



Note! WeatherView™ should NOT be installed together with any software that uses C-MAP charts!

C-MAP WeatherView™ 2.0

User's Manual



For updated information or registration of the one-month-FREE trial version, please visit:

<http://www.c-map.no/marineforecast>

For pricing and subscription options, please send an email to:

weather@c-map.no



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I. INTRODUCTION

WeatherView™ is a **low cost electronic weather information system** utilizing the new Weather Module specified by C-MAP Marine Forecast in order to meet the market demand for a marine information system regarding weather and weather related services. The main purpose of **WeatherView™** is effective downloading, presentation and easy distribution of various types of geo-referenced weather information as overlay of global coverage of electronic navigational charts provided by the world-wide Electronic Chart Database CM-93 Edition 3.0 from C-MAP. **WeatherView™** can access the Z and A scale ("overview charts"). For detailed chart combined with the Weather Module, we recommend OceanView.

WeatherView™ is primarily aimed for on board purposes, but it also covers the need of organizations and commercial companies involved with the management of the shipping business and marine environment protection. Many other potential users such as marine universities, navy, public libraries, research centers should find it useful for their purposes as well.

WeatherView™ is a powerful tool for creation and distribution of geo-referenced weather information. This is part of the C-MAP contribution to safety of navigation and the environmental protection of our Oceans.

II. GENERAL INFORMATION

1.0 Electronic charts

CM-93/3 is a specially compiled database of electronic charts comprised of objects and their attributes as defined by the IHO S-57 Edition 3.0 standard. CM-93/3 is fully compliant with the S-57/3 data format, and in addition the CM-93/3 distribution conventions allow the mariner to immediately use the required chart coverage, including automatic updating.

The CM-93/3 Worldwide Chart Database contains over 20,000 electronic charts grouped into the following scale layers:

Scale name	Letter symbol	Scale range
Background, small scale	Z	1:5,000,001 – UNLIMITED
Background, medium scale	A	1:1,500,000 – 1:5,000,000
Overview	B	1:500,001 – 1:1,500,000
General	C	1:150,001 – 1:500,000
Coastal	D	1:50,001 – 1:150,000
Approach	E	1:15,001 – 1:50,000
Harbour	F	1:5,001 – 1:15,000
Berthing	G	0 – 1:5,000

Note: **WeatherView™** will only support Scale Z and A. For other scales, OceanView is recommended.



2.0 The combination of seamless coverage and bookmarks

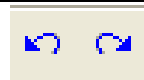
The CM-93/3 database provides seamless cartographic coverage. In addition to this, the user can save the current view as a geo-referenced bookmark. There are two types of bookmarks implemented in the system. Personal bookmarks allow saving views within the current window and providing fast panning to any point of interest. Shared bookmarks can be saved as a file with the users own defined name and contain all current chart settings such as database version, data set name, coordinates of screen, presentation model, display mode, scale, zoom factor, and references to all user objects that were displayed on the screen. The bookmark files can be managed as any standard Windows files: placed in the chosen directory, saved on diskette, forwarded to another computer in the office network or sent as a binary attachment to an e-mail.

Such a unique combination of seamless coverage combined with the bookmark feature gives the user both freedom of easy navigation in the worldwide electronic chart database and quick restoration of all chart settings that were made during the previous working session.

This feature allows a fast and easy way of exchanging geo-referenced information between the members of a working group within the office network or by Internet, and even via direct communication channels such as GSM or Inmarsat.

III. LIST OF FUNCTIONS

This section presents a short list of functions affordable by WeatherView™. For full description of functions listed, please refer to the next part of the Manual.

FUNCTION	ACCESS	TOOLBAR ICON
1) View the electronic navigational charts. The following parameters can be chosen:	AUTO	
a) Any scale.	Mouse wheel	
b) Double and half scale	F5, F6	
2) Information about charted objects.	RIGHT click on chart	
3) Bookmarks:		
a) Access to the whole map.	-	
b) Moving to the previous or next view.	-	
c) Saving internal bookmarks.	-	
d) Opening and deleting internal bookmarks.	-	
e) Saving external bookmarks as MS Windows files and opening them.	File – Save as, File – Save, File - Open	
4) Multi-windows mode.	File - New	
5) Screenshots	File - Export	
6) Two tools for cartographic measurements:		
a) ERBL	Tools – ERBL	
b) A-B function	Tools - Measurement	
7) Tidal calculations	Tools – Tides	
8) Weather Downloading (C-MAP Terminal)	Weather – Download data	
9) Weather Browsing (upload into WeatherView™)		
a) Browse for Grib file	Weather – Browse for GRIB file	
b) Browse for Cyclone file	Weather – Browse for Cyclone File	

10) Weather Functionality Panels		
a) Weather presentation (Weather parameters in chart modus) b) EasyMode	Weather – Weather Presentation Sub Menu of the Weather Panel giving access to basic functions	
c) Weather alarms / thresholds	Weather – Alarm Area Settings	
d) Weather time series	Weather – Weather Time Series	
11) Weather presentation		
a) Pressure forecast	Presentation& units in  panel	
b) Temperature forecast	Presentation& units in  panel	
c) Wind forecast	Presentation& units in  panel	
d) Current forecast	Presentation& units in  panel	
e) Precipitation forecast	Presentation& units in  panel	
f) Ice concentration forecast	Presentation& units in  panel	
g) Swell forecast	Presentation& units in  panel	
h) Total waves forecast	Presentation& units in  panel	
i) Total cloud coverage forecast	Presentation& units in  panel	
j) Sea surface temperature forecast	Presentation& units in  panel	
k) Deviation of sea level forecast	Presentation& units in  panel	
l) Alarm zones	Settings in  panel	
m) Tropical cyclone warnings	Presentation in  panel	
12) Route planning functions:	Tools – Route planning	
a) Export/Import routes.	Tools – Export/Import - Routes	



IV. GETTING STARTED

1.0 About this Manual

This Manual is written under the assumption that the user is familiar with the main principles of the MS Windows environment and its applications.

All dialog names, their fields and environment terms are written in **bold**.

Any program messages are italicized (e.g.: *"Please enter the necessary value"*).

In order to improve the visual information in this user's manual, the following logical simplifications will be used:

File → Open for example, instead of using the expression "select **Open** in the **File** menu", we will rather use; "**File** → **Open**."



When you see this sign it means that a topic contains additional information. This information is unnecessary for **WeatherView™** operation, but it may be useful for completely understanding of its functions.



Important information is marked with this sign.

2.0 System Requirements

WeatherView™ is a PC based Windows application. The program will run on almost any IBM compatible PC with an Intel Pentium™ processor. However, we recommend at least a 500 MHz processor with 128MB RAM. The system must also contain a CD-ROM drive.

Please note that **WeatherView™** is designed to run under Microsoft Windows 98 (Second Edition), NT™, Windows 2000 or Windows XP. If the PC does not have either of these, it must be upgraded before the installation of **WeatherView™**.

In order to download weather information (see [chapter VII 1.0](#)), internet connection (either by http or email) is needed (but only when downloading the dataset or when system updates are required).

3.0 Short description of WeatherView™ installation procedures

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For a **stepwise and detailed installation with pictures**, we refer to to our web pages:
<http://www.c-map.no/marineforecast/>

Follow the on-screen instructions of the installation program to install **WeatherView™**. We also recommend the user to read the detailed installation guide under FAQ ("Frequently asked Questions") on <http://www.c-map.no/marineforecast/>. When the serial number is requested, enter the SystemID provided with the distribution media (e.g. printed on the WeatherView™ system CD). A dongle ("eToken") will be used for the commercial subscription.

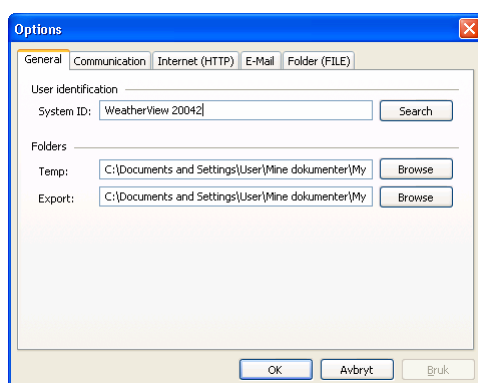
If the installation program finds that some C-Map software is already installed, i.e. there is an available C-Map System ID (or eToken identification) registered for the machine, it does not offer to input new serial number but it uses the existing one.

At the end of the installation process, the user is offered to send a unique ID file, the "user.usr" file, to C-Map office. This file will be used to obtain a weather subscription. *OBS! This is not applicable for the free demo trial, see below.* A **C-MAP WeatherView™ icon** is placed on the desktop.

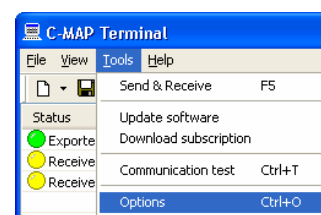
In order to get the weather prediction dataset, the user must also install the C-Map Terminal; this is a separate installation process that must be done after installing WeatherView™ successfully. A **C-MAP Terminal icon** will be placed on the desktop.



After installing the C-Map Terminal, open this software by double clicking the icon on the desktop. The following window will open:



If the above window does not open automatically, click on **Tools → Options**:



Press the "Search" button to fill in the System ID.



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The "System ID" is taken from the system ID file located in the file "user.id" in the directory "C:\Program Files\C MAP\")

To open the weather service you must either have a **trial subscription** or a **customer subscription**:

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Online registration of one month demo subscription:

To activate a free trial subscription (after receiving a WeatherView™ System CD), please visit: <http://www.c-map.no/marineforecast/> and register at "Free one month demo".

Customer subscription:

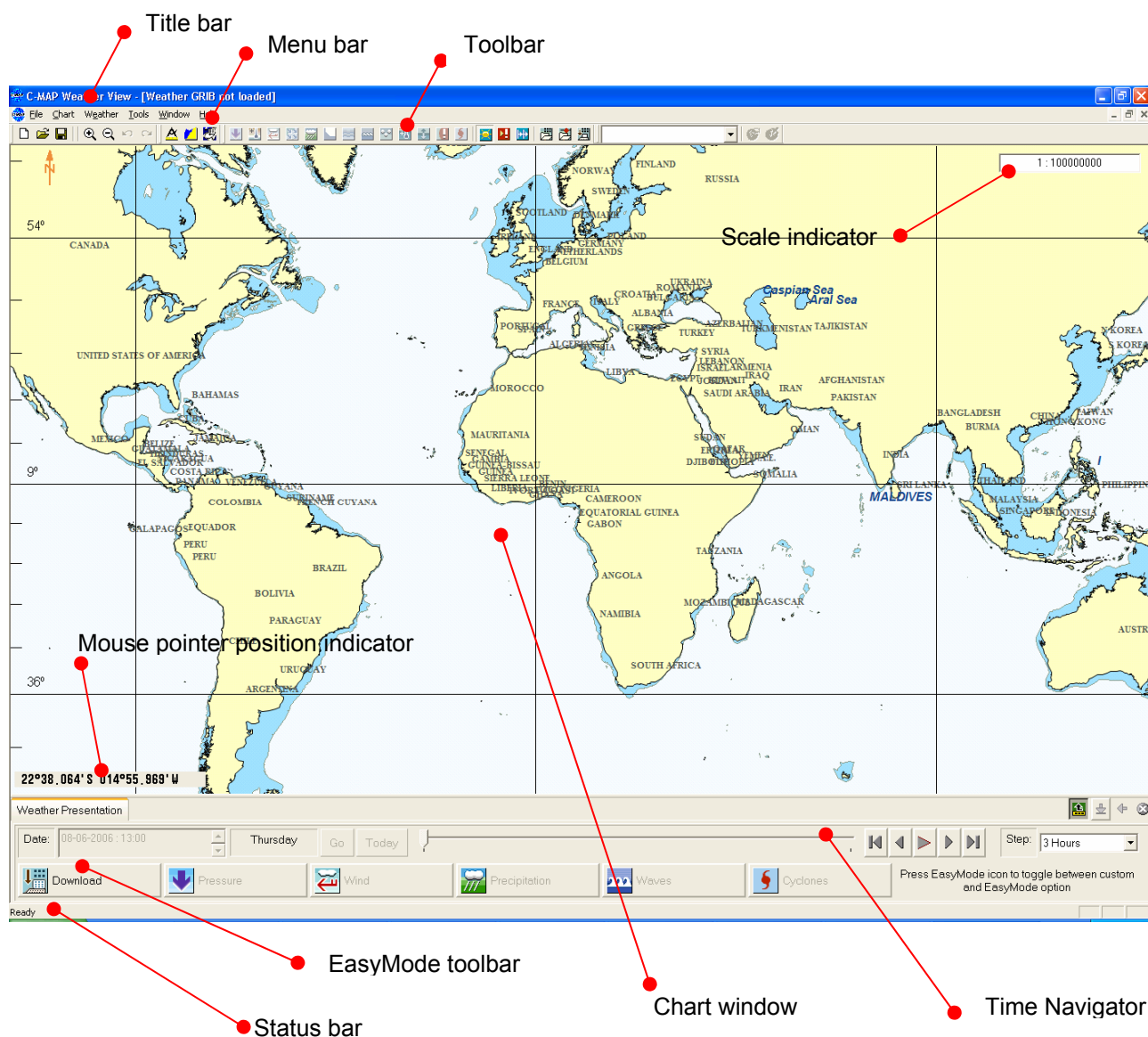
You have to subscribe and be registered at C-MAP Marine Forecast. Please contact C-MAP; email: weather@c-map.no

When having a valid subscription, you can activate this in the Terminal by clicking **Tools -> Dowload subscription**.

Send and Receive by **Tools – Send & Receive**. If not automatically saved (bullet turning into a green "Exported" sign), click on current line (turning blue) and click **File – Save**. **NOTE:** *if using "Folder option", please ask weather@c-map.no for further details if needed!*

4.0 The WeatherView™ Layout

When you have installed the **WeatherView™** and the **C-Map Terminal**, you are ready to get started! First, run **WeatherView™**, either from the icons on your desktop or from your Windows **Start**. After starting the program, the following window will appear:



The program window consists of the following elements:

- 1) **Title bar** – it contains the name of the program and the name of the file you are working with;
- 2) **Menu bar** – it brings different options that can be selected by the user;
- 3) **Toolbar** – Icons that are designed to facilitate the user's job. Some of the options can be selected from the Menu bar as well;



- 4) **Status bar** – Here you can see some useful information such as Tool tips.
- 5) **Chart window area**. This is the main window of **WeatherView™**. Its background is a navigational chart. At the same time you can work with several **Chart windows**. In each **Chart window** there are:
 - ♦ **North sign**. The North direction is always upward.
 - ♦ **Scale indicator** displays the current scale. When you move cursor to this indicator a **Scale panel** appears.
 - ♦ **Mouse pointer position indicator**. It is the latitude and longitude of the cursor position and appears while cursor is inside the chart window borders. Coordinates are expressed in degrees, minutes and thousands of minute.
- 6) **EasyMode bar** – Gives your access to the most basic functions; download a weather dataset and to present these data.
- 7) **Time Navigator (Time Slider)** – this tool enables the user to locate the different timesteps.

Please bear in mind that these panels obstruct the **Chart window**. For example, when you zoom in, you see just part of your selection.

All Functional panels have the same two instruments: The **Close** button  and the **Alignment** button.



The Alignment button allows you to move the Functional panel to the left, top, right or bottom borders of the Chart window.



Sometimes additional buttons appear on Functional panels, for example **Export to MS Word**.

In order to exit from **WeatherView™** use the **File – Exit** command or press the  button on the **Title bar**.

If the setting **Tools → Options → General → Get confirmation before exit C-MAP WeatherView™** is switched on, an exit confirmation will be requested.

V. PRINCIPLES OF WORKING WITH CHARTS

When you start WeatherView™, the default scale shown is 1:100,000,000. However, this information can be changed by clicking on the scale indicator and typing a new desired scale.

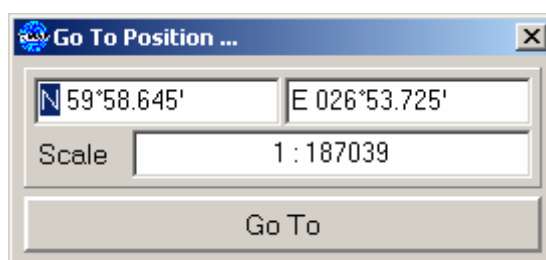
1 : 30000

1.0 Moving around the world (panning).

Click with the LEFT mouse button on any place inside the **Chart Window**. The point where you click will always become the new center position.

Press and hold down the RIGHT mouse button. You will pan slowly but continuously.

Chart → Go to position (or move mouse pointer over the Scale indicator and press the icon). This command will open the **Go To Position ...** panel.



Type in the desired position here and it will be set as the new central position. When this window first appears it displays the current screen center position.

The highlighted parts are all editable. North, South, East and West can be changed with N, S, E, W keys on the keyboard or with UP and DOWN arrows. Moving selection to degrees, minutes and parts of minute can be done with the LEFT and RIGHT keyboard arrows. The TAB button selects Latitude, Longitude and Scale in sequence.

Please note that besides the position you can also enter the scale value here.

