

## EuroNav V Software

**EURONAV MAP FEATURES AND REPRESENTATION** Our multiple map overlay capability has been groundbreaking for intelligent map solutions. Map information like VFR, town and street names and other important map information can be used as a layer over or under any type of maps. In consequence, it is possible to select or search for, e.g. a street in a photo map and the vector map highlights the street, gives you the name, distance and ETE / ETA. Furthermore, collision and Ground Proximity Warning, realistic camera footprints, sunshading, map transparent option (only in combination with DTED® maps) and many more features like true color representation are available. Entirely new is the re-designed map engine which enables EuroNav V to represent smooth map movements with an update rate of 20-30 Hz independent of the visible map. The following map types are supported: Raster maps, vector maps, DTED® maps, obstacle over-lays, photo maps, satellite maps and Jeppesen® maps can be displayed. All maps can generally be set to north-up, track-up or heading-up, portrait or landscape map orientation.

**EURONAV V GRAPHICAL USER INTERFACE** The EuroNav V GUI (Graphical User Interface) is menu driven. As known from EuroNav IV all menus and sub-menus can be configured by the customer. Accordingly, the menu can also be shortened and therefore optimized to the type of application. EuroNav V provides an efficient, intuitive and user-friendly graphical user interface (GUI). One of the central aims of the GUI design and its development was to provide concise flight-relevant information. All menu boxes are transparent and can be setup individually. Our consistent philosophy of menus and dialogs minimizes user workload, e.g. throughout all dialogs and menus there is always the same way to abort / confirm an input. The illustrations on the right representing various map examples. The raster map is used as an overlay combined with a DTED terrain model to calculate a realistic sunshading model with different settings.

The menu structure offers nearly the same approved look and feel as EuroNav IV menus to provide an easy access to the new EuroNav V system software and to keep the transfer simple for experienced EuroNav operators and administrators, too. For each menu item a short online help is available. By this means, handling and learning the system is very easy. The following screenshots with different map types and combinations represent the EuroNav V GUI and show the capability of the new map engine.

**The DIGITAL TERRAIN ELEVATION MODEL** The Digital Terrain Elevation Data (DTED) model provides enhanced ground proximity features for flight safety aspects. Different pre-defined coloring models are available, e.g. warnings or topographical coloring. Mission related parameters can be configured individually. Furthermore, the combination of different kinds of map types is possible, e.g. by using a defined level of transparency in combination with scan (scanned paper maps) or photo maps.

- Real-time display of safe / unsafe terrain depending on aircraft altitude
  - Ground Proximity Warning with acoustic warning indication
  - Realistic sunshading calculation
  - Flexibility in combination with other map layers and types
  - Exact footprint in combination with a camera pointer
  - Elevation over ground calculation
  - Pre-calculation of minimum altitude when creating a flight plan
  - Creating a terrain altitude model out of a freely selectable flight line
- EURONAV FLIGHT RECORDS** The EuroNav V provides a flight recording function for every mission, recording ACFT position and altitude, speed and heading as well as camera foot prints and manually created events.
- EURONAV EMERGENCY MODE** In case of emergency the EuroNav V can quickly provide a Direct To to the next hospital, refueling point etc. This menu can individually be configured to access important functions as fast as possible.
- EURONAV ADDRESS POINT** The EuroNav V features a function to enter an address into the system and search for it in the map. An installed address database is required.
- EURONAV INTERVISIBILITY** The EuroNav V provides a new function for tactical applications. The Intervisibility feature highlights warning or safety zones to indicate the detection range. This feature can also be combined with a DTED map as shown in the illustration.
- OVERVIEW**
- Display of virtual any kind of map: raster, vector and DTED®
  - High zooming capability 100m to 5000km on the screen
  - Most accomplished collection of mission related functions on the market
  - Fast access to frequently used functions via user definable macros
  - Map design system for vector map appearance adjustment (e.g. Day/Night use)
  - Same Flight Planning capabilities as known from the EuroNav IV system
  - State-of-the-Art map engine with smooth map movement
  - Developed according to RTCA-DO-178B Level C (qualification planned for mid 2007)
- MISSION RELATED FEATURES**
- Pre-adjustable automatic map switching when zooming
  - Terrain warning overlay to all other map types
  - Flight Info with full access to airport information e.g. frequencies, services, map
  - Display of user definable range sector and fuel ranges in the map
  - Display of current or recent flight tracks also during flight
  - Calculation of offsets against recent flight tracks
  - Calculation of time, fuel, minimum leg altitude for all kinds of flight plans
  - Freely definable vector, bitmap and military symbology (NATO)
  - Electronic Checklist display
  - Automatic display of nearest database objects (e.g. Hospital / Landing site)
  - Radial line display with quick set function