



VTS Operator Workstation VOC5060

KONGSBERG

The VTS Operator Workstation (VOC5060) application is the primary user interface in the Vessel Traffic Management & Information System (VTMIS5060). The VOC5060 plays a crucial role in the VTMIS5060, giving the VTS operator access to all the information available in the system, together with the ability to control system functions.

One VOC5060 is normally provided for each VTS operator. The VOC5060 can be supplied with one or more display monitors. Through the use of Microsoft Windows 2000/XP®, the VOC5060 provides a flexible means by which the operator can configure the display(s) to monitor the vessel traffic in a specific area of interest or the entire coverage area.

Features

- ✦ Electronic chart of the coverage area - supporting both encrypted S63 charts and unencrypted S57 edition 3 charts, using the S52 IHO standard presentation library
- ✦ Display of object information for all chart objects
- ✦ Chart overlays (warning areas, navigation channels, etc)
- ✦ Digitised radar video
- ✦ Radar target tracks (symbol, vector and ID tag depicting a target's position, course, speed and identity)
- ✦ AIS target tracks (symbol, vector and ID tag depicting a target's position, course, speed and identity)
- ✦ Bearing lines from VHF/DF bearing lines
- ✦ Detailed vessel data via infolink to a database
- ✦ Target and Buoy warnings
- ✦ System warnings
- ✦ Status and controls for VTS sensors
- ✦ Data from other sensors (Meteorological/Hydrological, CCTV, SCADA, VHF/DF, AIS)

➤ Chart Windows

The operator may display one or more chart windows at a time. Each window can display the whole chart or just a segment, depending on the range and centre selected for the window.

Overlays are used to present various types of information in a chart. By dividing chart information into various overlays, it is possible to display information according to the user's preferences.

➤ Radar Video

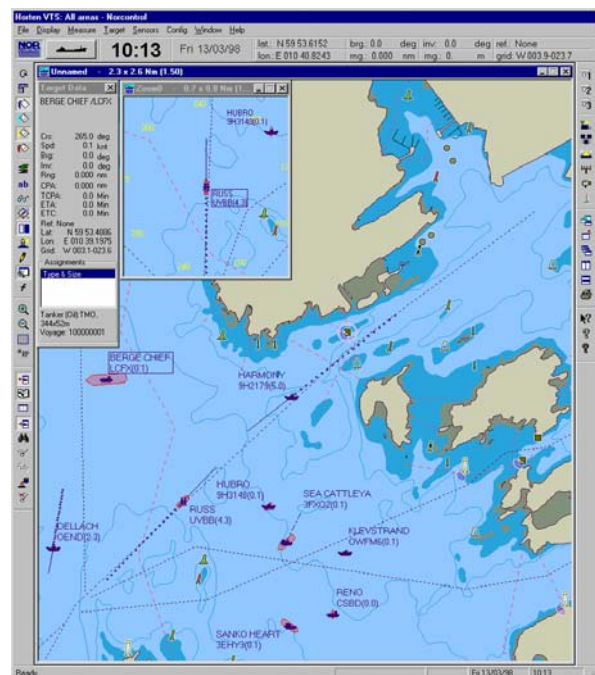
The radar video presented on the VOC5060 is digitised radar information, derived from the analogue video signal outputs of the radar transceivers. The VOC5060 gathers this digitised information from the VET5070 Extractor and Trackers, and presents it in the chart windows. Up to 32 simultaneous Radar Video sources can be displayed. Radar returns are visualised as clusters of filled, coloured polygons. The fill colour depends on both the intensity and the age of the digital video fragment.

➤ Target Tracking

On the VOC5060, the digital video presentation of a vessel can be acquired, which means that the VET5070 tracking unit is directed to track that particular target. Targets can be acquired manually by the operator, or automatically by the VET5070 tracking unit.

In addition target tracks may exist based on data received from AIS transponders.

Target tracks are visualised by a symbol and a vector, depicting the target's position, course and speed. A unique identifier, called a tag, is attached to the target symbol.



➤ Target Warnings and Assignments

The VTMIS5060 Warning and Integration Server continuously checks tracked targets against a wide range of pre-defined warning criteria. If a target violates one of the warning criteria, a target warning is reported. The basic target warnings are Lost and New Target. Related to navigation channels; Exit, High/Low Speed, Course Deviation, Encounter and Contravention. Other target warnings are Reporting Area Enter/Deviation, Turning Circle Deviation, Striking Prediction, Domain Intruder, Grounding Prediction, Collision Prediction, Prohibited Anchoring, Leaving Anchorage, Dragging Anchor, Multipurpose Area Entering / Leaving / Inside / Outside / Approaching / High Speed / High Acceleration / High Deceleration, Sailing Route Distance / Course / ETA deviations and Tracking Deviation.