Press the **Go To** button to change the screen position and scale.

2.0 Changing the chart scale.

There are several methods for changing the chart scale:

- Drawing a boundary box around the area you wish to zoom.

- 1) Press and hold down the LEFT mouse button
- 2) Draw a box around the area you wish to zoom using the mouse pointer.



- 3) Release the LEFT mouse button. The area inside the box will be shown in the whole **Chart window**.

If you want to cancel this action press ESC key while drawing.

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For zoom out take the same steps but hold SHIFT key down.

In the case of zoom out, the whole chart window will show the coverage that was inside the boundary box after releasing the LEFT mouse button.

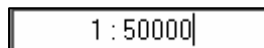
-  (F5) doubles the scale and  (F6) halves it.

- Turn the mouse wheel in an anticlockwise direction (outward) to increase scale and in clockwise direction (inward) to decrease it. This means that you will change the scale slowly but continuously.

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This kind of zoom gives + 5% or – 5% of the current scale. Please note that sometimes turning the mouse wheel has effect and this is caused by an MS Windows feature. Press the mouse wheel while the mouse pointer is inside the chart area to restore availability of this kind of zoom.

- Type scale directly in the **Scale indicator**.



- Use the **Scale panel** that appears when you move the mouse pointer over the **Scale indicator**.

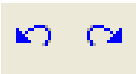


The buttons  and  are equal to the buttons  accordingly. The  button calls the **Go To Position ...** panel. This panel is described in [chapter VI.1.0](#). You can also change the scale here.

- **Chart – Set Original scale.** This will change the scale to the “scale of compilation” (original scale of the source paper navigational chart).
- **Chart – Set Best scale.** The largest scale chart available in its original scale will be displayed. The search among charts is carried out for the central screen position.

3.0 Bookmarks.

The central screen position and current scale define the current view. There are several methods for changing a view.

- The  buttons on the Toolbar change a view to the previous one and back again.
- The  icon changes to the view at startup in a scale of 1:100 000 000 and shows the whole world -map.
- Internal WeatherView™ Bookmarks. You have possibility to save a current view as a bookmark and open it later.

To save a bookmark:

- 1) Set a view by choosing a position and scale;
- 2) Type in the bookmark name in a special box on the Toolbar;



- 3) Press the ENTER key. The bookmark is now saved.

To open a bookmark:

- 1) Press on the downward arrow to see the list of bookmarks.



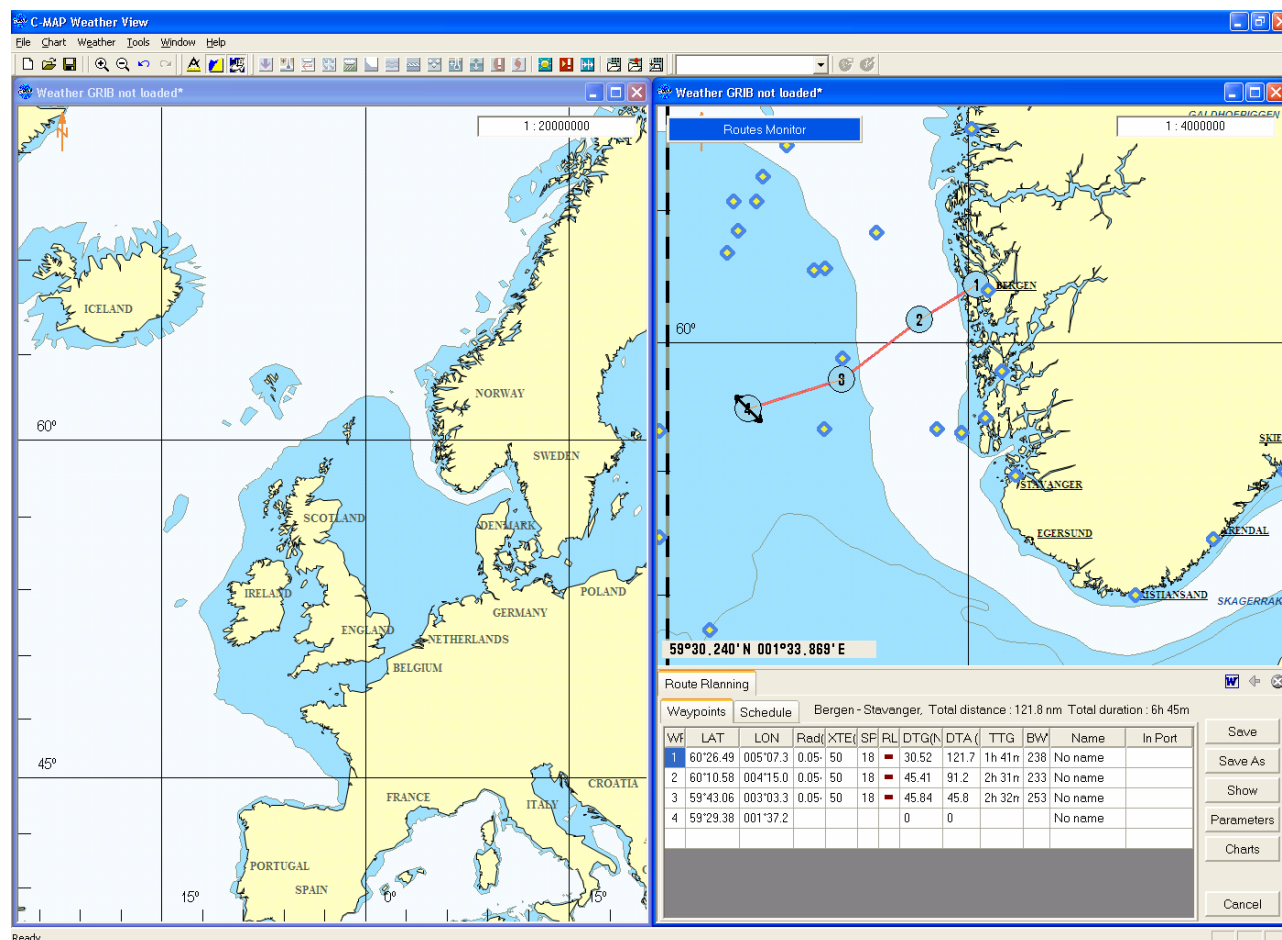
- 2) Select the bookmark from the list;
- 3) Press the  icon. The screen is moved to the saved view.

To delete a bookmark:

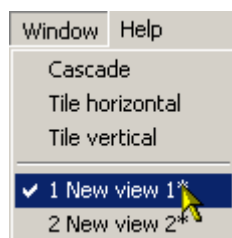
- 1) Click on the downward arrow to see the list of bookmarks;
- 2) Select the bookmark from the list;
- 3) Press the  icon. The selected bookmark is deleted.

4.0 Multi-window features

WeatherView™ allows you to work with several windows. Each window can be configured with its own presentation settings:



In order to open a new window, select **File → New** command. This will show a new world map. Opening an external bookmark also opens a new window.



The **Window** menu is assigned to manipulate the separate windows.

Here you can switch between windows and arrange them in normal windows styles (**Cascade**, **Tile horizontal** and **Tile vertical**).

In order to close a window, select **File → Close** command (or the  button on a window **Title bar**).



Please note that WeatherView™ will not close the last window. Thus, at least one window is always open.

5.0 Measuring distances and directions

There are two tools for measuring distances and directions in WeatherView™.

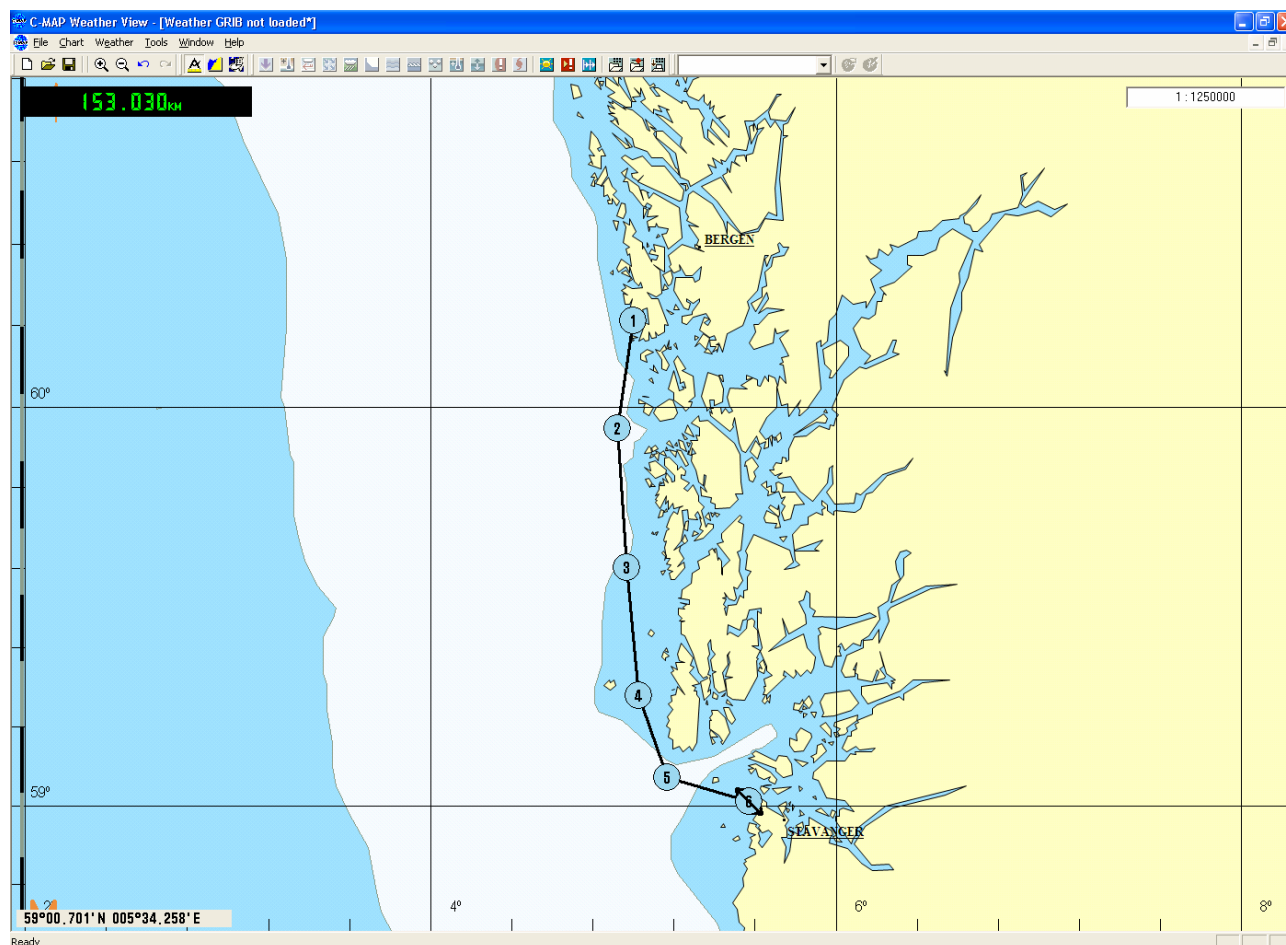
5.1 Measurement tool



The measurement tool is activated by pressing the  button or by selecting **Tools → Measurement**.

The **Result of measurement** indicator will appear in the upper left corner of the **Chart window**. It displays the total distance between the first and the last points.

153.030km

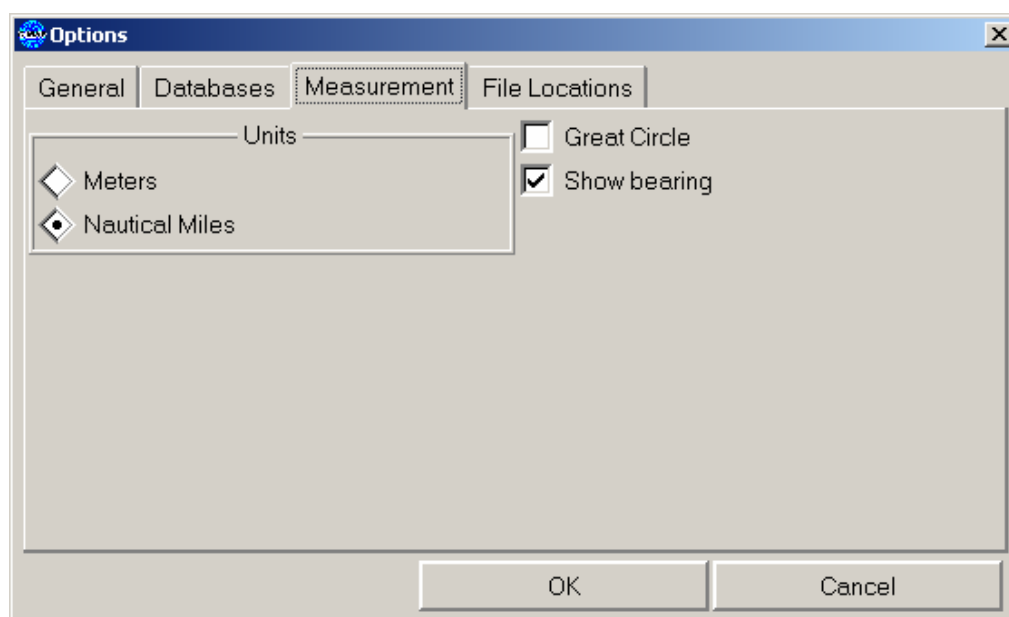


The principle of working with the **Measurement** tools is as follows:

- To add a point – Click with the LEFT mouse button on the chart. A point number (1) in a blue circle will appear. Move the cursor and a thin red line linking this point and the mouse pointer is displayed. This can be useful for checking a second point position. Click with the LEFT mouse button in a new place on the chart. The second point (2) will now appear. The next LEFT click will plot the next point and so on.
- To control a point position – Pressing and holding down the LEFT mouse button while adding points allows controlling the point position. Release the mouse button to plot the point.
- To pan and zoom in or out – While you are in the *Measurement mode*, any LEFT click plots a new point. In order to pan the **Chart window** or zoom it with a boundary box press and hold down the CTRL key. While the CTRL key is held down, you can pan and zoom with the boundary box in the same way as in the chart view mode (for zoom out press and hold down the CTRL and SHIFT key simultaneously).

- To insert a point before the first one – Move the mouse pointer over the first point. The thin red line will be linked to it instead of the last point. Now, move the mouse to the position you want and a new point will be added before the first one. In the same way you can move the mouse pointer over the last point to keep on adding points from the last one.
- Delete point – In order to delete a point, move the mouse pointer over it. The thin red line will be absent but a special symbol will be displayed. Press the RIGHT mouse button to delete the point. 
- Move point – In order to move a point, locate the mouse pointer over it and press the LEFT mouse button. A special symbol will be displayed. Choose the new point position and press the LEFT mouse button again. The point will be moved. Press ESC to cancel the operation. 
- Insert point between two existing points – In order to insert a point between two existing points move the mouse pointer over the line between them. A special symbol will be displayed. Press the LEFT mouse button, choose the new point position and press the LEFT mouse button again to insert a point. Press ESC to cancel the operation. 

If you want to change the Measurement tool settings, select: **Tools → Options → Measurement:**



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You can edit the following settings:

- measurement units: meters or nautical miles
- display directions or not (**Show bearing** option)
- compute legs as great circle or lines (**Great circle** option).

In the great circle mode, a leg always consists of a number of rhumb lines with limited length. The value of that limit is set so as to get negligible errors. Therefore, in this mode, you will see several values of direction along the line when the **Show bearing** option is on.

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Besides that, when you move the cursor along the great circle line you can notice the appearance of the “Delete point” symbol which should be displayed above the point only. It means that the “separation” point is actually under the cursor but just hidden. This feature with “separation” point affects the appearance of this symbol only, and does not affect any other measurement functions.

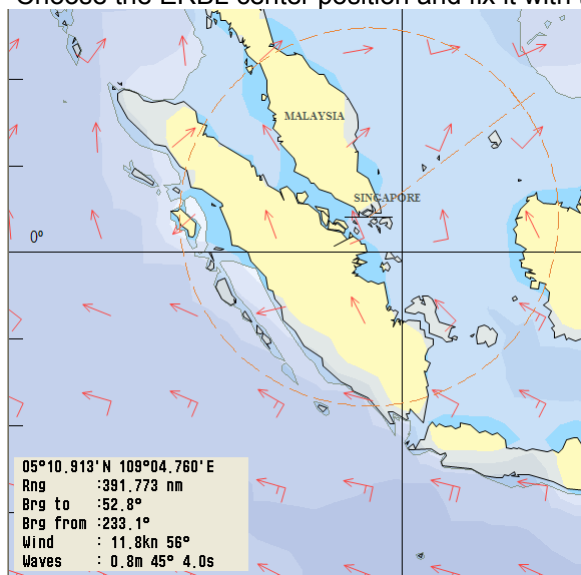
!

When you work with several windows and you would like to unify these setting for all windows switch on the option **Tools → Options → General → Apply settings to all Map Windows**. If this is not checked then these settings are applied for the active window only.

5.2 ERBL (Electronic Range Bearing Line) tool

Select **Tools → ERBL**. The ERBL is displayed on the screen.

