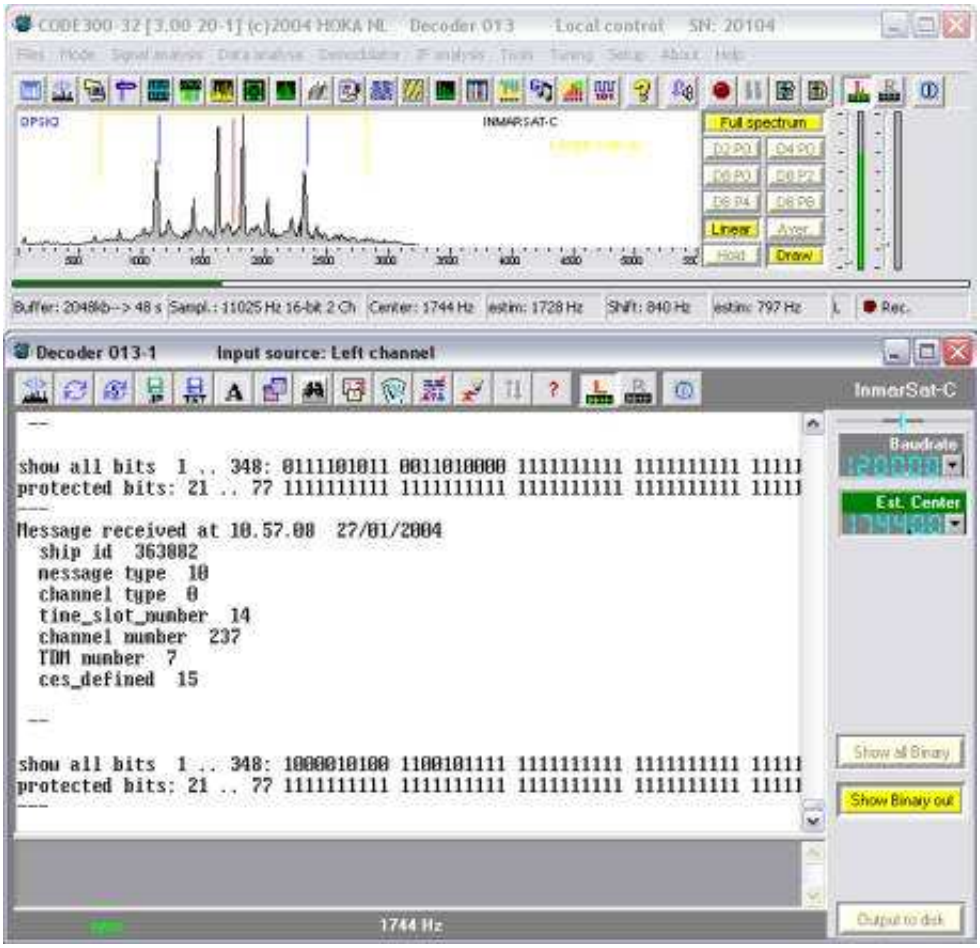
HOKA Electronic
THE NETHERLANDS

TRAINING PROGRAM

for CODE 300-32 Operators



Hoka Italia
Data Communication Solutions

Via Livia Bianchi 2/A
46036 Revere (Mantova) Italy
Phone and Fax +39 0386 467203
e-mail info@hoka.it

Hoka Electronic
Data Communication Consultants

Flessingsterrein 13
9665 BZ Oude Pekela - The Netherlands
Phone +31 597 675040 Fax +31 597 612645
e-mail: hoka@hoka.net

HOKA Electronic offers complete training on our products covering all key features plus all the technical details. General information in radio data transmission, frequency monitoring and associated topics like basic signal processing and recording methods can also be included in a course.

Training is available at your location or in one of our locations. Please ask for additional information.

- # History:
    - Brief History about Hoka Electronik and the evolution of Code 300-32 systems.

