DANPHONE NAVTEX SYSTEM

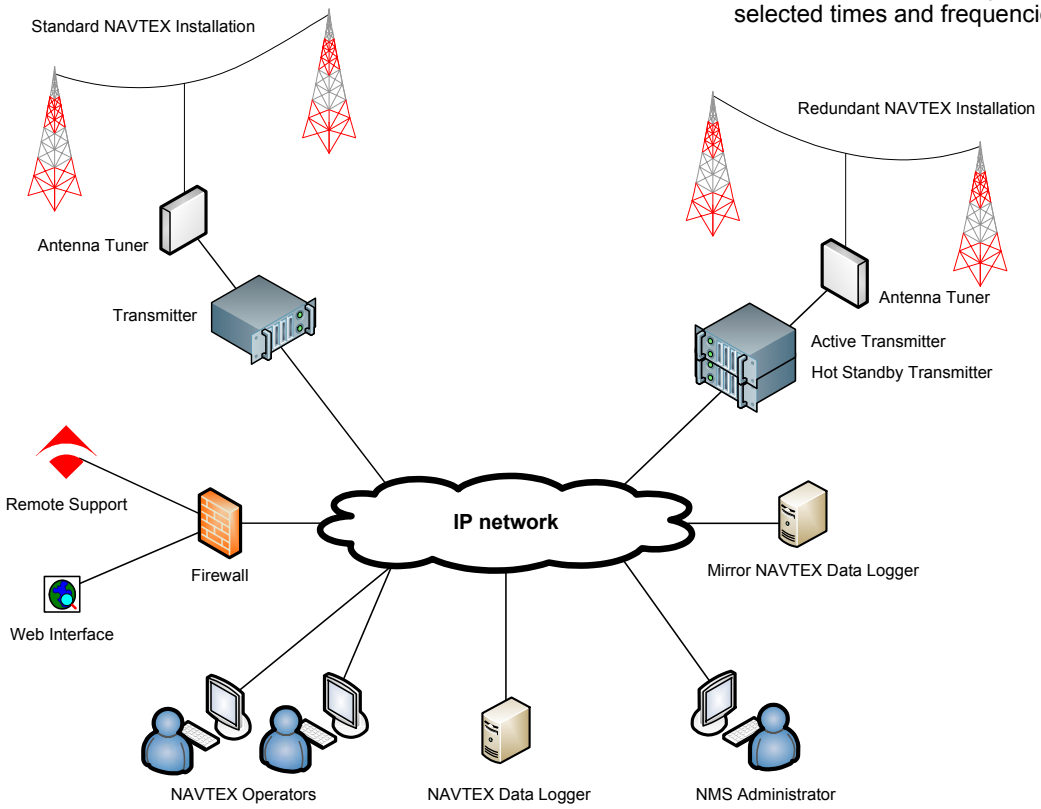
Flexible IP-based System with 1 kW Transmitters

From a single-transmitter setup to a complex national system with multiple operators and transmitter sites installed at various remote locations, the Danphone NAVTEX System can be configured and customised to suit all requirements.

Incorporating Danphone's intuitive graphical user interface, the system offers a wide range of opportunities for single or multiple transmitter operation, single or dual-channel transmissions, main/standby configurations, etc.

The server free architecture ensures transmission of prepared messages even if the network is down.

Software packages offer PC remote control and the facility of editing and compiling NAVTEX messages to be transmitted automatically at pre-selected times and frequencies.



System features

- IP network infrastructure (IEEE 802.3)
- Remote controlled transmitters,
- 518 and 490 kHz transmissions as a standard
- 4209.5 kHz transmissions upon request *new*
- No single point of failure
- Allows for redundancy of all system elements
- Multiple transmitter sites and operator positions
- NAVTEX Database with history of all transmitted messages
- Supports 490 kHz transmissions with any local character set in any language *new*
- Adjustable transmission power
- Independent power settings for each time slot
- Compact rugged construction suitable for use in harsh environmental conditions
- Modular design for future expansions
- Allows remote service and support by Danphone specialists

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High Power Transmitter Stations

Danphone's NAVTEX transmitters are specifically designed for the transmission of NAVTEX messages in accordance with the IMO NAVTEX manual.