Choose the ERBL center position and fix it with the RIGHT mouse button. After that, a range circle and a



bearing line will show the range and the bearing from the center point to the mouse pointer position. In the lower left corner of the **Chart window**, the range values are in nautical miles (**Rng**), the bearing from the center point to the cursor (**Brg to**) and back (**Brg from**) are displayed.

Press the RIGHT mouse button again to release the ERBL.

VI. ROUTE PLANNING

1.0 WeatherView™ Tools for Route Planning

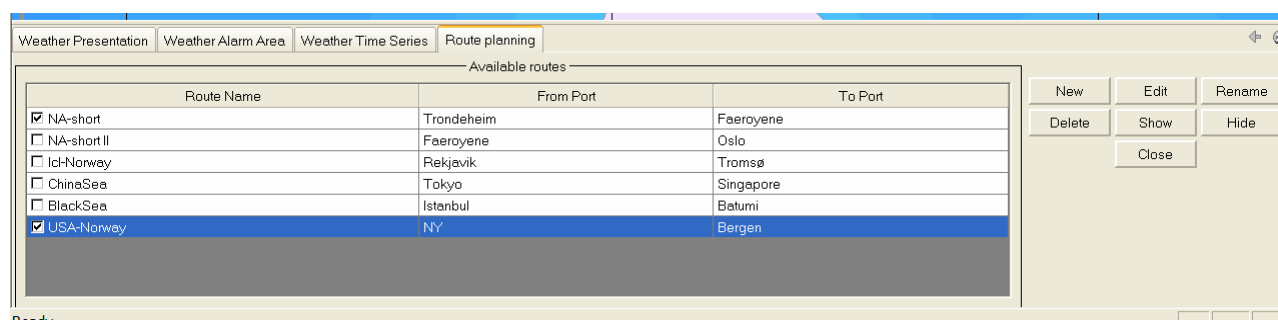


In order to start a route planning, press the  button or select **Tools → Route planning**.

Route Planning allows you to manually create a new route or edit an existing one. Besides that, route and voyage information such as waypoints, critical points and voyage schedule, is accessed in the Edit route mode of the tool. Critical weather exceeding your alarm thresholds will be shown as red colors along the route, while the green color indicates weather below your alarm thresholds.

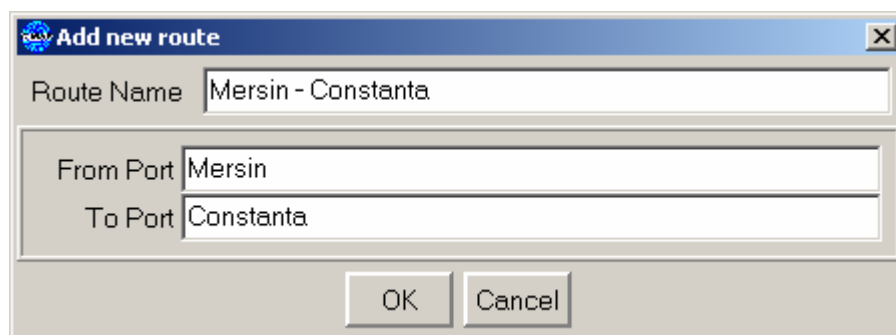
2.0 Manual Route Creation

The **Route Planning** panel consists of the **Available route** box and seven buttons on the right side. An example of some routes in WeatherView™ is shown here. All buttons and principles of working with this list are described in [chapter VI.4.1](#).



If you have created your route previously you may skip this chapter and continue reading from [chapter VI 3.0](#) (Route planning – Edit mode).

Press the **New** button in order to create a new route. The **Add new route** dialog box appears where you have to fill out appropriate fields.



Add new route

Route Name: Mersin - Constanta

From Port: Mersin

To Port: Constanta

OK Cancel

Press the **OK** button to create the route and switch to the **Edit mode**; see next chapter.



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You can use any Route Names here but mentioning the departure and destination ports in the Route Name is advisable. The port names you type here will then appear in the:

- 1) **Route Planning** → **Available routes** list
- 2) **Export & Import routes** ([see chapter VI.4.2](#))
- 3) **Weather Time Series** (see [chapter VII 3.2](#))

When you press the **OK** button, you will observe the following:

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- 1) Your route is created and registered in **WeatherView™**. All registered routes are shown in the **Available routes** box of the **Route Planning** panel. If weather is downloaded, and some alarms are activated, a green and red line will indicate where the alarm thresholds were exceeded or not.
- 2) Your route will be loaded. **WeatherView™** always loads a route prior to showing or editing it. If a route consists of many waypoints the loading process may take some time. In order to save your time there is possibility to keep routes loaded even when they are not shown (hidden).

The **Route monitor** panel appears in the upper left corner of the **Chart window** when there are any loaded routes. It is designed for easy access of the loaded routes.

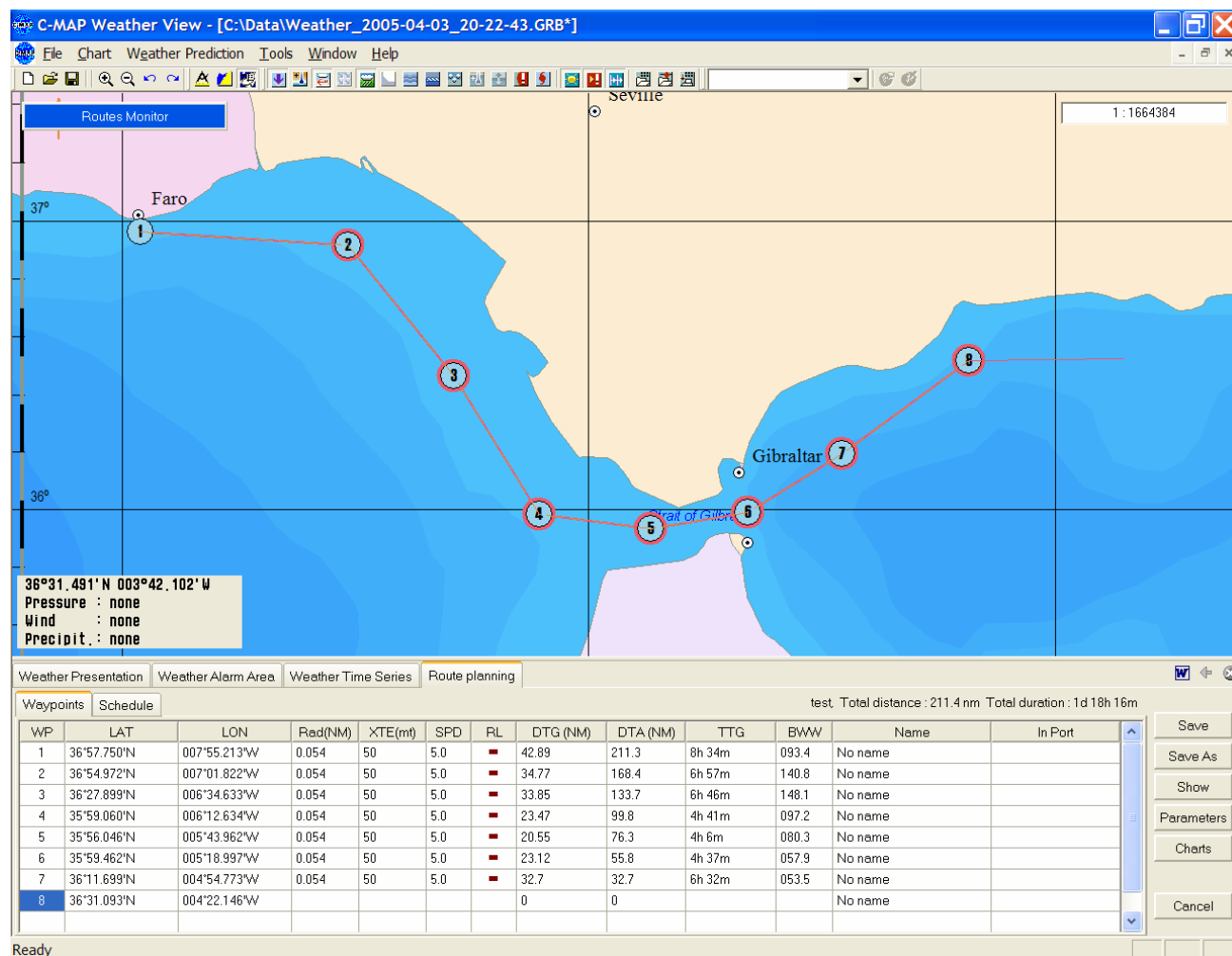
Routes Monitor

- 3) Your route will be activated. This means that your route is in the **edit mode**; see next Chapter for entering way points ect.
- 4) **Pan/Zoom** might be done as normal by holding down the <Ctrl> key.

3.0 Route Planning: Edit Mode

You can create a route by selecting **Tools → Route Planning**. After that, you can enter the Edit mode in order to plot a route, check it or edit it.

When a route is in the edit mode the **Route Planning** panel consists of the **Waypoints** and **Schedule** panels. Control buttons on the right side of the panel are also different. The total route distance and the total voyage duration are calculated automatically and shown in the upper right corner of the panel. And, of course, in the edit mode you can plot waypoints directly on the chart.



3.1 Plotting Waypoints on the Chart

The plotting principles are the same as for the **Measurement** tool ([see chapter V 6.0](#)). They are listed here once again.



The term “waypoint” means the geographic position where a vessel’s course should be altered. The term “leg” means a line between two adjacent waypoints and the vessel’s track between them accordingly.

- Add waypoint. Click with the LEFT mouse button on the chart. A waypoint number (1) in a blue circle will appear. Move the cursor and a thin red line linking the point and the mouse pointer is displayed. It can be useful for checking the leg and the second waypoint position. Click with the LEFT mouse button in new position on the chart. The second waypoint (2) will appear. The next LEFT click will plot the next waypoint and so on.
- Checking waypoint position. Pressing and holding down the LEFT mouse button while adding waypoints allows controlling the waypoint position. Release the mouse button to plot the waypoint.
- Pan the **Chart window** or zoom it with a boundary box press and hold down the CTRL key. **While the CTRL key is held down you can pan and zoom with a boundary box the same as in ordinary chart view mode** (for zoom out press and hold down the CTRL and SHIFT key simultaneously)
- Insert waypoint before the first one. Move the mouse pointer over the first waypoint. The thin red line will be linked to it instead of the last waypoint. Click with the LEFT mouse button. A new point will be inserted before the first one. In the same way you can move the mouse pointer over the last waypoint and resume adding waypoints from the last one.
- Delete waypoint. In order to delete a waypoint move the mouse pointer over it. The thin red line will be absent but a special symbol will be displayed. Press the RIGHT mouse button to delete the waypoint. 
- Move waypoint. In order to move a waypoint, locate the mouse pointer upon it and press the LEFT mouse button. A special symbol will be displayed. Choose the waypoint position and press the LEFT mouse button again. The waypoint will now be moved. Press ESC to cancel operation. 
- Insert waypoint between two existing waypoints. In order to insert a waypoint between two existing waypoints move the mouse pointer over the leg between them and a special symbol will be displayed. Press the LEFT mouse button, choose the waypoint position and press the LEFT mouse button again to insert a waypoint. Press ESC to cancel operation. 

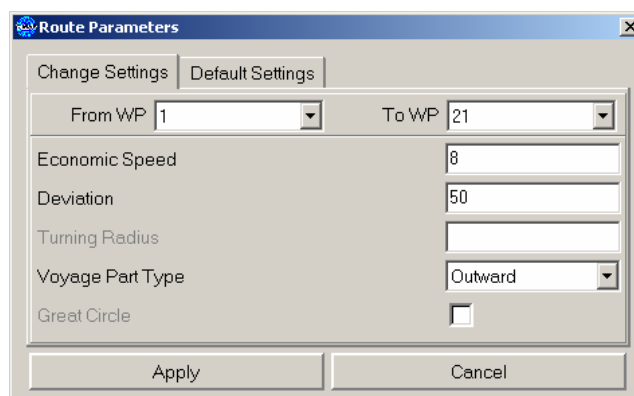
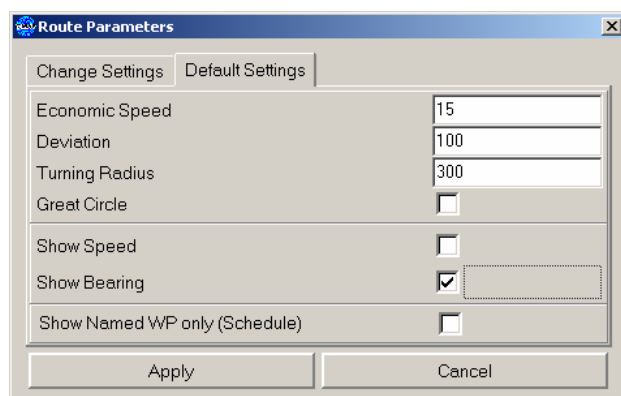
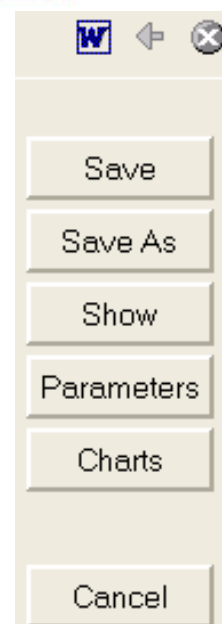


Please note that while you are plotting or checking the waypoints, you can use the ERBL tool (Tools – ERBL, [see chapter V.6.2](#)). Click with the RIGHT mouse button on a land feature to fix the ERBL and move the mouse pointer to the position where you are going to plot a waypoint. The ERBL will display the distance and the bearing to that land feature.

3.2 Control buttons

When you go into the edit mode, a new control buttons appears on the right side of the Functional panel.

- The **Save** button allows you to save the edited route. It will actually save all of the changes made since the editing start. Once the route is saved, you may exit from the Edit mode (the route is deactivated) and the standard **Route Planning** panel appears. The route will still be loaded and shown.
- **Save as** will save the route with a different name. The **Save route as...** window will appear where you can type another route name. After you exit from the edit mode, your initial route is unloaded (hidden) and a new (renamed) route is loaded and shown.
- The **Show** button changes the scale and screen position in order to view the whole route in the Chart window.
- The **Parameters** button shows a dialog box for editing the **Route parameters**. It consists of two panels: **Change Settings** and **Default settings**.



- ◆ **Default settings** – sets default route parameters. These are applied for new legs only.
- ◆ **Show speed** – When it is switched on, the speed is displayed on the legs. Please note that when one of the leg waypoints is outside of the **Chart window** limits, the speed is shown above the visible waypoint.
- ◆ **Show bearing** – Like the speed setting, when it is switched on, the courses are displayed on legs.
- ◆ **Schedule Named WP only (Schedule)** – When it is on, only the named waypoints are displayed on the **Schedule** panel.
- ◆ **Change settings** – allows the unification of Common settings for several legs of the route. When you reset a setting, it will be the same for all legs in an interval defined by WP (Waypoints) diapason.

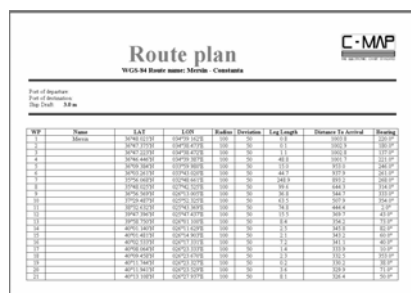
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A route is logically divided and consists of three sections: Outward (Berth to Pilot station), Sea passage (Pilot station to Pilot station) and Inward (Pilot station to Berth). Select waypoints for outward section (for example, 1 to 9), set Voyage part Type for them (Outward accordingly) and set (change) all parameters (Speed, Deviation, etc.) for that Type. Press Apply button. (See also chapter VII.4.3)

Note: only highlighted parameters will be changed. On the picture above the legs will not become Rhumb lines!

The idea is during Maneuvering these parameters are usually completely different to Sea passage parameters. By means of Type selection for a route Section (with defining waypoints forming it) you can easily change those parameters.

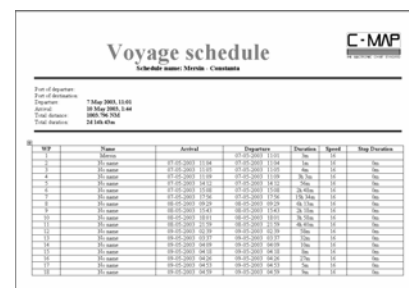
- **Charts** button – displays all WeatherView™ charts in the limits of which the route is plotted. Be aware that only background chart is supported in WeatherView™.
- **Cancel** button – allows exiting from the edit mode canceling all changes made. Once the route is canceled, you may exit from the Edit mode and the standard **Route Planning** panel appears. The route is unloaded.
- **Export Table** function – is represented by the  icon. This important tool exports to MS Word the current table in view (Waypoints or Schedule).