Certain target monitoring is initiated by a target assignment given by the VTS operator. The target is continuously checked for deviations from given criteria, such as Navigation Channel, Anchor Position, Anchoring Area, Collision Survey, Domain Watch, Grounding Watch, Reporting Area, Turning Circle and Sailing Route.

➤ **Vessel Database Information**

VOC5060 allows for sharing of VTS related data with other applications. If the system includes an SQL database, such as the PMIS, the VOC5060 includes dialogues designed to present the operator with detailed vessel data extracted from the database. Typical data is Vessel characteristics, Vessel Voyage movements, Cargo-, Pilot-, Tugs- and Owner information.

➤ **Target Simulation**

The VOC5060 allows for the definition of simulated targets that can be useful for training purposes.

➤ **Buoy Surveillance**

For predefined surveyed buoys, the WIS5060 will check received survey data against their individual warning criteria. If a buoy violates one of the warning criteria, a buoy warning is reported.

➤ **Sensor Control and Monitoring**

Sensor Handling dialogues allows the operator to control and monitor the various sensors, such as Radar, AIS, SCADA, Met/Hyd, VHF/DF and CCTV equipment.

➤ **Measure Functions**

These functions enable the operator to adjust range and centre for charts, marker position readout, and designate reference points and reference targets.

➤ **Target Functions**

Target functions allow the operator to select specific targets, initiate tracking, display and print data relating to the targets, make target assignments, and acknowledge target warnings. The items in the complete Target Menu are Data, Details, Select, List, Control, Prediction, Define Simulated, Acquire Selected, Park Target, Swap Identification, Acquire, Two-Point Acquire, Info Link, Release Lost, Cease Tracking, Remove All, Remove All Simulated and Target Tracking Status.

➤ **On-line Help**

The VOC5060 includes context sensitive On-line Help functions describing the features and operation of the VOC5060 in detail.

➤ **Security**

VOC5060 workstations can be configured in four levels according to the responsibility of the user: typically Basic, Experienced, Expert and Administrator.

System Configuration

An optional System Configuration application is available for customers who require the ability to modify system-level VTMIS5060 parameters such as:

- ✦ *Importing chart data; complete charts and incremental updates. S57, S63 and ChartWorld data formats are supported.*
- ✦ *Create and edit custom colour schemes for chart and video*

- ✦ *Create and edit chart overlays, geographical masks for the VET5070, warning areas and parameters, responsibility areas and target symbols*
- ✦ *Establish access levels and passwords for users*

Technical Specifications

- ✦ *Computer Type: Desktop PC*
- ✦ *LAN Connection: RJ-45*
- ✦ *LAN Protocol: IEEE Standard 802.3, 10/100BaseT*
- ✦ *Database Connectivity: Direct access to SQL based Vessel and Voyage information*
- ✦ *Maximum Number of Simultaneous Radar Video Sources for Display: 32*
- ✦ *Radar Video Display: 4 bit resolution. Up to 16 distinct levels of video can be displayed*
- ✦ *Afterglow Adjustment: 0 to 254, and infinite number of scans*
- ✦ *Maximum Number of Integrated Targets: 2000*
- ✦ *Maximum Number of Surveyed Buoys: 250 per VET5070*
- ✦ *Maximum Number of Open Chart Windows: 10 per user*

Options

- ✦ **Optional Computer** - An Industry Standard PC is available as replacement for the standard computer.
- ✦ **Extra Display Monitors** - One VOC5060 workstation can be supplied with up to 4 display monitors.
- ✦ **Console** - The VOC5060 can be supplied with a standard or custom-designed console to house the computer equipment and related peripherals.
- ✦ **Printer** - A wide range of compatible printers can be supplied.
- ✦ **System Configuration** - The System Configuration option is available when supervisory and administration personnel are to modify VTMIS5060 system parameters.
- ✦ **Expanded Number of Integrated Targets** - Up to 3000.
- ✦ **Target Filtering and Category Symbols (AIS related)** - The Target Filter function enables for a temporary suppression of certain categories of targets. Dedicated target symbols are associated based on category.
- ✦ **Training mode** - Requires dual VET5070, gives the operator the opportunity to exercise on live signals without interfering with traffic operations.
- ✦ **Operator eLearning** - Web-based, guided software simulations.
- ✦ **Secondary Datum** - An optional dialogue bar is available for displaying an additional latitude/longitude reference for the marker and a selected target, using a predefined secondary datum.
- ✦ **Customised Features** - Customised dialogue boxes can be developed for display of database information or control of special sensors.

® Microsoft® & Windows® are US registered trademarks of Microsoft Corporation.

© Copyright 2006 Kongsberg Norcontrol IT AS

Illustrations, description and technical data may change without notice

Kongsberg Norcontrol IT AS
PO Box 1024, N-3194 Horten, Norway
Phone: +47 33 08 48 00, Fax: +47 33 04 57 35

Email: webmaster@norcontrolit.com
Internet: www.kongsberg.com/eng/KDA/Norcontrolit/



KONGSBERG