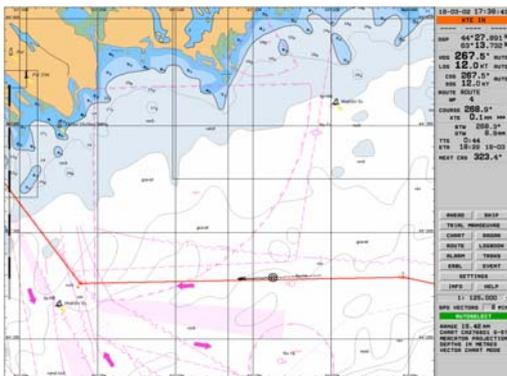


MASTER - DEQ

ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEM - ECDIS

- ⇒ The first member of a family of onboard navigational systems
- ⇒ Fully complies the IMO requirements and IEC standard (IEC 61174) for ECDIS

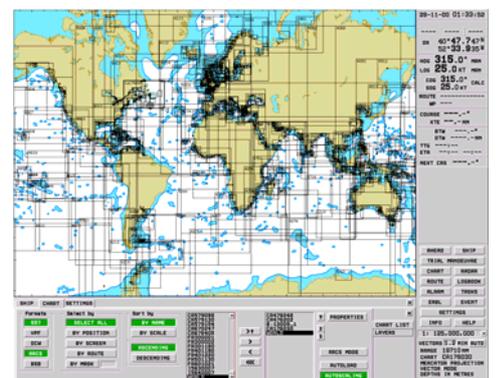
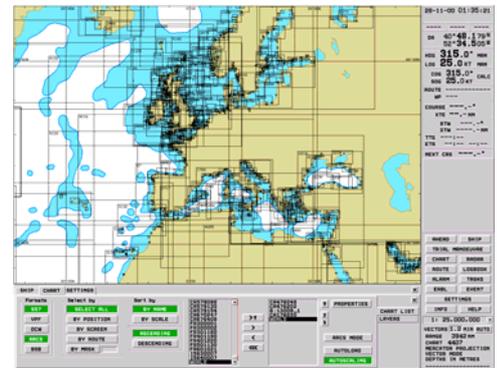
Electronic Charts and Databases used:



- Official S-57 Ed. 3.1. (and 3.0) Electronic Navigational Charts manufactured and distributed by Government authorized Hydrographical Offices and provides their continuously electronic online up-dating
- ARCS Raster Navigational Charts produced by UKHO (British Admiralty)
- BSB Raster Navigational Charts produced by different authorized organisations in USA and Canada
- DEM – Digital Elevation Model - from USGS
- Different proprietary charts and databases (e.g. topographical charts, navigational information and photos produced by MapTech)

The Main features of the system:

- flexible network architecture providing unlimited number of workstations
- possibility of translation of vessel's position via onboard TV station
- route planning including voyage planning and route's corridor safety check
- route monitoring
- true and relative motion
- "North Up", "Head Up" and "Route Up" modes
- ship's track recording with 10 seconds precision and electronic logbook
- unlimited number of electronic rulers (ERBL)
- a large set of different navigational alarms including ECDIS required
- tide calculation
- trial manoeuvre
- RADAR overlay
- order zones
- military maneuvering functions



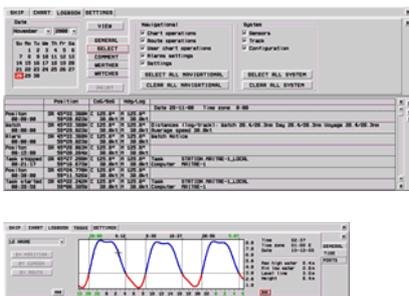
The system is mounted onboard in special certified hardware (console, computer, monitor...)

The summary number of electronic nautical charts of different formats distributed by NAUDEQ exceeds 5000

CONNECTED SENSORS :



- up to 4 sensors's position: GPS (DGPS), GLONASS, DECCA, LORAN, OMEGA and any other NMEA-0183 position sensor including different Inertial systems
 - ARPA Automatic Radar Plotting Aids
 - Gyro and Magnetic Compass, Log
 - Doppler Log
 - Echo Sounder
 - Autopilot
 - AIS transponder
 - NAVTEX receiver
 - Wind speed and direction, Air and Water temperature, Atmospheric pressure
- Sensors
- sensors monitoring operational state of the ship equipment (main engine revolutions, propeller pitch, rudder angle, etc.)
 - sensors monitoring fishing equipment
 - up to 2 Periscopes or Binoculars with digital interface



EXTERNAL INTERFACES :

- full NMEA-0183 (IEC 61162-1) data exchange protocol
- modification of NMEA-0183 for AIS
- different proprietary protocols on demand of equipment's manufacturer (Inertial systems, Periscopes, old non-standard ARPAs)
- Radar Integration Board Interface

NAUTICAL DIGITAL EQUIPMENT

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