Route plan
WGS84 Route name: Miroslav - Constantine

WP	Name	LAT	Lon	Radius (m)	Leg Length	Distance To Arrival	Heading
1	Start	41°28'12.4"N	065°22'16.3"W	0.054	50	12.0	689.53
2	Waypoint	45°10'78.9"N	050°26'41.4"W	0.054	50	12.0	1750.93
3	Waypoint	59°59'32.4"N	007°52'86.1"W	0.054	50	12.0	198.13
4	Waypoint	59°29'96.0"N	001°25'64.3"W	0.054	50	12.0	192.64
5	Waypoint	60°25'08.4"N	004°41'54.4"E	0	0	0	0

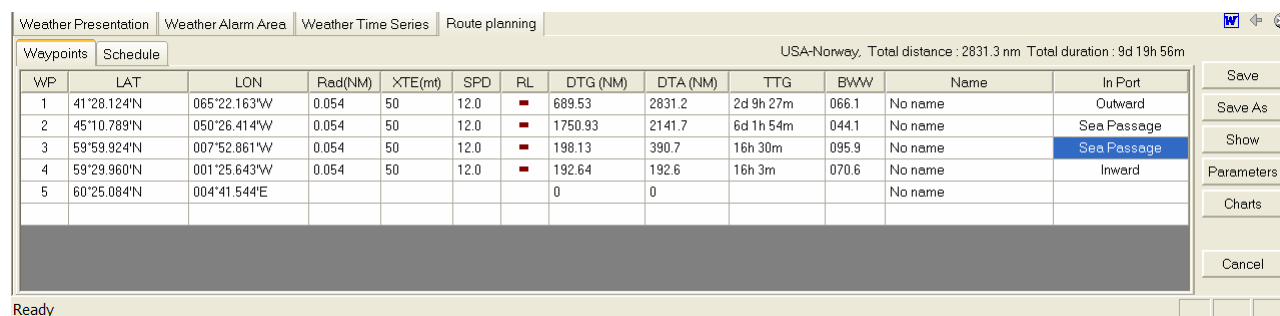
After export you can print your table.



Voyage schedule
Schedule name: Miroslav - Constantine

WP	Name	Arrival	Departure	Duration	Speed	Stop Duration
1	Start	21-05-2003 11:04	21-05-2003 11:04	0h	12.0	0h
2	Waypoint	21-05-2003 11:10	21-05-2003 11:10	0h	12.0	0h
3	Waypoint	21-05-2003 11:15	21-05-2003 11:15	0h	12.0	0h
4	Waypoint	21-05-2003 11:16	21-05-2003 11:16	0h	12.0	0h
5	Waypoint	21-05-2003 11:17	21-05-2003 11:17	0h	12.0	0h

3.3 Waypoints panel



Weather Presentation | Weather Alarm Area | Weather Time Series | Route planning |  

Waypoints | Schedule

USA-Norway, Total distance : 2831.3 nm Total duration : 9d 19h 56m

WP	LAT	LON	Rad(NM)	XTE(m)	SPD	RL	DTG (NM)	DTA (NM)	TTG	BWW	Name	In Port
1	41°28.124'N	065°22.163'W	0.054	50	12.0	■	689.53	2831.2	2d 9h 27m	066.1	No name	Outward
2	45°10.789'N	050°26.414'W	0.054	50	12.0	■	1750.93	2141.7	6d 1h 54m	044.1	No name	Sea Passage
3	59°59.924'N	007°52.861'W	0.054	50	12.0	■	198.13	390.7	16h 30m	095.9	No name	Sea Passage
4	59°29.960'N	001°25.643'W	0.054	50	12.0	■	192.64	192.6	16h 3m	070.6	No name	Inward
5	60°25.084'N	004°41.544'E					0	0			No name	

Save
Save As
Show
Parameters
Charts
Cancel

Ready

This is the list of waypoints. The table consists of the following parameters for each waypoint:

- **WP** – Waypoint number
- **LAT** – Waypoint latitude
- **LON** – Waypoint longitude
- **Radius** – Estimated turning radius at the waypoint expressed in meters. The default value is set in the **Route parameters** dialog box ([see chapter VII.4.2](#)).

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This parameter is supposed to be used in high accuracy navigation. WeatherView™ draws an arc at the waypoint depending on the turning radius value. If you expect turning at some waypoint with a different radius you can change the value (this radius depends on vessel's speed, rudder angle, etc). If you do not want to use this parameter you may set it to zero.

If WeatherView™ is unable to calculate a maneuver correctly (when angle between legs is too acute) it does not draw an arc.



- **Dev** – Deviation or Cross Track Error (XTE) along the leg from this waypoint to the next. It is expressed in meters each side of the leg. The deviation is an analog of accuracy and it is used for determining dangers and cautions along the route ([see chapter VII.4.6](#)). The default value is set in the **Route parameters** dialog box but it can be changed in the table.
- **Speed** – Estimated speed on the leg from this waypoint to the next expressed in knots. The default value is set in the **Route parameters** dialog box (Economic Speed).
- **Rhumb L (Rhumb Line)** – A choice of whether Rhumb Line (✓) or Great Circle (■) sailing will be applied from the waypoint to the next one. When you activate the **Great Circle** checkbox in the **Route parameters** dialog, all of the new legs will be calculated as Great Circle lines.



These four parameters (Radius, Deviation, Speed and Rhumb Line) may be reset in the **Route parameters** dialog box. You should set the appropriate values in the **Common settings** section, activate the checkboxes and press **OK** button. The parameters will be set the same for all waypoints.

- **Distance(Nm)** – It is the leg distance from the waypoint to the next one expressed in Nautical Miles. The Distance is calculated automatically.
- **DTA** – Distance to Arrival or Distance to Go – the distance from this waypoint to the last one of the route (destination) expressed in Nautical Miles.
- **Time** – Estimated time that will be spent for sailing from this waypoint to the next. It is calculated automatically.
- **Name** – The name of waypoint. You are not obliged to type any waypoint name but it is advisable.
- **In port** – Voyage Part Type or Mode of Voyage. The value in this column can be “Sea passage”, “Inward” or “Outward”. “Inward” means that the route starts from Pilot station to Berth, “Outward” from the Berth to Pilot station and “Sea Passage” – from Pilot station to Pilot station.

By default all legs are marked as “Sea Passages”. You can change the value by double clicking on the cell. However a more convenient possibility is by using the **Change settings** dialog box of the **Route parameters** window ([see chapter VII.4.2](#)).

It is strongly recommended to set this parameter properly in order to get the correct speed, ETA and fuel consumption calculation and reflect it in the report.

In order to change any of the above mentioned parameters (except Distances, Time and In Port) click with the LEFT mouse button in the chosen cell of the table, type in desired value and press ENTER.



By using the keyboard only, you can “navigate” around the table with the ARROW keys and start editing by pressing any key.

In this way you have an important possibility to type in waypoint positions. You may need this if you copy a route from a paper source for example.

The last row in the table is empty. If you start editing any cell in that empty row a new waypoint is added. This feature allows you to enter new waypoints without reference to the chart.

In order to delete a waypoint using the keyboard only, press the DELETE key while any cell (except **LAT**, **LON** and **Name**) in the waypoint row is selected.



Double click on the waypoint number (or by pressing ENTER on the keyboard while that field is selected) to center the **Chart window** on the selected waypoint.

3.4 Schedule panel

The Schedule panel defines your route schedule

WP	Name	Arrival	Departure	Stop dur.	Speed	Distance	Time to next
1	No name		02-04-2005 12:00		12.0	689.5	2d 9h
2	No name	04-04-2005 21:28	04-04-2005 21:28	0m	16.0	1750.9	4d 13h
3	No name	09-04-2005 10:54	09-04-2005 10:54	0m	16.0	198.1	12h 23m
4	No name	09-04-2005 23:17	09-04-2005 23:17	0m	16.0	192.6	12h 2m
5	No name	10-04-2005 11:19			0.0	0.0	

The following parameters are included in the table:

- **WP** – Waypoint number. The list of waypoints is taken from the **Waypoints** table;
- **Name** – The waypoint name;
- **Arrival** – Date and time of arrival from the waypoint;
- **Departure** – Date and time of departure from the waypoint;
- **Stop dur.** – Stop duration at the waypoint. It can be applied for waypoints representing pilot stations and ports, as in [WeatherView™](#) a route can include a number of intermediate ports of call;
- **Speed** – Estimated speed in knots on the leg from this waypoint to the next. It is taken from the **Waypoints** table and can not be changed here;
- **Distance** - The leg distance from the waypoint to the next one expressed in Nautical Miles. The Distance is taken from the **Waypoints** table;
- **Time to Next** – Time that will be spent to reach the next waypoint. It is calculated as Speed divided by Distance;



The Arrival, Departure and Stop duration parameters can be changed. In order to do this, click with the LEFT mouse button in the chosen cell of the table, type in desired value and press ENTER. Using the keyboard you can “navigate” around the table with the ARROW keys and start edit by pressing any key.

The last edited cell is highlighted with a red font color. By default the departure time from the first waypoint is highlighted.

The initial value of departure time from the first waypoint (Port) is the time and date when the route was created.

When you change any of editable parameters, **WeatherView™** calculates new values of corresponding parameters because they are linked with arithmetic formulas. For example, you set an arrival time at some waypoint. It means that you would like to arrive to that waypoint (Port or Pilot Station) at a certain time. But it is impossible, as this arrival time depends on the departure time from the previous waypoint and speed during leg passage. Theoretically, any of those parameters could be changed for conformity. However, in this case, **WeatherView™** will change the departure from the initial waypoint thus shifting the whole schedule. The following table clarifies what is changed while you edit a parameter.

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You edit...	Is changed...
Arrival	Departure time from the initial waypoint.
Departure from initial waypoint	All schedule.
Departure from any other point	Stop duration at the same waypoint. However, if you decrease Departure time and the Stop duration is less than the value of your decrease (in fact get a Departure time less than Arrival time) this operation is blocked. If the Stop duration is zero (no waiting) you are not able to reduce Departure time at all.
Stop duration	Arrival time at the next waypoint and the whole schedule after.

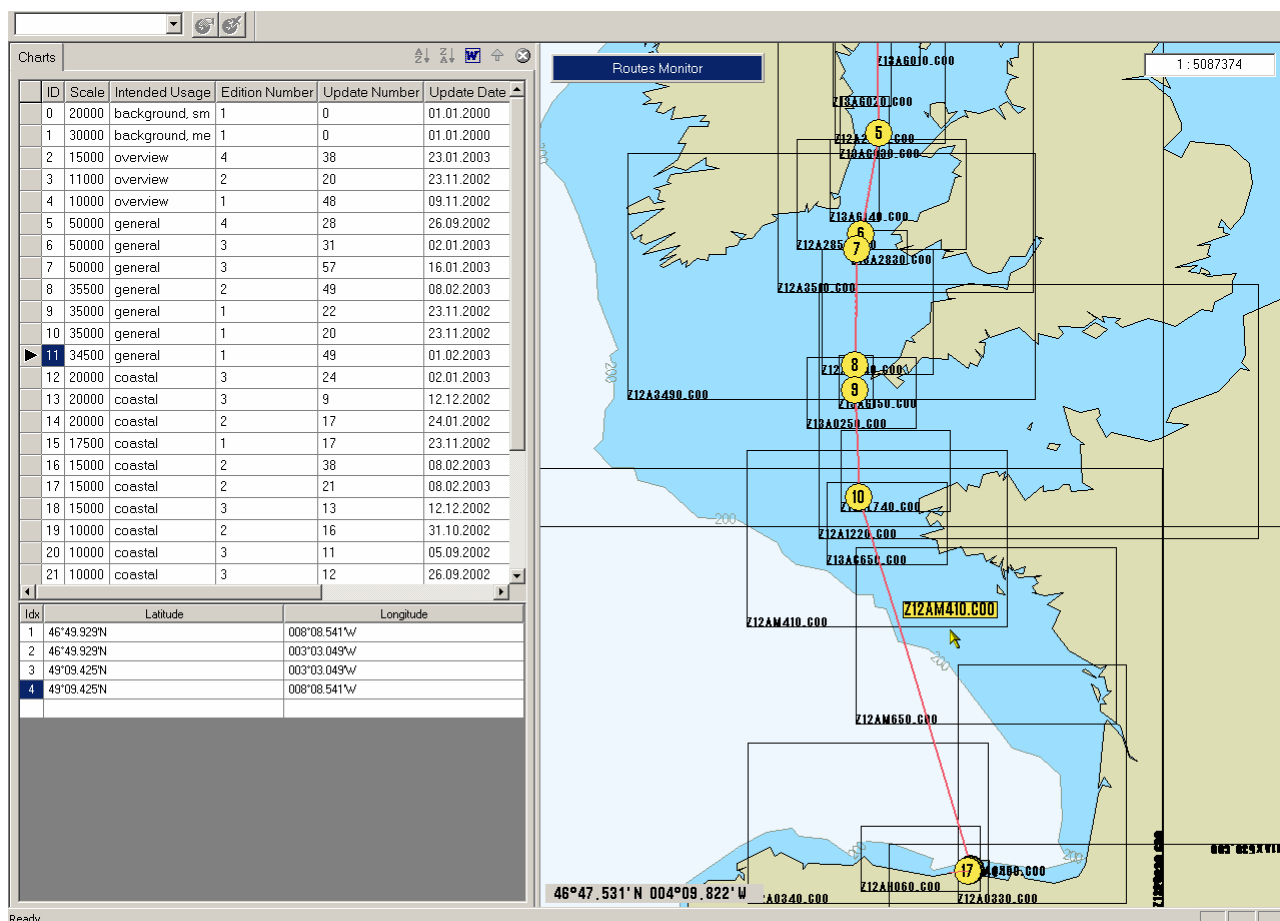
Bear in mind that the program does not realize the full reality of your schedule. It allows setting Stop duration at open sea, instant speed increasing and decreasing and so on. The operator will only check its schedule.

3.5 Charts



Note: **WeatherView™** supports scales A and Z only, and this option is therefore of limited interest. For both combined weather and chart, we recommend the OceanView software.

When you press the **Charts** button on the Control box of the **Route planning** panel all charts in the limits of which the route is plotted are displayed in the **Chart window** and listed in the created **Charts** panel.



In the **Chart window** you can see Chart borders and names of appropriate Datasets (electronic chart names). When you move the mouse pointer to a chart border the Dataset name is displayed as a Tooltip.

In the **Charts** table you can see some additional Chart information, such as Scale, Edition Number, Issue Date, etc.

If you click on the chart border with the LEFT mouse button this chart is selected in the table. Double click on the any field of the chart in the table and that chart will be highlighted in the **Chart window**.

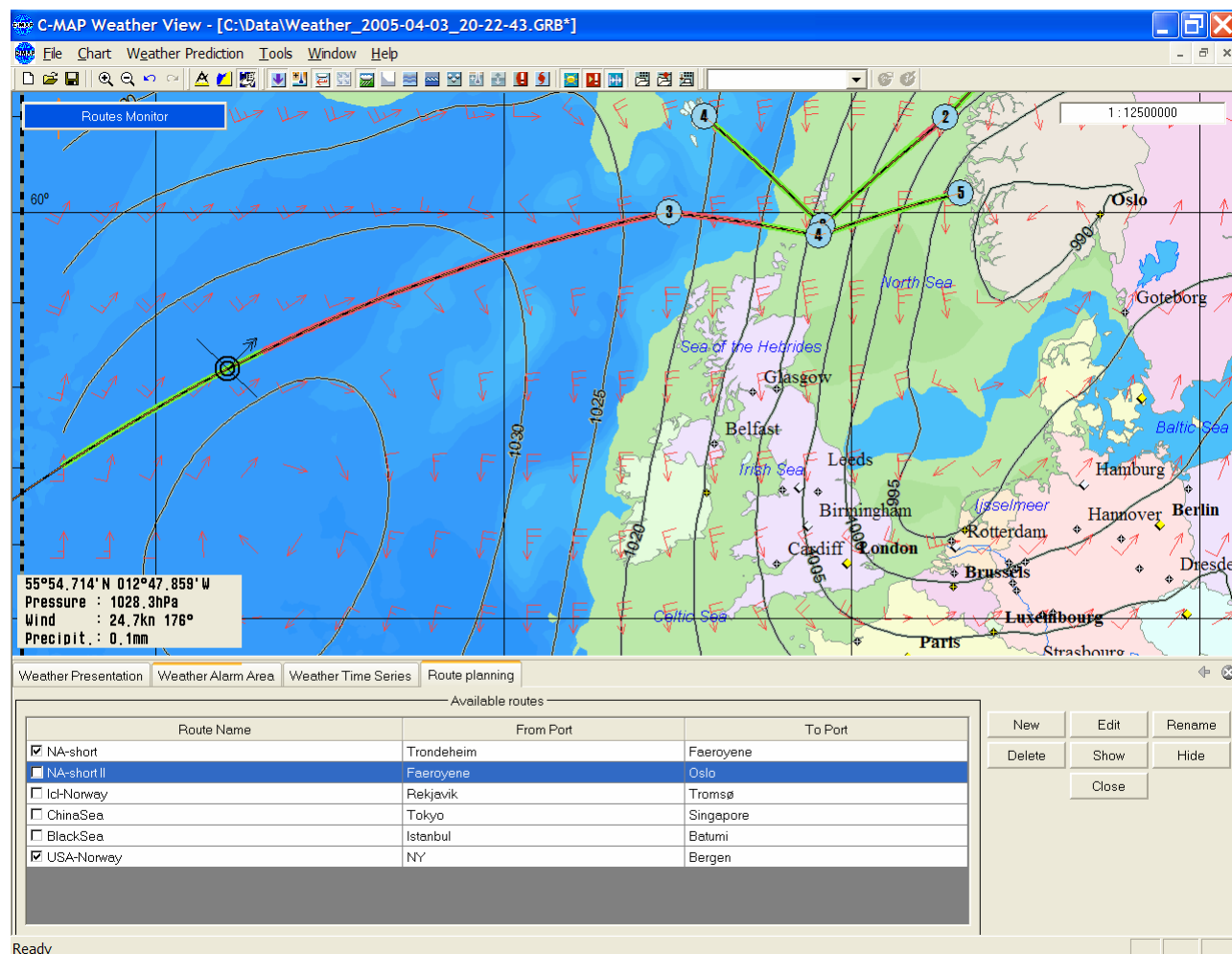
You can sort charts in the table. Select the field that you want to use as criterion for chart sorting. Press

the  (Ascending order) or  (Descending order) button located in the upper right corner of the **Charts** panel. The charts will be sorted appropriately.