Under the brand name Futronic the standard 1 kW transmitter provides NAVTEX transmissions in English on 518 kHz and in any local language on 490 kHz.

A complete standard transmitter station consists of two main units: The remote-controlled NAVTEX transmitter and a single-phase power supply unit.

The transmitter ensures messages can be sent even if a reverse power fault is observed. In case of too high reverse power, the forward power will be automatically reduced to protect the transmitter.

In case of a sudden short at the antenna, built-in circuitry will protect the transmitter against damage by immediately shutting down the transmission.

During standby, the antenna is isolated from the transmitter and grounded.

Antenna Tuner

Transmitters and power supplies are designed for rack mount and installed in 19” standard cabinets with glass doors.

A single transmitter station can be accommodated in a 1,200 mm / 18HU rack cabinet.

A duplicated NAVTEX station with two transmitters in main / standby configuration will require a rack of 1,800 mm / 40 HU rack.

Antenna Tuner

The output from the transmitter is connected to an antenna tuner (left) in order to match the transmitter’s 50-Ohm output impedance to the antenna.

The antenna tuner is mounted in a weatherproof enclosure, which can be mounted directly under the antenna.

Technical Data

Transmitter

RF Output Power
50-1,000 W into 50 Ohm

Frequency 518 kHz / 490 kHz

Frequency Stability +/-0.5 Hz

Spurious Radiation
Less than -53 dB

Modulation
304HF1 BCN
(FSK +/- 85 Hz 100 Baud)

Control Interface
LAN (IEEE 802.3)

Power Supply
85-264V 50–60 Hz single phase

Power Consumption
Max 1.5 kW (6.5A at 230V)

MTBF > 10,000 hours

Amb. Temperature -20 to 55 °C

Cooling System
Forced air-cooling

Dimensions
490 x 180 x 380 mm (19” 4HU)

Weight 10 kg

Compliances ITU-R M.540-2, ITU-R M.625-3, IMO Revised NAVTEX Manual 2013, EN 60950, EN 60215, EN 55022, EN 61000-3-2, EN 61000-3-3, EN 61000-4-2, EN 61000-4-2/-3/-4/-5/-6/-11, EN 61000-6-2, EN 61000-6-4, ETS 300 067

Antenna Tuner

Max input power 1,000 W

VSWR 1.1:1

Amb. Temperature -20 to 55 °C

Dimensions
H x W x D = 800 x 600 x 310 mm

Weight 20 kg

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Intuitive Graphical User Interface for Touch Screen

The User Interface has been designed for touch screen operation.

It is very easy to prepare NAVTEX messages and to have them automatically transmitted at pre-selected time slots. An on-screen wizard will guide the operator in selecting message category and type, transmitter and time slots, etc.

Messages ready for transmission are queued in the transmitter, awaiting automatic transmission at the next scheduled time slot. If required, a message can also be transmitted immediately.

The queued messages can be individually previewed, edited or deleted prior to transmission.

It is possible to make draft messages, which can be retrieved and edited by the operator as required.

All transmitted messages are logged automatically.

