

Voice Encryptor for HF radio communications

Codan's *Voice Encryptor* option for NGT transceivers is a simple, practical and affordable solution for communication security (COMSEC) across High Frequency (HF) radio networks.

Organisations are aware that their radio communications may be eavesdropped upon by third parties. With the *Voice Encryptor* option it is possible to prevent a communications breach that could result in the failure of field operations or threat to staff.

KEY FEATURES

Simple to use

Secure mode is activated at the touch of a single button. It enables the user to communicate sensitive information in confidence, without complicated setup procedures, and it provides visual confirmation that the conversation is secure.

Reliable

The *Voice Encryptor* uses the unique patented SAFE encryption technology, which does not require synchronisation and allows communication to be conducted successfully and efficiently even across poor channel conditions.

Secure

Using analog encryption the *Voice Encryptor* provides a high level of privacy and tactical security to suit military purposes or any commercial requirements.

Compact and discreet

The *Voice Encryptor* is fully integrated into an NGT HF SSB transceiver and its operation, making it compact and discreet.

ADDITIONAL FEATURES

Key management and configuration

Each NGT transceiver fitted with a *Voice Encryptor* is designed to be programmed with a Corporate Code. This code, shared only by other users in the same organisation, ensures call security and can be modified by using a PIN for increased protection. In addition, a Global Code permits secure communication with users in different organisations. Codes are not vulnerable to interception because they are never transmitted.

The algorithm used in the *Voice Encryptor* uses an analog encryption environment with 128-bit key length, as specified in the signal encryption patent (US Number 5101432). The advantages of these techniques include:

- **No need for synchronisation**, so users will not accidentally drop out of encryption mode, and cannot unilaterally force the conversation out of secure mode.
- **A unique form of voice encryption**, which prevents conventional attempts from successfully breaking the code.
- **An ability to change code at any time**, or switch between clear and encrypted communication.
- **Secure conference calls**, which can be conducted with an unlimited number of participants.
- **Excellent quality of signal reconstruction**, where the encryption process actually reinforces the quality of the original signal rather than introduce degradation.



SPECIFICATIONS

Operating

Clear	voice transmitted half duplex unencrypted
Encrypted	voice transmitted half duplex encrypted
Speech delay	250 milliseconds when encrypted

Cryptography

Encryption algorithm	128-bit proprietary (non-linear phase signal encryption)
Encryption mode	fixed length 10E10000 combinations
Key management	user programmable Corporate Key 8 digits user settable PIN 4
Key diversity	proprietary
Synchronisation	not necessary
Group membership	Global, Corporate and Personal
Interoperability	available for all NGT transceiver models: SR, VR and AR

Power

DC voltage	5 V
Current	200 mA maximum

Audio

Signal bandwidth	300 to 2700 Hz
Frequency offset	±100 Hz maximum for HF SSB

Mechanical

Option board (internally mounted)	height	126 mm
	width	105 mm
	depth	66 mm

Environmental

Ambient temperature	-30 to +60°C
Relative humidity	95% non-condensing

WHO CAN USE IT

The *Voice Encryptor* option is specifically designed for the needs of business, government, and non-government organisations, which require safe and secure communications when carrying out vital operations.

Such operations may include anti-narcotic operations, international truck convoys and humanitarian aid organisations.



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