4.0 Routes management

4.1 Working with several routes

After completing the route creation, checking it and pressing the **Save**, **Save as** or **Cancel** buttons you exit from the Route Planning → Edit mode. The ordinary **Route Planning** panel appears. It consists of the list of available routes and control buttons in the right part:



Available routes are the routes registered by WeatherView™. They are your own created routes with **Route Planning** (see chapters VI.2.0) as well as imported routes. Route name, Port of departure and Port of destination set in the **Add new route** window are displayed here.

With a LEFT mouse click, you can select any routes. While holding down CTRL key you select all routes you click and with the SHIFT key you select all routes in the list between two last clicked. This is a standard feature for many programs and is applied in most WeatherView™ lists.

The control buttons are applied for selected route(s) and they mean the following:

- **New** – A new route will be created;
- **Edit** – The selected route is loaded and activated. You enter the edit mode. At the same time chart scale and position are arranged to display the whole route on the screen. You can edit only one route at a time;
- **Rename** – A **Modify-route-info** window appears. It looks exactly as the **Add-new-route** window. The Route, Port of departure and Port of destination names may be changed here. You can rename only one route at a time.



- **Delete** – The route will be deleted (unregistered);
- **Show** – The route will be loaded and shown. The chart scale and position are arranged accordingly to display the whole route on the screen;
- **Hide** – The route will be hidden and unloaded;
- **Close** – The Voyage planning tool will be closed. You have the possibility of doing the same by releasing the  button on the **Toolbar** or pressing by the  button;

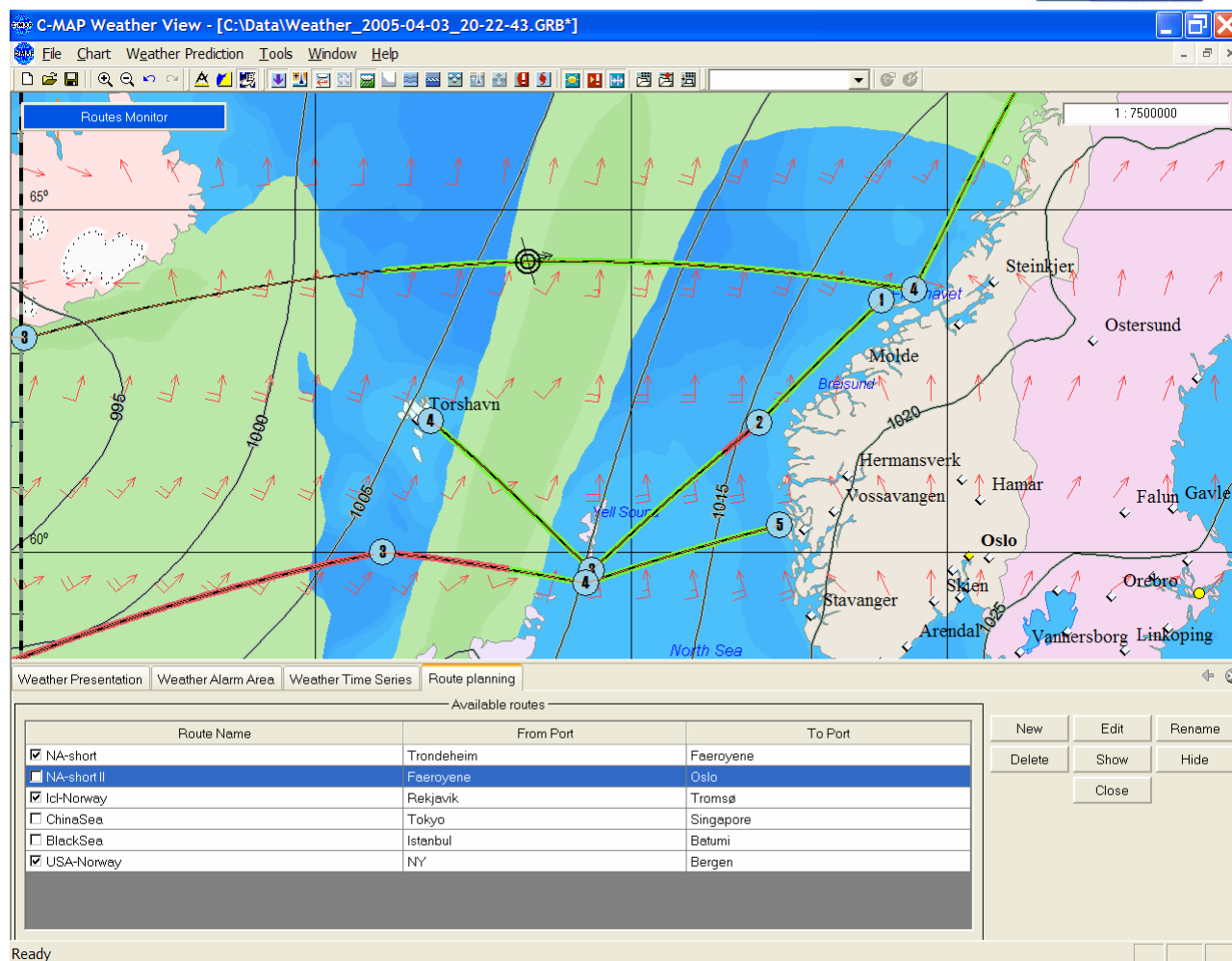
Please note that when you close the Voyage report tool, a route is activated (in the Edit mode). This route is not deactivated (you can continue editing on the chart). Besides that, all loaded routes are not unloaded and the **Route monitor** will still be presented on the screen. Thus, closing the Voyage planning tool just gives you more space in the **Chart window**, but it does not affect any route operation.

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On the left side of the route name, in the **Available routes** list, you will notice a checkbox. When you switch it on the route is loaded and shown, but the scale and screen position are not changed as they are with the **Show** button. When you switch it off, the route is hidden and unloaded.

All loaded routes are marked in the checkboxes.

The **Routes monitor** is displayed in the upper left corner of the **Chart window**. Move the mouse pointer upon it and the list of all loaded routes will be displayed.



On the picture above you can see three loaded routes in the **Routes monitor** box. They are marked also in the **Available routes** list and they are shown on the chart.

The **Route monitor** also allows the management of loaded routes. Three buttons are provided for this purpose:



(Hide) button is equal to **Hide** button on the **Route planning** panel. The route will be hidden and unloaded.



(Show) button is equal to **Show** button on the **Route planning** panel. The route will be shown, scale and screen position changed in order to display the entire route on the screen. This feature may be useful even when the route is shown already but not on the entire screen.



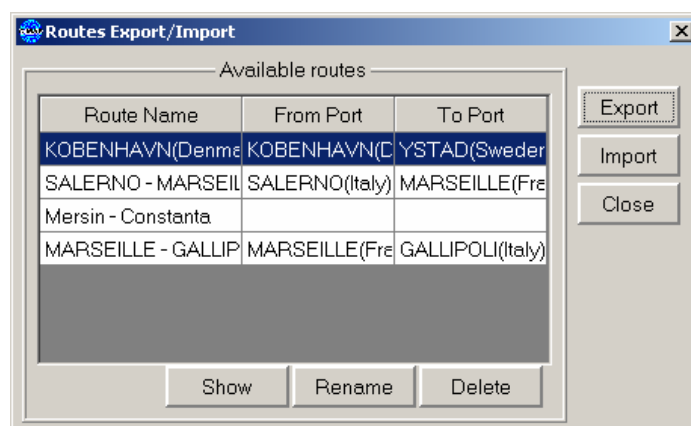
(Toggle view). This is a unique feature of **Route monitor**. It allows hiding the route but keeping it loaded. This feature should save the time required for loading a route. When this button is pressed the route is shown. When it is released the route is hidden. The  button automatically presses .

When you edit the route  and  buttons are disabled for this editing route.

4.2 Routes export and import

In order to export routes:

- 1) Select the **Tools → Export & Import → Routes** command. The **Routes Export/Import** window will appear.
- 2) Select the route you want to export. With CTRL and SHIFT you can select a number of routes. All those routes will be saved in a single file.
- 3) Press the **Export** button. A standard MS Windows **Save as** window will appear.
- 4) Enter the file name and save the route. If you select or type in an existing file name, the routes are added to that existing file.

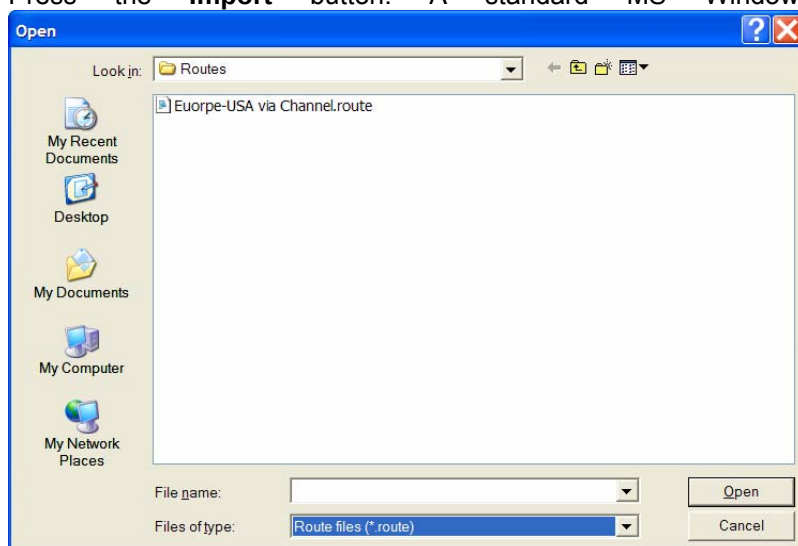


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Please note, the file will be saved in the folder defined in the **Tools → Options → File Locations** dialog box.

In order to import routes:

- 1) Select the **Tools → Export & Import → Routes** command. The **Routes Export/Import** window will appear;
- 2) Press the **Import** button. A standard MS Windows **Open** window will appear;

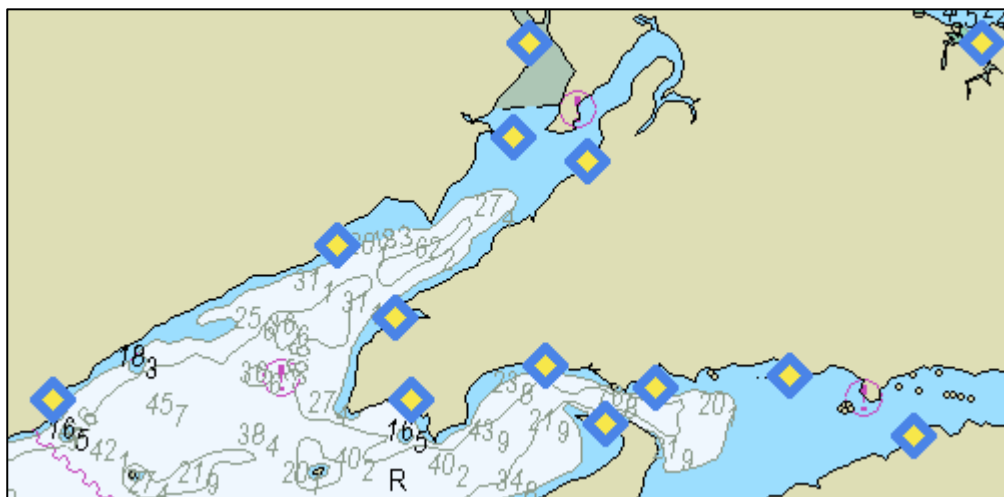


- 3) Open the file containing the required route. The **Select Route Name** table will appear;
- 4) Select the route you want to import. If there is only one route in the file you will not have to select anything;
- 5) Type the new route name if you want;
- 6) Press the **OK** button. The route will be imported and registered in WeatherView™. It will also appear in the **Available routes** list of the **Route planning** panel.

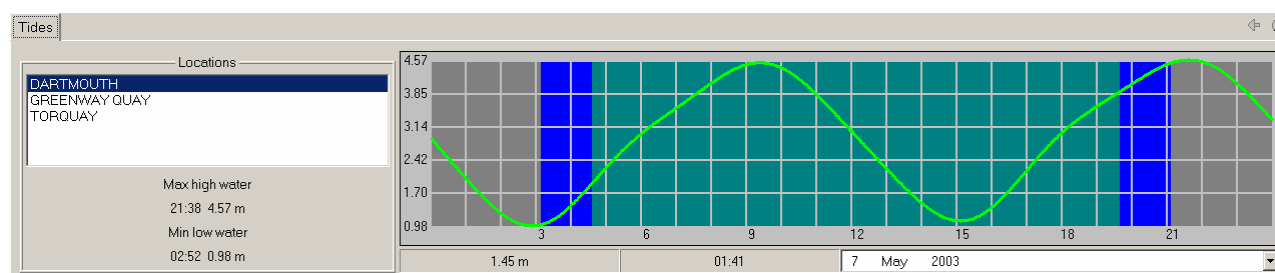
5.0 Tidal predictions



All tidal information is accessed via the  button, or Tools → Tides command. Once this icon is pressed, small blue diamonds appear on the chart. These represent the tidal prediction points (locations) around the world. In total, there are about 4000 of the tidal diamonds.



Click with the RIGHT mouse button on any of these diamonds to see the tidal height prediction.



By default, the tidal diagram is calculated for the current date (today). This date is displayed in the **Date indicator**.

Tidal height is dependent of Time and is graphically expressed on the diagram.

Heights are in meters above the Chart Datum.

Time is the Standard Time of the country concerned.

The diagram background consists of three color zones. These zones graphically show night time (grey), daytime (green) and twilights (blue).

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In addition to this, there is a very useful feature within this diagram. When you move the mouse pointer over the diagram area, it becomes a cross. When you move the cross-pointer position, the time and the corresponding tidal heights are shown allowing you to obtain detailed tidal information.

Please note that you do not need to move the cross-cursor precisely over the line. Only the horizontal movement (time) affects the tidal height figure.

The time and tidal height for maximum high water and minimum low water are given on the left part of the panel in the **Locations** box.

You can see several entries in the **Locations** list if you have clicked on a small scale chart and

there were several tidal prediction locations near that point. In such cases you can select any location from the list.

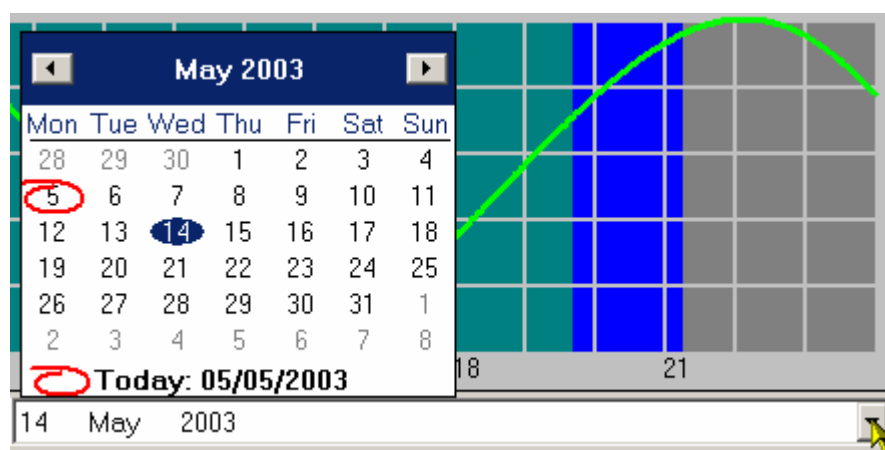
It is possible to predict tides for any future date. There are two means to do this:

- 1) LEFT click on the **Date indicator** allows you to enter the date manually;



Select day, month or year with LEFT and RIGHT keyboard arrows.
Use UP and DOWN keys for editing the selected item.
The diagram is renewed automatically.

- 2) Press on the downward arrow in the **Date indicator** to call the **Date selection dialog box**;



The Today's date is written at the bottom and a special mark  is used for highlighting it on the calendar.

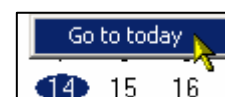
The selected date for tidal prediction is highlighted with dark blue color. LEFT click on the day in the calendar to select it.

