



NHF-256EXT  
External Interface Unit

NHF-256INT Internal-fit wire-in module



An External Interface Unit connected to a typical HF radio with a headset

## Secure Digital Encryption solution for HF Radios with high level voice security

Our new HF Digital Encryption System secures voice communications for HF radios which are also known as "long range" or "ship-to-shore" radios. This is an ideal solution considering that HF radios are easily monitored due to the vast distances the signal travels .

Using our HF Digital Encryption, your HF radio is converted to a Digital radio as well as the added peace of mind that no one else can listen to your transmissions. Ideal for maritime shipping, airlines, military communications and ship-to-shore anti-piracy protection.

The encryption can either be hard-wired directly into your existing HF radio or an external interface boxed version may be plugged into an external auxiliary port available on most makes of HF radios.

Alternatively, we can supply you a complete HF radio with the encryption already fitted. See our online shop for more details: <http://www.nabishi.net>

## Main Features

- Full 256-bit AES Digital Encryption
- PC programmable Crypt keys
- Over 4 Billion key combinations
- Converts analogue radio to a digital radio
- Internal wire-in module (NHF-256INT)
- External Interface box fitting (NHF-256EXT)
- Ship-to-shore voice call security
- Aircraft to base voice call security
- Military communications voice call security
- Long range voice call security
- Amateur radio voice call security
- Anti-piracy protection for Marine Vessels



## Features and Functions

Nabishi's Digital Encryption system for HF Radios, works on SB & SSB (side band and single side band) mode, utilises the NHF-256B (External Interface) and NHF-256M (Wire-in Module) with a 256-bit AES algorithm convert normal voice communications into encrypted Digital voice communications make your calls totally secure against all levels of eavesdropping .

With our new NHF-256b External interface system, it is even easier to convert existing HF analogue (analogue) transceivers to Secure Encrypted Digital voice with NO transceiver modifications.

The NHF-256b External interface system and the NHF-256m wire-in module will automatically detect a digital signal and decodes it and channel the audio in clear or secure mode, so you also maintain full analogue capabilities.

The two interface units are designed to fit any Commercial, Amateur, Marine or Military radios

Our Digital Encrypted Voice Encryption could be the

## Typical HF Radio Installation



Military Radios



Vehicle Radios



Marine Vessel Radios



Base Station Radios

## Technical Specifications

Encryption Algorithm	256-bit AES (Advanced Encryption Systems)
Number of Encryption Keys	Over 4 Billion
Bandwidth	400 to 2600 Hz
Channel modulation	8-FM
Subcarrier frequency	1350 Hz
Interleaver	360 ms
Compensation of symbol speed mistiming	±30 Hz, 1 Hz/sec
Compensation of frequency drift	±100*10 <sup>-6</sup>
Compensation of multipath/fading	0...5 ms, 3.8 Hz
Receive – transmit delay, not more	1.5 sec
Vocoder	MELPe 1200/2400
Working mode	Simplex
Power supply	5 to 12V
Power consumption, not more than	1 Watt

**Nabishi**  
*Systems*

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