

# Voice Encryptor for Codan HF transceivers

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 [Unité de Cryptophonie pour Communications Radio HF \(114 kb\)](#)

CODAN HF Voice scrambler 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 eaves dropped upon by third parties. With the CODAN 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 CODAN 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 HF Voice Encryptor is fully integrated into an CODAN NGT HF transceiver and its operation, making it compact and discreet.

Additional features

### Key management and configuration

#### [AT Communication ©](#)

Each CODAN NGT HF transceiver fitted with a Voice Scrambler 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 CODAN 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**

#### Who can use it

The CODAN 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.

#### Quality of the signal:

 [Encrypted HF on air \(wav\)](#)

## [After decryption \(wav\)](#)

Technical 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 CODAN 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	$\pm 100$ Hz maximum for HF SSB

### Mechanical

Option board (internally mounted)	126mm (height) x 105 mm (width) x 66mm (depth)
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### **Environmental**

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

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