In order to select a month click on it with the LEFT button and select the month in the submenu.

For year selection click with the LEFT mouse button.  Use the up and down arrows.

By means of the  and  buttons you can change the month.

With the RIGHT mouse click on any place inside the **Date selection dialog box** you can move back to today's date.



VII. WEATHER FORECAST

In order to access Weather forecast data and advanced functionality like weather and alarms along route, you have to subscribe and be registered at C-MAP Marine Forecast. Please contact C-MAP; email: weather@c-map.no, to get a WeatherView™ System CD.



To activate a free trial subscription (after receiving a WeatherView™ System CD), please visit: <http://www.c-map.no/marineforecast/> and register at "Free one month demo".

1.0 Downloading weather data

When installing WeatherView™, a dedicated download software, named **C-MAP Terminal**, is installed as an integrated part of WeatherView™. The download function can be activated in three modes: one **EasyMode** mode (see 1.1 below), one **DirectView** (see 1.2 below) mode and one **Customized** mode (see 1.3 below). The EasyMode is the most user friendly, while Customized gives you most options.

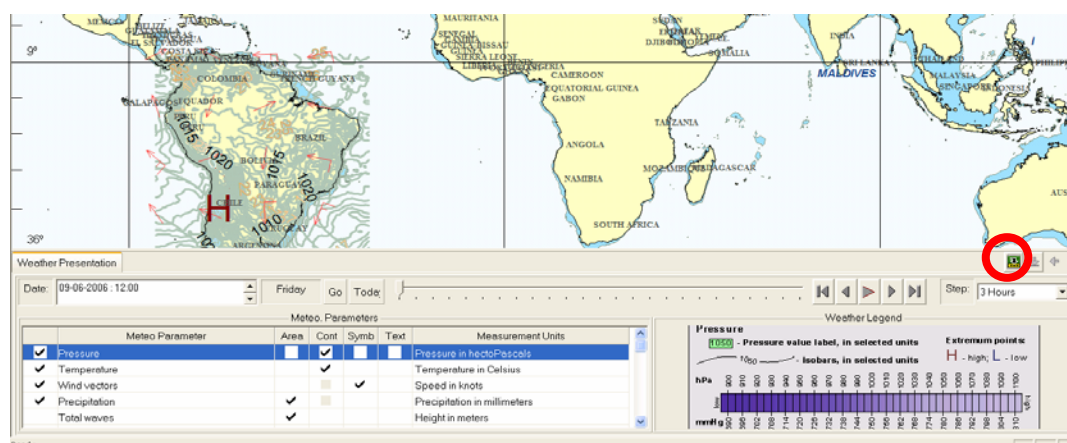


The **EasyMode** mode is the fastest and easiest way to **download and view weather**, and we **recommend this option for daily inspections especially when connected to the internet**. The **Customized** mode will allow you to customize the *scheduled weather data* (get weather data from server) and where to save *downloaded information* (e.g. on local disk, on CD, on USB pen, etc).

1.1 Downloading Weather with "EasyMode"

EasyMode is the most recent feature in the WeatherView™ software. It was incorporated in version 2.0. It simplifies the communication between WeatherView™ and the C-MAP Terminal (See the next subsections for information on how to download Weather dataset in other ways). When opening WeatherView™ it will always be in EasyMode.

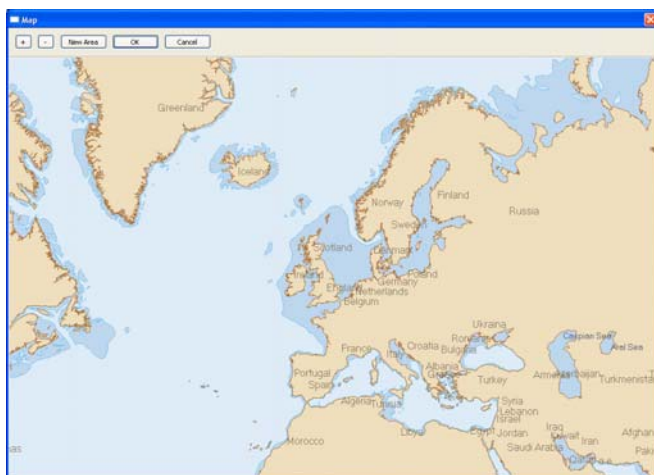
In order to activate EasyMode when using other functions, one needs to select the icon in the Weather Presentation Panel, as shown below:



The EasyMode toolbar consists of 6 buttons:



- 1) **Download** – by clicking on this button, the user will be directed to a map window. From this window, the user can select and define the region of interest for the downloading of weather dataset:



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By clicking on the map, the user can move the center position of the map. The plus (+) and minus (-) buttons are used for zooming in or out, respectively.

For selecting a new region, click on the button “New Area”. After that, draw a rectangle around the region of your interest.

After selecting the region, click on the “OK” button. The C-MAP Terminal will then download the dataset for you.

- 2) **Pressure** – The pressure dataset is plotted on the map (for the region selected);
- 3) **Wind** – The wind dataset is plotted;
- 4) **Precipitation** – The precipitation data is plotted. When this button is activated, the “Waves” button is deactivated and vice-versa. This is because the plotting of waves and precipitation is done through filled contours. If both variables would be plotted together, it would be difficult to read/interpret the results.
- 5) **Waves** – The wave dataset will be plotted;
- 6) **Cyclones** – The cyclone information will be plotted. This button is only activated when there are cyclone warnings.

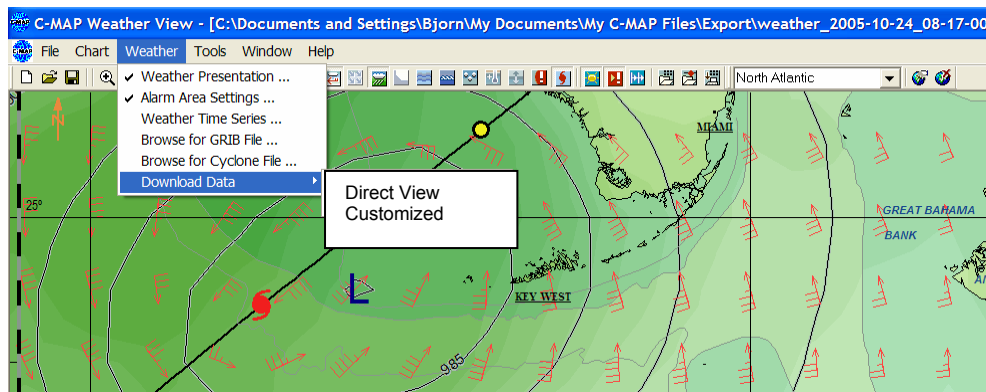
!

All of the buttons from the EasyMode toolbar are pre-defined. The objective is to make the task of downloading weather dataset easier and faster.

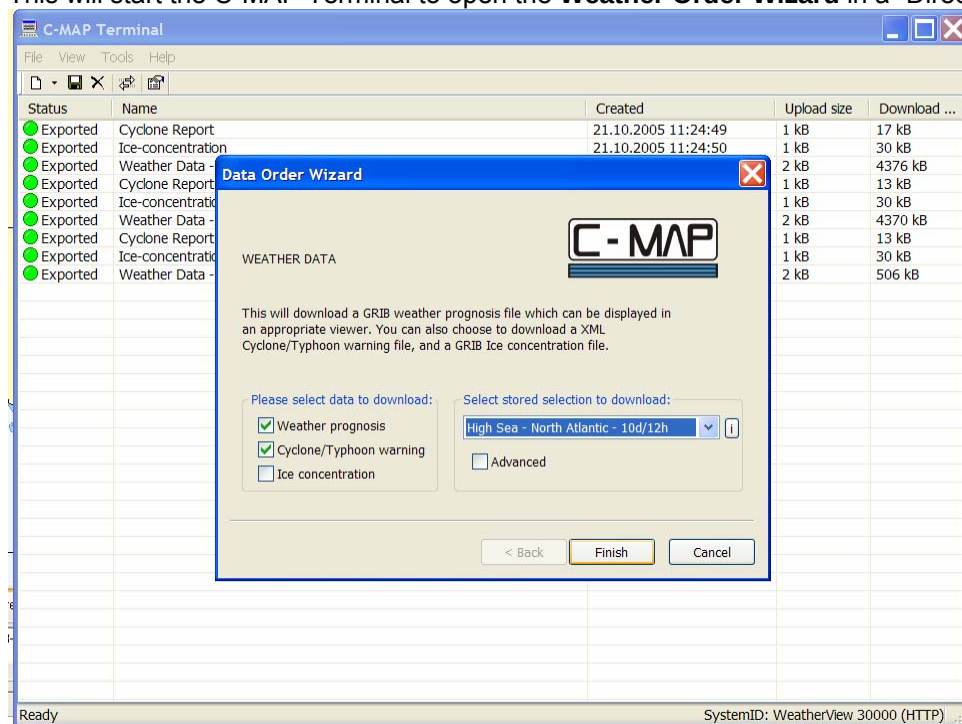
For customized options, see the next subsections.

1.2 Download Weather with “Direct View” option (“Two Steps Upload”)

You can enter the **Direct View** mode from the menu: **Weather → Download Data → Direct View**:



This will start the C-MAP Terminal to open the **Weather Order Wizard** in a “Direct view” mode:



The **Direct View** option will allow you to use the “**Two Step Upload**”:

- 1) Choose a predefined request under the scroll bar “**Select stored selection to download**” ;
- 2) Click the **Finish** button.

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This will automatically send a “request & receive” response. The downloaded weather data is subsequently uploaded and visualized in **WeatherView™**.

- You can make changes to the selected request and later save this as a new predefined request by entering the “**Advanced**” option.

- Downloaded data from a “Direct View” session can be exported/saved by opening C-MAP

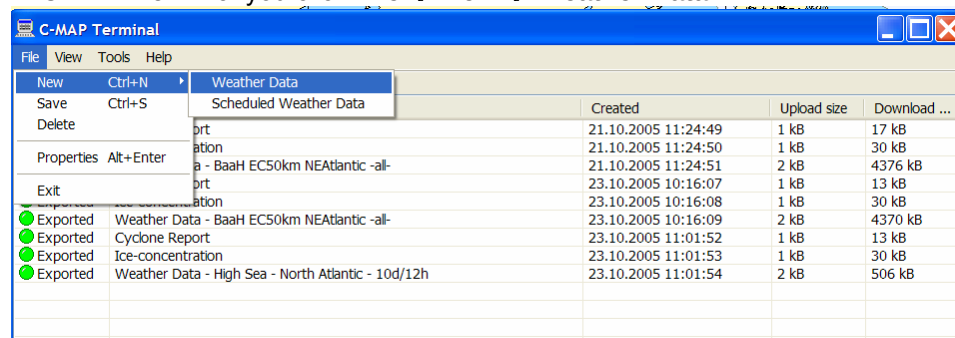
Terminal and save them manually by marking a line and clicking **File → Save**.

For details, please refer to C-MAP Terminal help file (**Help → Contents**).

1.3 Download Weather (grib files) with “Customized option”

You enter the **Customized** mode either from the menu: **Weather → Download Data → Customized**, or by clicking the icon: ; this will make the C-MAP Terminal open.

In C-MAP Terminal you click **File → New → Weather Data**:



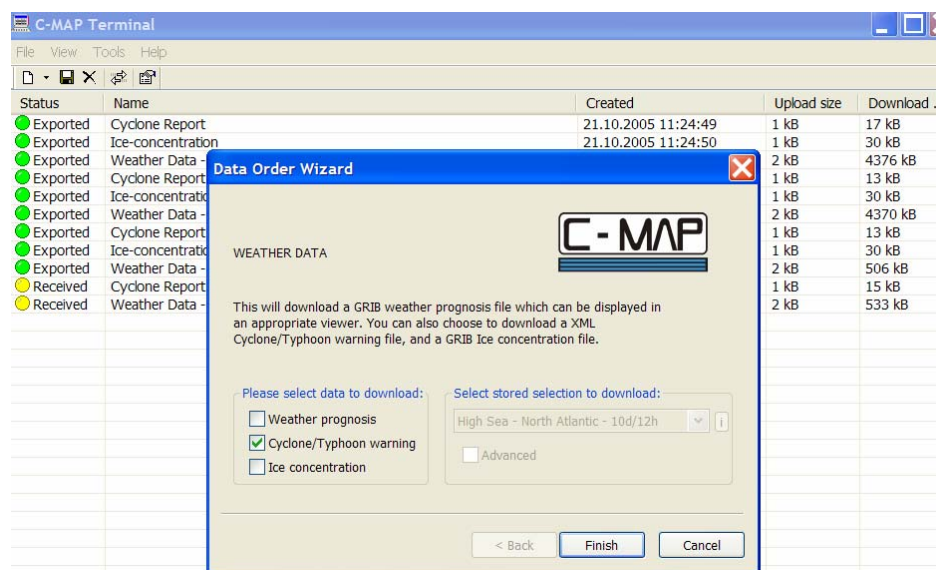
This will start the **Weather Order Wizard** in “customized mode”, allowing you to specify a detailed request. After finishing the download wizard, you have to manually make a “Send & Receive”. After receiving is OK, you can export/save the downloaded weather data to your preferred destination by selecting **File → Save** (e.g you predefined local disc or a CD). To view this data, you must upload it in **WeatherView™** by selecting **Weather → Browse for GRIB file**.

If you have defined the communication as **E-Mail or Folder** in C-MAP Terminal (see **Tools → Option → Communication**), you will be given a second option from the menu: **File → New → Scheduled Weather Data** (see previous figure). This will allow you to define a subscription on the server (often called “Push Option”) where you can specify to have weather data sent to you either at a **fixed time** or at **every time the weather data are updated**.

For details, please refer to C-MAP Terminal help file (**Help → Contents**).

1.4 Download Tropical cyclone files (xml files)

Enter the Data Order Wizard (e.g. by selecting **File → New → Weather Data**):



You can then check the alternative for downloading Cyclone/Typhoon warnings, either as a stand-alone request or together with weather and/or ice concentration.

For details, please refer to the C-MAP Terminal help file (**Help → Contents**).

1.5 Download Ice Concentration

This is the same as “Downloading Tropical cyclones files”, but mark for “Ice concentration” (see previous figure).

2.0 Overlay (or weather chart) presentation

After downloading the weather dataset (see [1.0 Downloading weather data](#)), you are now able to present this data in several ways. This chapter concerns the chart presentation. There are three ways to enter the weather chart presentation:

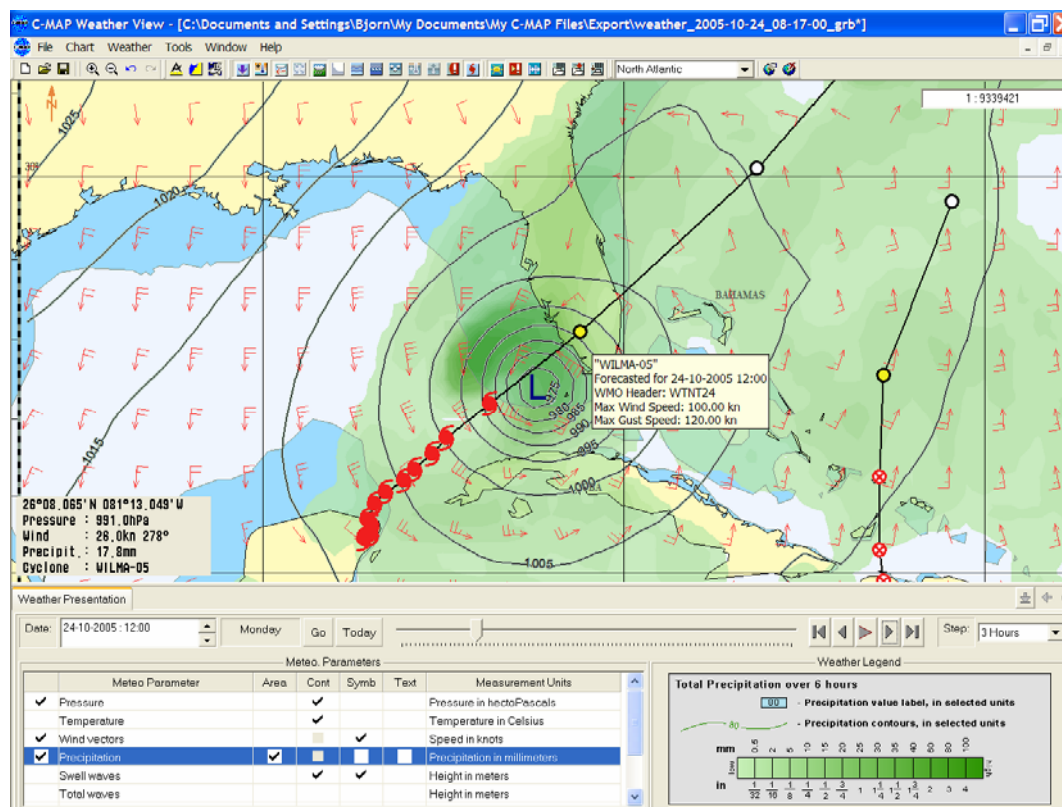
1) Left click on one of the weather icons in the title line. For explanation of the symbols, please place the mouse pointer over an icon; a tip box will inform you its name. For a complete list of icons and their corresponding functionality, see [III. LIST OF FUNCTIONS](#).

