \pm 0.45 Amps
Low Voltage Battery Release	9.8 Volts - 10.6 Volts

Physical	
Unit Dimensions	483 (W) x 343 (D) x 132 (H) mm (excluding protrusions)
Shipping Dimensions	570 (W) x 540 (D) x 315 (H) mm
5208R-AC Weight:	12 Kg's
Shipping Weight:	14.6 Kg's
Approvals	
Inclusions	Operators Manual, AC Cable, Transceivers, Power Supply
Options	Automatic Identification Module, Lightning Protection, Transient Barrier, Back-Up Batteries