- # Settings & Configuration:
    - Installation of Code 300-32 software.
    - Instructions about the dongle.
    - Possible installation problems.
    - Directory structure and all files of Code300-32.
    - Instructions on installing an update of the Code 300-32
    - Un-installation procedure of Code 300-32
    - Software Update.
    - Discussion on various audio inputs for Code 300-32
    - Connecting receiver to decoder
    - Configuring the program, "code300W.cfg" file
    - Aligning of clock
    - Setting audio levels under Windows and possible problems with the sound card
    - About Code 300-32 Extended Version
    - Instructions on handling more sound cards in same PC

- # Program Overview:
    - Main menu, main form, decoding modules (in general), custom menu, .IP
    - how to handle the decoder with two channel input simultaneously
    - Overview on Basic Signal Analysis Tools in Code 300-32
    - Overview on Basic Data Analysis Tools in Code 300-32

- # Basic Aspect:
    - How to tune a generic HF digital signal
    - Audio bandwidth
    - Most common telex alphabets
    - Modulations techniques OOK, FSK, FSK, MFSK, PSK

- # FSK Signals:

  - Basic details on how to tune the FSK signal, FSK Modulation and Demodulation etc.
  - Determining the shift, speed, center frequency, cycle length, asynchronous and synchronous signals.
  - FSK signal overview:
    - ✓ Baudot / Ascii family
    - ✓ Sitor family
    - ✓ ARQ family
    - ✓ FEC family
    - ✓ FAX family
    - ✓ Pactor family
    - ✓ Packet family
    - ✓ CW family.
  - Bit level analysis of the FSK signals.
  - Analysis of Complex FSK signals, Baudot F7B, VFT.
  - Basic investigation for unknown FSK signal using various analysis features available on code300-32.

- # MFSK Signals:

  - Basic details on how to tune the MFSK signal.
  - Determining the shift, speed, center frequency and other characteristics of MFSK signal.
  - MFSK signal overview:
    - ✓ Coquelet family
    - ✓ Piccolo family
    - ✓ Crowd 36 family
    - ✓ NON Amateur MFSK signal family
    - ✓ Mil 188-141-A ALE
  - Analysis of Complex MFSK signal, VFT Piccolo
  - Basic investigation for unknown MFSK signal using various analysis features available on code300-32.

- # PSK Signals:

  - Basic details, how to tune the PSK signal
  - Determining the shift, speed, center frequency
  - PSK signal overview:
    - ✓ MIL 188-110 family
    - ✓ Stanag family
    - ✓ Inmarast family
  - Basic investigation for unknown PSK signal using various analysis features available on code300-32.

- VHF / UHF:
  - Hardware to connect receiver to decoder, cable, different audio output
  - SELCALL systems – CODAN8580 SELCALL etc.
  - GMDSS / EPIRB
  - POCSAG
- Audio Files:
  - How to make a good audio recording
  - How to use the basic function of a common audio editor (cool edit)
  - Long time recording
  - How to decode, analyze audio recording
  - Possible problem with audio files sample rate, distortions, noise, etc
- Encryptions (Basic):
  - Bit inversion
  - Characters substitutions
  - Translation table
  - Custom table
- Others:
  - Adobe Adition 1.5 Tools Preview
  - Steps to covert Stereo Signal to Mono Signal using Adobe Audtion 1.5
  - Various steps to demodulate the unknown signal using Code 300-32
- Note for training at your location:

For a good training it is important have a real working monitoring station comprising of

- a working HF/ V-UHF receiver
- working HF /V-UHF antenna
- one / two PC.
- DAT tape player maybe helpful.
- CD Player

Good setup for students:

- one HF receiver and one pc for two person, and
- not more of 10 people for training.

One (or half) day is needed before start of actual training for verifying/ checking of all equipment and for studying the HF spectrum in the area. The team would need presence of a good radio operator or supervisor to help on handling the receiver. To safe time, some signals for the training will be played back from hard disk. But also live signals are used for decoding.