2) Opening the **Weather Presentation** Panel by:

2.1) Left click on the “Weather Presentation Panel” icon: 

2.2) From the menu: **Weather → Weather Presentation**

The **Weather Presentation** Panel consists of three windows; a “Time slider/information” window, a “Meteo Parmeter” window and a “Weather legend” window. When left clicking the “Arrow down” icon in the upper right corner: , the “Weather Presentation Panel” will be reduced to show the “Time slider/information” window only. The “Arrow up” icon:  will resize the window:



Full Weather Panel: to adjust the presentation according to your request.

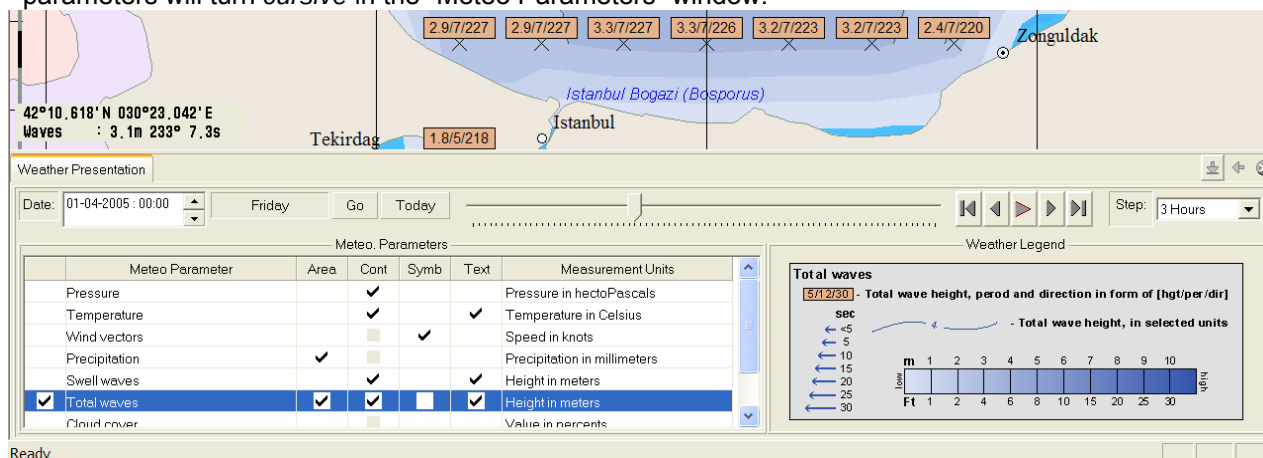


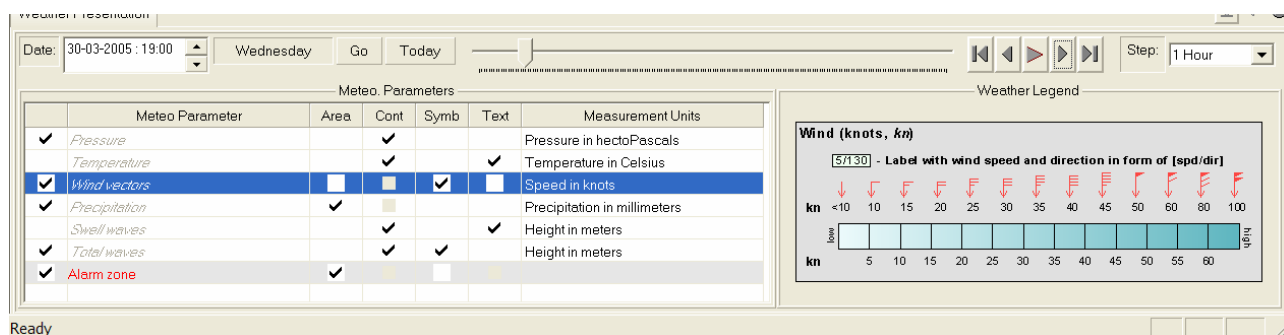
Reduced Weather Panel: Used to show only time information when inspecting data in full screen mode. The small up/down arrow to the bottom right is used to toggle.



In the “**Time slider/information**” window you can adjust the time for presentation either by editing the “Date-box”, by dragging the slider or by clicking the animation buttons:
Buttons are: First step, one step Backward, Play/Stop animation, one step Forward and Last step respectively. **Time step** in presentation can be set to 1, 3, 6 or 12 hours.

The **Time interpolation** is used if you choose a time step less then the least time step available in the originating weather data. To distinguish interpolated time step from original time step, the interpolated parameters will turn *cursive* in the “Meteo Parameters” window:





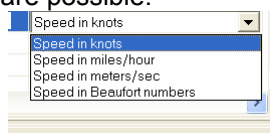
In the “**Meteo Parameter**” window you can:

- Turn on/off parameters by marking in the left column (example: Total waves in figure below)
- Choose presentation modus for each **Meteo Parameter**:
 - o **Area**: Filled contour according to legend
 - o **Cont**: Contoured lines (e.g. isobars for air pressure)
 - o **Symb**: Vector parameters (e.g. wind) are shown with strength and direction, Scalar parameters (e.g. air pressure) are shown with a “X –symbol “ only
 - o **Text**: Numeric value is shown in each single grid point, e.g. for waves; each text box showing wave height [m], period [s] and direction [deg] (in addition “Area” and “Cont” is turned on) :

Linear interpolation in space and time is used to smoothly display the weather data. No special procedure is applied close to land. When the parameter names are not *cursive* (like in the above example), the “Text” option will give you non-interpolated values in the original Grib-file only.

Measurement Units: In this column you may state your preferred units. By left-double-clicking on a unit box, you will have a scroll list in which to choose preferred unit, e.g. for wind four units are possible:

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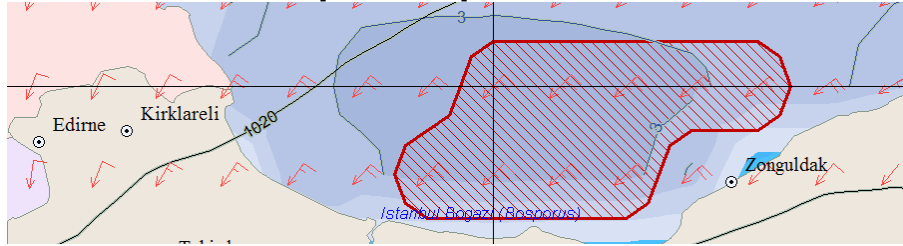


In the “**Weather legend**” box the Meteo parameter in question, i.e. the one marked blue in the “Meteo Parameter”- column, has its corresponding legend.

Short key: When in chart window, you can step forward and backward in time by holding down ctrl key + cursor arrow:

- <Ctrl-key> + <right arrow -key> : one time step forward
- <Ctrl-key> + <left arrow -key> : one time step backward
- <Ctrl-key> + <up arrow -key> : increase time step to next step (e.g. from 3 to 6)
- <Ctrl-key> + <down arrow -key> : decrease time step to next step

Please note: if an alarm is defined (see VII. [4.0 Alarms](#)), a **red masked area** will be shown where weather parameters are exceeding defined alarms thresholds. The alarm will only be shown in the chart when the choice [Alarm zone] is activated.



3.0 Timeseries

In the **Weather Timeseries** panel, one can show the evolution of chosen weather parameters for a single point or for a defined route within your weather domain. Enter the **Weather Timeseries** panel by left click



, or from the menu: **Weather → Weather Timeseries**.

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Sometimes it is very convenient to step forward in time, inspecting simultaneously both the chart and the timeseries presentation. This is enabled with a short key;

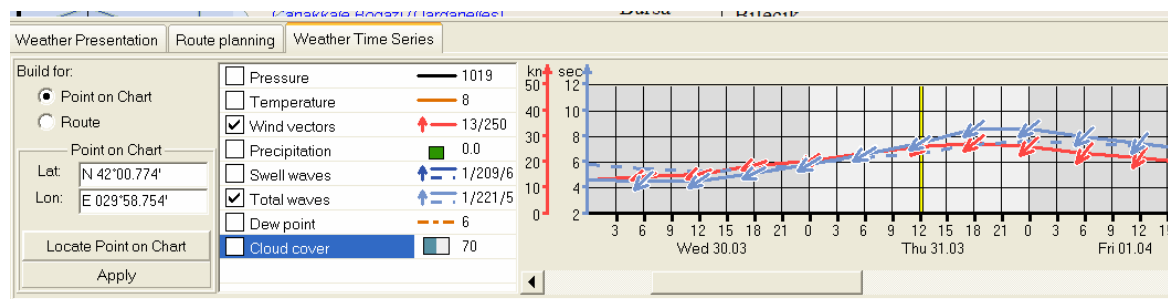
Short key: When in chart window, you can step forward and backward in time by holding down ctrl key + cursor arrow:

- <Ctrl-key> + <right arrow -key> : one time step forward
- <Ctrl-key> + <left arrow -key> : one time step backward
- <Ctrl-key> + <up arrow -key> : increase time step to next step (e.g. from 3 to 6)
- <Ctrl-key> + <down arrow -key> : decrease time step to next step

3.1 Timeseries for a point

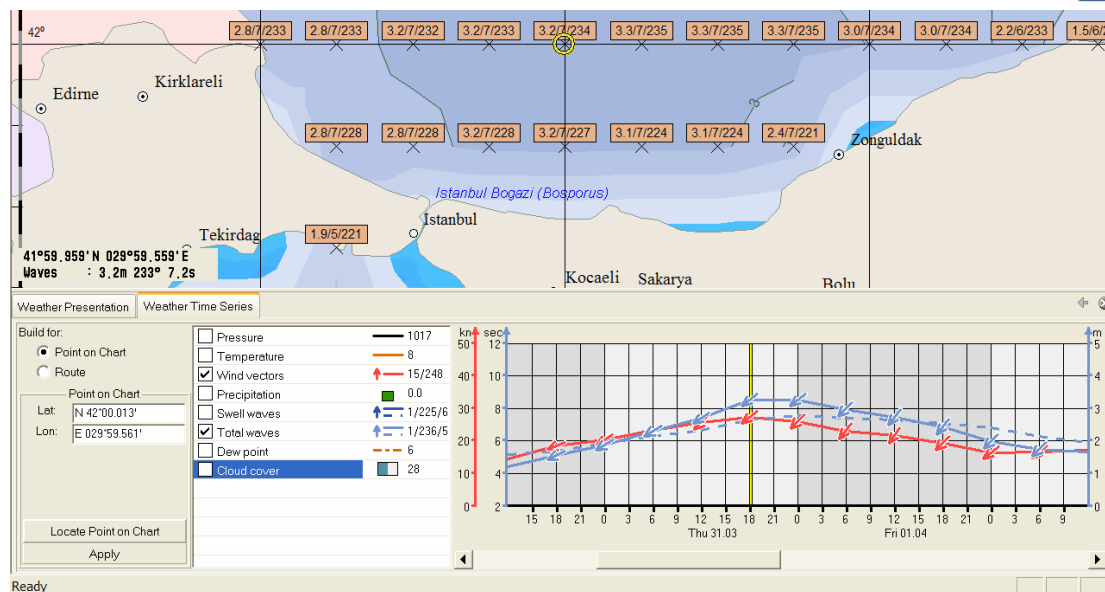
Showing a time series of a given point:

1) In the **Weather Time Series** panel choose the **Point-on-Chart** option:



2) **Locate the point on Chart** – then mark a point in the chart; a **yellow ring** will appear.

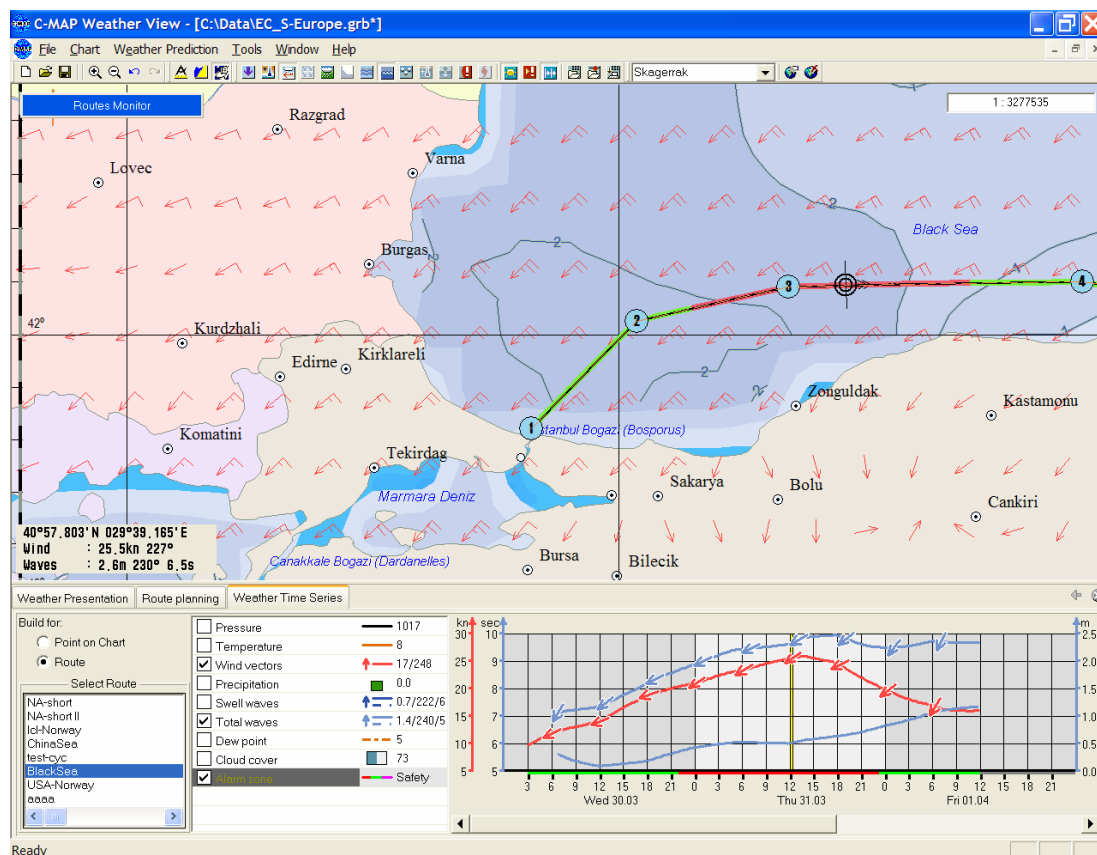
3) **Choose the desired parameters**, and they appear in the graphical window. When moving the cursor in this window, the actual parameter value will be given together with the legend. The actual time from the Weather Presentation panel will be indicated by a **yellow vertical line**.



3.2 Timeseries along route

Showing a timeseries along a route:

1) In the **Weather Time Series** panel you chose the **Route** option:



2) Select one of the available routes already made in the Route Planning tool (see [VI. VOYAGE PLANNING](#));



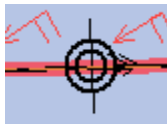
3) Choose meteo parameters of interest. Their value along the route will be seen in the times series window. Please note that this function requires weather forecast covering your route in both space and time. Actual time from the Weather Presentation panel is indicated by a **yellow vertical line**.



Please note: if an alarm is defined (see VII. [4.0 Alarms](#)), a **green** or **red** line will represent part of the routes (in time and space) where weather parameters are **not exceeding** or **exceeding** defined alarms thresholds, respectively. The alarm will be shown in the chart automatically, while in the **Weather Timeseries** panel you can mark **Alarm zone**; a green or red horizontal line will indicate the time step below or above thresholds.



Dragging the ship symbol forward and backward along its route will change the time step of the weather forecast display.



Ship symbol.

4.0 Alarms

In the **Weather Alarm Area** panel, one can manage alarm thresholds for wind, waves, etc. Enter the **Weather Alarm Area** panel by left click , or from the menu: **Weather → Alarm Area Settings**:

Weather Presentation	Weather Time Series	Weather Alarm Area			
Met parameter	Value of	Value from	Value to	Operation	
Wind vectors	Value of vector velocity, kts	35.00		AND	
Temperature	Value of temperature, °C		2.00		

How to define an alarm:

1) Left click on button [Add condition], a blue line will appear – double click this to edit:

Weather Presentation	Weather Time Series	Weather Alarm Area			
Met parameter	Value of	Value from	Value to	Operation	
Wind vectors	Value of vector velocity, kts	35.00			
<double-click to edit>					

2) Choose “Met parameter”, and then type (“Value of”):

Weather Presentation	Weather Time Series	Weather Alarm Area			
Met parameter	Value of	Value from	Value to	Operation	
Wind vectors	Value of vector velocity, kts	35.00			
Pressure					
Pressure					
Temperature					
Wind vectors					
Precipitation					
Swell waves					
Total waves					
Cloud cover					

3) Choose alarm interval (“Value from” and/or “Value to”):

Weather Presentation	Weather Time Series	Weather Alarm Area			
Met parameter	Value of	Value from	Value to	Operation	
Wind vectors	Value of vector velocity, kts	35.00			
Temperature	Value of temperature, °C		2		

4) Choose an **operator** if you have two or more parameters defined. The operator might be **AND** or **OR**.

