



RTV-1124

VHF COAST STATION FOR GMDSS



ELMAN

HI-TECH COMMUNICATIONS
SINCE 1975

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RTV-1124 is an all-in-one marine VHF transceiver supporting narrowband FM/PM mode (with channel spacing of 25 kHz or 12,5 kHz) designed to comply with the GMDSS requirements for safety and general communications. In addition to voice communication, the RTV-1124 includes DSC capability.

RTV-1124 has a form factor that enables installation into a standard 4-unit rack-mountable module named THU-1124. Each THU-1124 can contain up to 4 radios.

RTV-1124 can be provided with 100 W RF power option when combined with the RPA-1124 module, which can be fitted inside the THU-1124.

FEATURES

Full IP connectivity

Wide range of implemented protocols: independent TCP/IP connections (remote client or server), SNMP, SNTF, TFTP for automatic firmware upgrade, HTTP for Web access and remote management.

VoIP

Customizable VoIP session for audio streaming (including multicast) and full-IP remote control.

Remote control via RS232 and RS422

Fully concurrent with IP and VoIP control.

BITE

Self-monitoring of internal parameters and auto-recovering when fault condition disappears (non-volatile alarm log memory). Alarm signalling on TCP/IP connections, RS232 and RS422, SNMP traps.

Built-in DSC modem

Internal modem can be controlled through TCP/IP connections, RS232 and RS422.

Data-link function

9600 bit/s on 25 kHz channels.

Full-duplex capable

Voice encryption

600-Ohm dedicated analog input, output and recorder lines

On-site operation

Keyboard, display and microphone plug for quick on-site tests.

Modularity

High modularity for easy maintenance.

Resilience

External structure in aluminium with high immunity to shock and vibrations.



ELMAN S.r.l.

Via di Valle Caia, 37
Zona Industriale S. Palomba
00071 Pomezia - Rome - Italy

Ph: +39.069194405
Fax: +39.069194306
e-mail: elman@elmansrl.it

www.elmansrl.com

GENERAL SPECIFICATIONS

| | |
|-------------------------|---------------------------|
| Frequency range | 156.025 ÷ 162.025 MHz |
| Extended optional range | 146 ÷ 174 MHz |
| Channel spacing | 25 kHz and 12.5 kHz |
| Modulation type | PM (G3E), DSC (G2B) |
| Frequency accuracy | Better than 1 ppm |
| Switching time Rx/Tx | 10 ms |
| Power supply | 19.6 ÷ 31.2 Vdc |
| Dimensions (H x W x D) | 173 x 96 x 277 mm |
| Weight | 2.5 kg |
| Operating temperature | - 20° ÷ + 55° C |
| Storage temperature | - 40° ÷ + 70° C |
| Humidity | 95% with T: +25° ÷ +55° C |

TRANSMITTER SPECIFICATIONS

| | |
|------------------------|--|
| RF Power | Adjustable 1 ÷ 50 W ± 1.5 dB |
| Antenna port impedance | 50 Ω |
| Audio bandwidth | 300 ÷ 3000 Hz (25 kHz) 300 ÷ 2550 Hz (12.5 kHz) |
| Spurious emissions | < 0.25 µW (-36 dBm) |
| AF distortion | < 5 % |

RECEIVER SPECIFICATIONS

| | |
|--------------------------------------|--|
| Sensitivity | ≤ 0.25 µV (-119 dBm) @ 20 dB SINAD dual antenna |
| Selectivity | ≥ 70 dB |
| Protection against spurious response | ≥ 80 dB |
| Protection against intermodulation | ≥ 85 dB |
| Spurious emission | ≤ 2 nW (-57 dBm) |
| Receiver SNR | ≥ 40 dB |
| Audio bandwidth | 300 ÷ 3000 Hz (25 kHz) 300 ÷ 2550 Hz (12.5 kHz) |
| AF distortion | < 5 % |

STANDARDS

EN 60950-1 (2006), EN 60950-1 (2006) / A11 (2009)
EN 60945 (2002)
EN 301 489-1 V1.6.1 (2005-09), EN 301 489-5 V1.3.1 (2002-08)
EN 301 929-1 V1.2.1 (2007-02)
EN 301 929-2 V1.2.1 (2007-02)
ITU-R M.493-14, ITU-R M.541-10

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