

# Codan Military HF Transceiver NGT MR

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### **RUGGED DESIGN**

The NGT™ MR meets or exceeds environmental specifications for shock, vibration and blowing dust. In addition to MIL-STD-810F, the RF unit is IP52 rated and the handset is IP41 rated. It also provides complete protection against reverse polarity, over voltage, antenna mismatch and temperature.

### **VOICE ENCRYPTION**

Voice security is provided through an optional voice encryption module, which is fitted inside the NGT™ MR. The encryption is based on a 128-bit digital algorithm to meet the unique demands of HF propagation. Up to 98 eight-bit user programmable key codes are available to enable 10E10000 key code combinations. These keys are never transmitted on-air and as a result cannot be intercepted. To start Secure Mode users simply press the SEC button on the handset. The NGT™ MR offers an additional level of security once a secure voice link is in session via a predefined 4 digit PIN. The two or more parties involved in communication enter the known 4 digit PIN at any time to create a separate secure session. Also, users do not have to synchronize at the beginning or during a secure session. This eliminates delays and means that there is no limit to the number of participants. Management and programming of keys is simple through Windows® terminal-based software.



## INNOVATIVE USER INTERFACE

Codan's cleverly designed NGT™ MR Handset and intuitive interface provides many benefits over traditional removable front panel designs. Its small size and light weight make it simple to install in many locations, especially in vehicles where space is limited. The menu system includes a call address list and the keypad is arranged like a mobile phone to ensure that radio operation is simple, familiar and intuitive. With convenient access to the RS232 port, located on the base of the Handset, users will find it quick and easy to program the RF unit.

## SPECIFICATIONS

Channel capacity	400 channels 600 channels when MIL-STD-188-141B ALE is enabled
Frequency range	Transmit: 1.6 to 30 MHz Receive: 250 kHz to 30 MHz
Operating mode	Single sideband (J3E) USB and LSB or switched USB/LSB, AM, H3E (optional), CW, FSK
Transmitted power	High Power: 125 W PEP / 100 W PEP (optional) Low Power: 10 W PEP
Spurious and harmonic emissions	Better than 65 dB below PEP
Receiver sensitivity	Frequency: RF amp off: 0.25 to 30 MHz 1.25 $\mu$ V PD -105 dBm Frequency: RF amp on: 1.6 to 30 MHz 0.12 $\mu$ V PD -125 dBm For 10 dB SINAD with greater than 50 mW audio output
Selectivity	Greater than 70 dB at -1 kHz and +4 kHz reference suppressed carrier frequency USB Pass Band: -6 dB 300 to 2600 Hz Ripple: -2 dB 500 to 2500 Hz
Frequency stability	$\pm 0.3$ ppm (-30 to +60°C)
Supply voltage	12 V DC nominal, negative earth Normal operating range: 10.8 to 15.5 V DC Reverse polarity protection provided
Overvoltage protection	Shutdown at 16 V DC (nominal) for duration of overvoltage
Supply current requirements	Receive: (no signal) 630 mA (nominal) Transmit: J3E voice: 6 A average J3E two-tone: 9 to 16 A (depending on frequencies)
Frequency Hopping	Hop Rate: 6/12/25 hops per second (user programmable) Security: 128 bit

	Number of Hop Plans: 32 Key Code length: 18 digits PIN length: 10 digits
Voice encryption	Security: 128 bits Key Code length: 18 digits PIN length: 4 digits
Size and weight	2012 RF Unit (excluding vehicle mounting frame):210 mm W x 270 mm D x 65 mm H; 3.3 kg 2020 Handset: 65 mm W x 35 mm D x 130 mm H; 0.3 kg Handset and Speaker Connector: 135 mm W x 117 mm D x 38 mm H
Sealing	2012 RF Unit: IP52 2020 Handset: IP41 Handset and Speaker Connector: IP41
Environmental	MIL-STD-810F Dust: method 510.4 Shock: method 514.5 Vibration: method 516.5

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