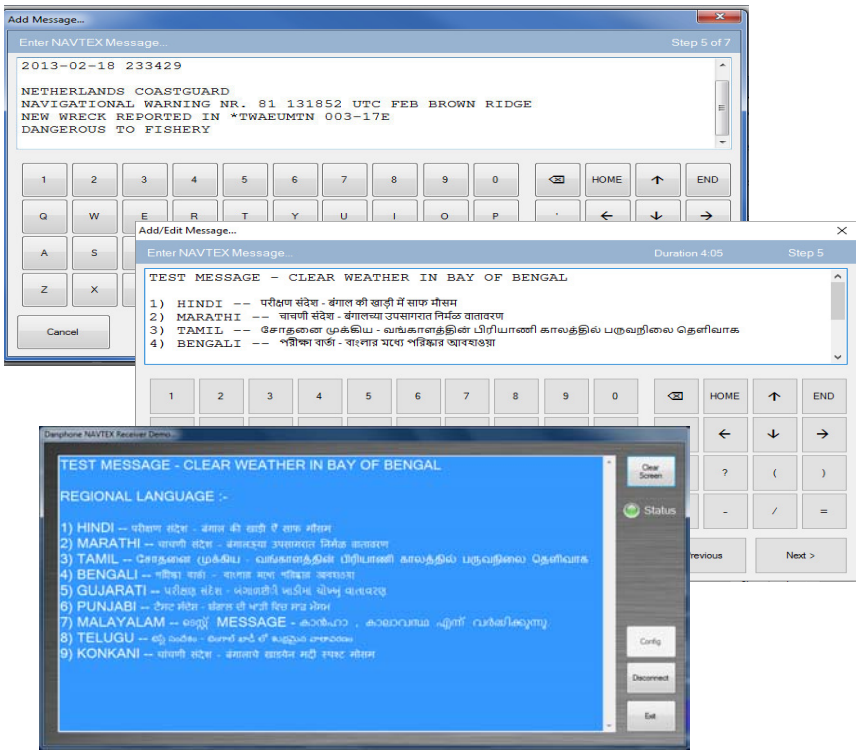
New messages can be written and edited using the touch screen keypad (right). Alternatively, a conventional keyboard can be used.

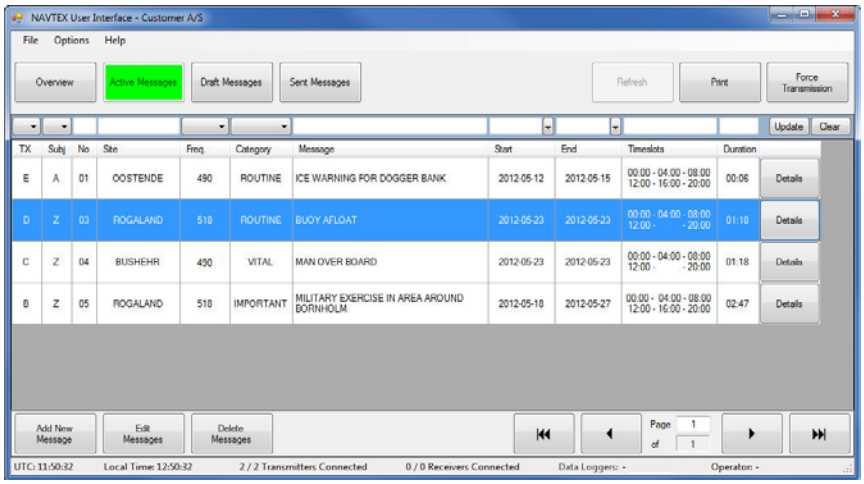
An on-screen wizard will guide the operator through all the steps.

The system permits transmissions in English on 518 kHz and in any local language on 490 kHz.

New messages can be created using the keypad or simply by copy and paste of emails or other electronic text.

Utilizing the Unicode alphabet, local messages can be created with any character set and in any language, such as all Indian languages, Chinese, Russian, Greek, etc. The illustration on the right shows Hindi, Marathi, Tamil, Bengali and others.





The Active Messages window (left) lists all messages stored in the transmitter ready for transmission at the next time slot. Other lists showing Sent Messages and Draft Messages can be selected accordingly.

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Remote controlled Network Management and Configuration

Danphone's Network Management System (NMS) gives the administrator a complete overview of the entire NAVTEX network as well as the ability to monitor and configure each individual transmitter.

In redundant systems, this is also where the administrator can select which transmitters shall be active and which shall be in standby.

Detailed information of each site and transmitter is displayed simply by clicking on the relevant icon. For instance, selecting the "Time Slot" button will illustrate the various time slots, when a particular transmitter will be sending and at what output power.

Network Management System Features

- Monitoring and configuration of transmitters
- Active/standby transmitter switch-over
- Event database
- Visual alarm of warnings and failures
- Audible alarm upon request
- Multiple-level password protection

For further information regarding our products and references, please refer to our homepage www.danphone.com or contact our sales and technical staff at info@danphone.com

Danphone conforms to the international quality system standard DS/EN ISO 9001:2008.

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