NGT *VR*
transceiver

Codan's NGT *VR* provides comprehensive solutions to suit your communication needs. The NGT *VR* transceiver is suitable for base station and vehicle applications. The transceiver incorporates all the usual features of Codan's leading-edge High Frequency (HF) radio technology, and also features an innovative handset and *Easitalk* as standard. Codan Automated Link Establishment (ALE) capabilities, voice encryption, phone calling features, and remote diagnostics/configuration are optional.

KEY FEATURES

Innovative handset

The handset can access all programming and procedures in a convenient and consistent manner. It provides an advanced interface, more efficient operation and easier network management.

Users can program channels, functions and addresses into the handset to meet their own requirements. These functions can then be accessed via a series of hot keys. A built-in address book can store up to 100 addresses that can be easily retrieved via the menu.

The handset may be mounted in any position that makes viewing easier. The handset provides a comprehensive display of information.

Emergency selcall

As Codan transceivers are often used in places where safety of life is at risk, the NGT *VR* has a unique emergency calling facility. A distress signal can be sent automatically to selected stations.

Multiple channels

The NGT *VR* has a capacity for 20 channels.

Easy installation

Every aspect of the NGT *VR* has been designed for easy installation in fixed and mobile environments. The unit is small and convenient to mount.

Smart monitoring

A variety of channels can be monitored while the radio is muted, and calls can be received on any of the channels being scanned.

Free tune receiver

Free tune receiver mode enables you to tune into any frequency and store it as a channel with your own label. Also, users can listen to AM stations, short-wave broadcasts and more.

Testing and protection

All Codan transceivers are fully protected from faults such as antenna damage, overvoltage and reverse polarity, which can destroy other transceivers. A three year warranty is available to every registered user.

OTHER FEATURES

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High dynamic range Rx

The high dynamic range of the NGT receiver provides better reception in difficult conditions.

Voice Encryption

The optional *Voice Encryptor* provides communication security (COMSEC) and enables users to communicate sensitive information in confidence, without complicated setup procedures. It also provides visual confirmation that the conversation is secure.

Remote diagnostics/ configuration

With Remote Diagnostics your radio installation can be tested remotely by another station to measure parameters such as signal strength, battery voltage levels and power.

It is also possible to remotely reconfigure most transceiver parameters including a facility to disable the transceiver.

Service and support

All Codan customers are supported with our worldwide network of Accredited Service Centres. Regular auditing and training by Codan technical staff ensure the best after sales service.

Automatic Link Establishment (ALE)

To automatically select the most suitable channel, ALE is available as an option. Codan ALE provides full interoperability with other equipment compliant with FED-STD-1045 ALE.

In addition, Codan transceivers outperform many conventional ALE systems through the use of Codan Automated Link Management (CALM).

CALM provides the following additional capabilities and features:

➤ Multiple networks can be scanned simultaneously at a scan rate of 8 channels per second. This enables up to 3 times more channels to be scanned in the same time as other ALE systems.

➤ A profile of channel characteristics is developed over time using a 24 hour based Link Quality Analysis (LQA) database, which has over 7 times more storage capacity and uses a higher data resolution than conventional ALE systems. This significantly reduces sounding activities and enables the transceiver to select a suitable channel at any time of the day from the moment it is switched on.

➤ The Listen-Before-Transmit capability detects both voice and ALE activities on the channel before initiating ALE. This avoids interfering on channels that are engaged.

Easitalk

The NGT *VR* uses Digital Signal Processing techniques to process received audio signals to minimise the effect of interference and reduce noise. *Easitalk* is simple to operate and extensive testing has shown that its performance is not affected by the language of the user.

BITE

Built-In Test Equipment (BITE) is a process that can be initiated by the user to test and report on certain aspects of the system's performance.

Calling facilities

The NGT *VR* comes standard with selective calling and optionally supports phone calling, and remote diagnostics and configuration. All incoming calls are time-stamped to identify precisely when each call arrived.

Selcall: Selcall gives users more flexibility. An operator can call a single transceiver and only that unit will respond—no more listening to noise while waiting for a call. The called transceiver will also signal that the message has been received.

Phone call: This optional function enables the transceiver to make telephone calls via suitable bases equipped with a telephone interconnect.

SPECIFICATIONS

Frequency range	1.6–30 MHz Tx, 250 kHz – 30 MHz Rx
Channel capacity	20 channels
Operating mode	Single sideband (J3E, USB, LSB, AM)
Frequency stability	±0.3 ppm (−30 to +60°C)
Primary voltage	12 V DC nominal, negative earth
Primary power	2011 Receive (no signal): 0.7 A Transmit: J3E voice: 6 A J3E two-tone: 10–14 A
Receiver sensitivity	−125 dBm (10 dB SINAD)
Transmitting power	125 watts PEP
Spurious and harmonic emissions	Better than 65 dB below PEP
Temperature	−30 to +60°C
Size and weight	2011 RF Unit: 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
ALE link quality data	24 hours of up to 100 stations and 100 channels using a total of 72675 discrete sets of LQA data
ALE link quality data resolution	Local: 8 bits SINAD, 8 bits BER Remote: 5 bits SINAD, 5 bits BER
Dust	MIL-STD-810F method 510.4
Vibration	MIL-STD-810F method 514.5
Shock	MIL-STD-810F method 516.5

OPTIONS/ACCESSORIES

Option	Purpose
CALM	FED-STD-1045 ALE/CALM
D	Remote Diagnostics
P	Phone call
COMSEC	*Voice Encryptor*
CONSOLE	NGT Desk console for base station use

NGT VR with optional desk console for use in base stations

Values noted are typical. Equipment descriptions and specifications are subject to change without notice or obligation. NGT®, CALM® and *Easitalk*® are registered trademarks of Codan Limited.

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