- **AND**: the alarm will be made for areas where **both** thresholds are true

- **OR**: the alarm will be made for areas where at least **one** of the thresholds are true

Weather Presentation	Weather Time Series	Weather Alarm Area			
Met parameter	Value of	Value from	Value to	Operation	
Wind vectors	Value of vector velocity, kts	35.00		AND	
Temperature	Value of temperature, °C		2.00	AND	
				OR	

In this case the alarm is true if the wind is above 35 knots **AND** the temperature is below 2°C, i.e. **icing conditions**.

5) You might also load predefined or user defined alarms by using the **Save** and **Load** buttons:

Met parameter	Value of	Value from	Value to	Operation
Wind vectors	Value of vector velocity, kts	30.00		OR
Temperature	Value of temperature, °C		-3.00	

Ready

NUM

Buttons: Add condition, Delete condition, Move up, Move down, Delete All, Save, Load

File path: C:\Documents and Settings\Bjorn\My Documents\My C-MAP Files\Alarm Parameters\Fast-Vessel-HCING.xml

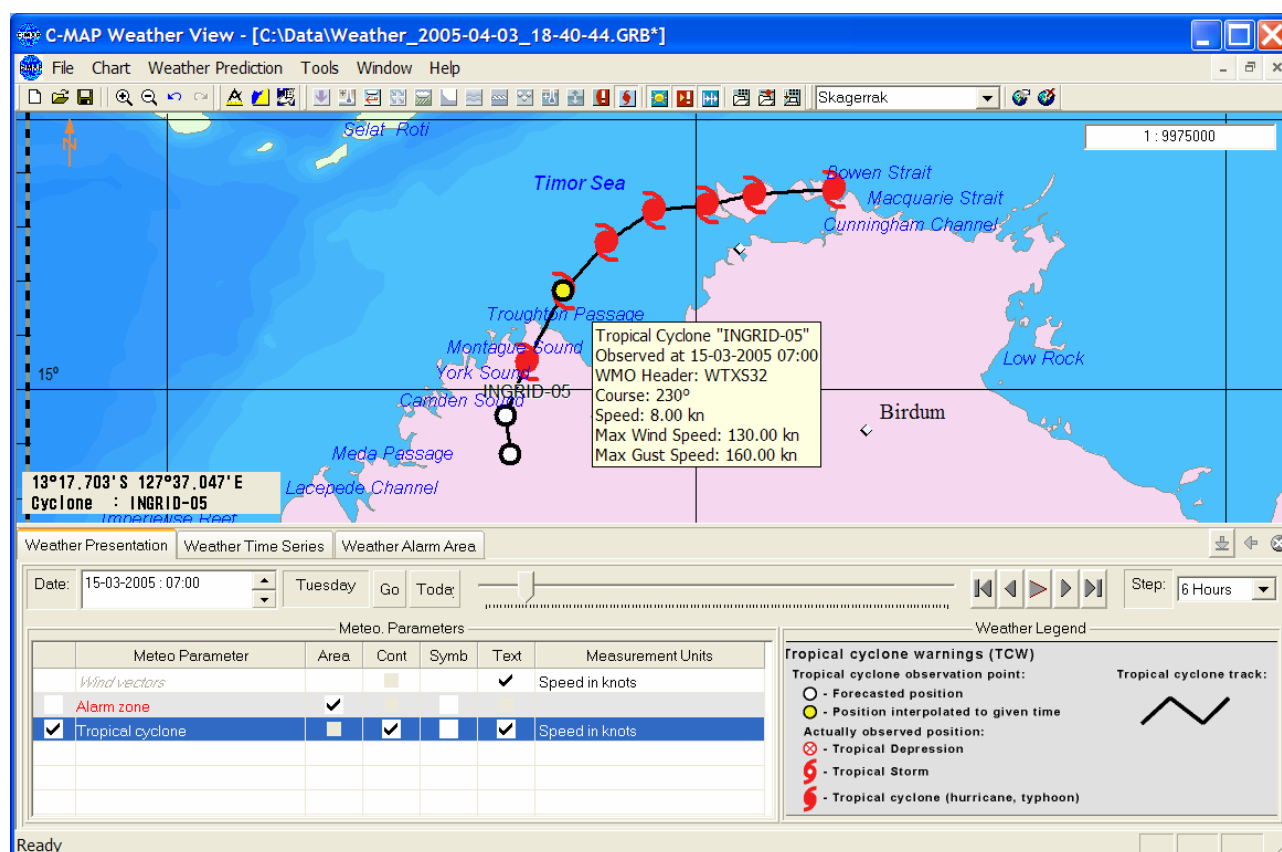
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The weather alarm criteria are calculated for every point of GRIB's space/time grid based on condition entered by user in the Weather Alarm Area panel.

5.0 Tropical Cyclone Warnings (TCW)

For downloading Tropical Cyclone Warnings, see [VII. 1.4 Download Tropical cyclone files](#).

The presentation of Tropical Cyclone Warnings (issued by the World Meteorological Organization, WMO) is activated from in the **Weather Presentation** Panel or by choosing the **Tropical cyclone** icon: 



Observations and prognoses have different symbols according to the legend provided on the screen. By moving the cursor over a point, you can inspect details for wind speed and wind gust.

If a route is passing close to an already downloaded cyclone warning, an alarm will be indicated by a purple line (both in chart and in timeseries). The alarm zone around the cyclone has a form of broadening from 100 NM to 500 NM lane built on the cyclone track, starting from the last known observation.



("never cross the track" rule plus error area on both side of track depending on validity of prediction: 0(obs): 50NM, 24h: 100, 48h: 150, 72h: 200, 96-above: 250NM)

The alarm zone is applied to the route part starting from the last observation time:

- 1) for the route part preceding the last observation time no alarm is issued;
- 2) if the route crosses the above mentioned alarm zone after the last observation time, then those legs are considered dangerous regardless of its schedule times.



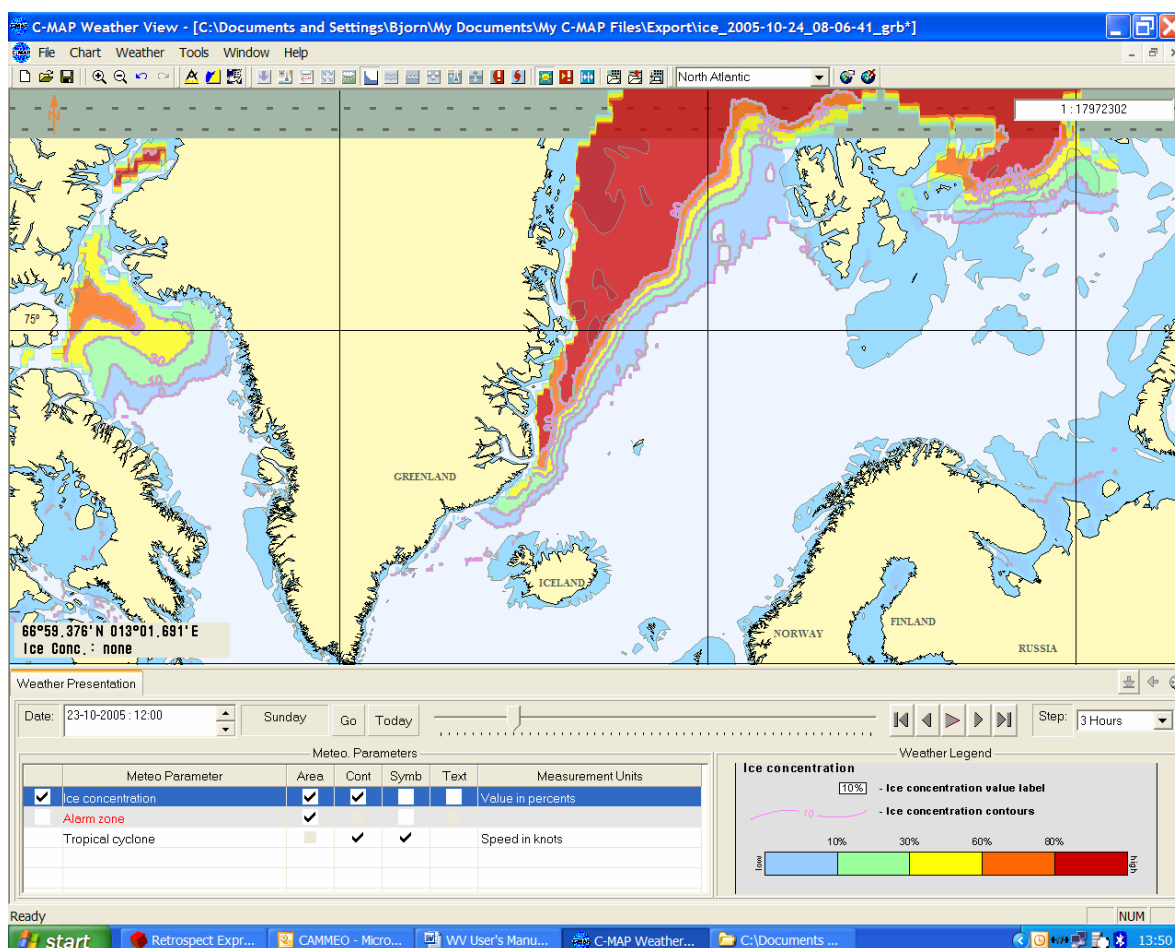
Alarm concerning Tropical Cyclones close to route: If a route is passing close to an already downloaded cyclone warning, an alarm will be indicated by purple line. This is based on the above described calculation regarding distance from cyclone track. *When in cyclone areas we always recommend you to update cyclone files regular and inspect them manually. For detailed information you are requested to ask your nearest WMO Cyclone Warning Center.*

6.0 Ice Coverage

For downloading of Ice Coverage information, see [VII 1.5 Download Ice Concentration](#).

The presentation of the Ice Concentration / Ice Coverage follows the guidelines issued by World Meteorological Organization (see color legend in below figure). The Ice Concentration is activated in the

Weather Presentation Panel or by choosing the **Ice Concentration** icon: 

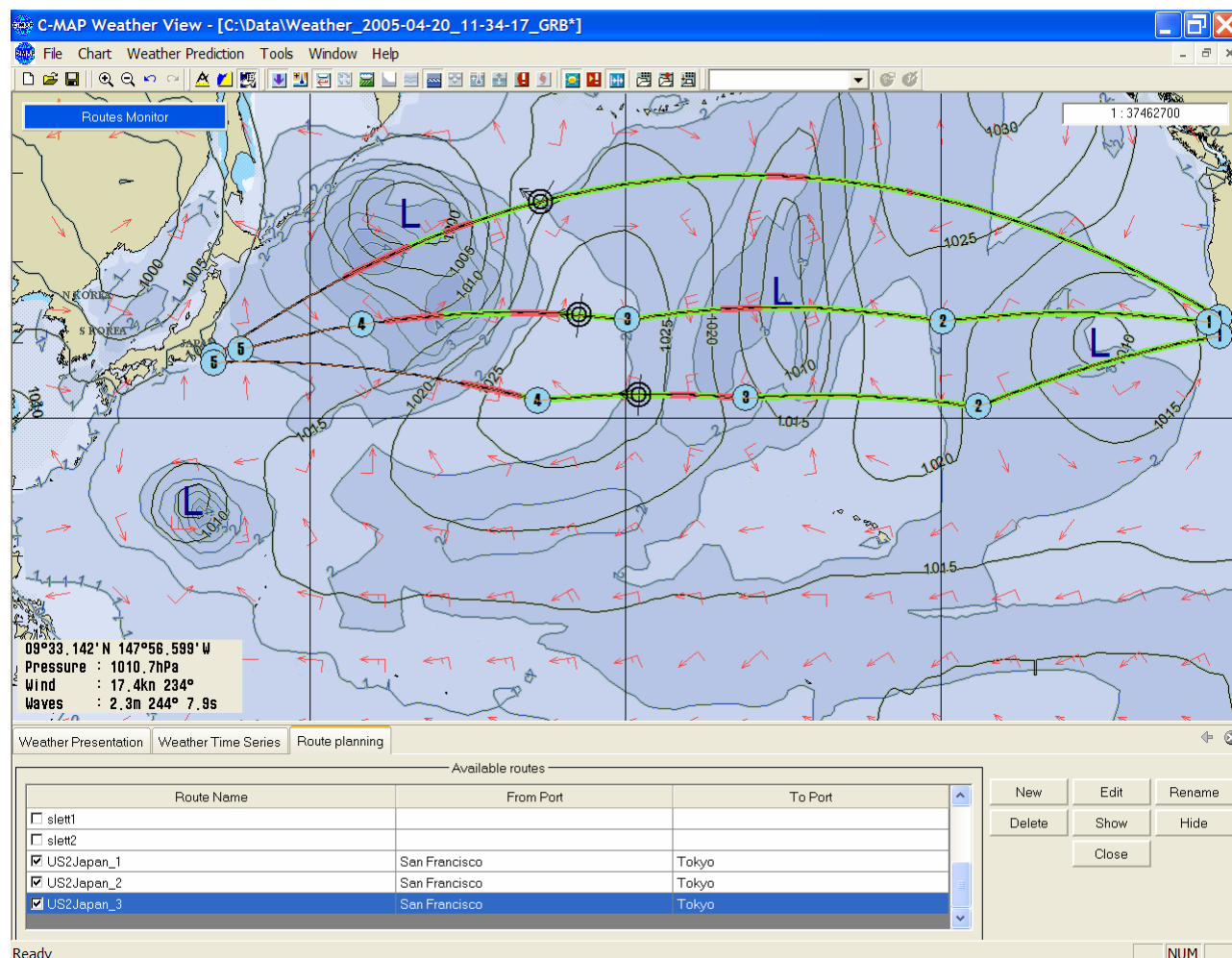


The Ice Coverage is an observation based on yesterday's satellite observation of the ice edge. This should be used as a guild line for today's ice coverage. *It should under any circumstances NOT be used for navigation close to or into the ice!*



To toggle the ice, you should first move the time stamp to **yesterday's date at 12:00 UTC**. This is due to all yesterday's satellite information has to be integrated into *one* time stamp.

7.0 Route comparison



By testing alternative routes, one will easily pick the best route depending on the user's defined weather alarms. When using the "drag and drop" functionality of ship symbols on routes, the program recalculates the time and redraws the weather and positions of other ships. If you have some number of alternative routes, this feature provides a good overview. Weather information is available for ten days ahead. In the "Edit" mode one can print a word document of the route including arrival and departure to/from all waypoints.

By activating the "Weather Timeseries" panel, one obtains all detail of weather along the defined route:



VIII. Ship Response: Simple Harmonic Motion (Roll, Pitch and Heave)

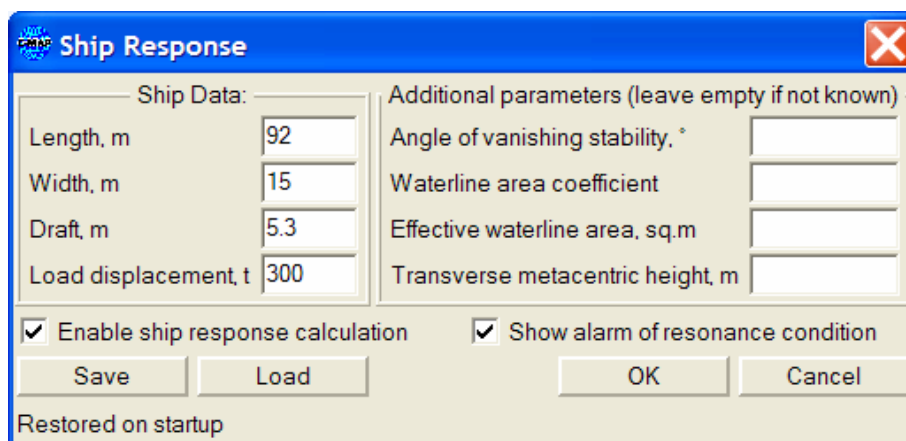
The response element of WeatherView™ is related to the sea state condition during the vessel's voyage along a planned route. It helps the user get information about swell and total waves, as well as information on the roll, pitch and heave.

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Before reading on, the first step to be able to take advantage of the response feature is to create a route. For more information on how to create and plan your route, refer to chapter VI (Route Planning).

1.0 Features of the Ship

After planning your route, you should inform the features of the ship. This may be done by selecting: **Weather → Ship Response → Ship Response Options**. The following window will appear:



SHIP DATA:

Length

Length at waterline (LWL) of the vessel, m.

LWL is the length of the vessel as measured from the bow ending of the waterline to the stern ending.

Width

Beam, the widest width, of the vessel, m.

Draft

Draft of the vessel, m.

Displacement

Displacement of the vessel, tons.

ADDITIONAL DATA (if known):

Angle of vanishing stability

Sets angle of vanishing stability (AVS) of the boat, degrees.

AVS is the angle the boat can heel and still right itself.

Waterline area coefficient

Waterline area coefficient, non-dimensional quantity.

Effective waterline area

Effective waterline area, m².

Transverse metacentric height

Transverse metacentric height of the boat, m.

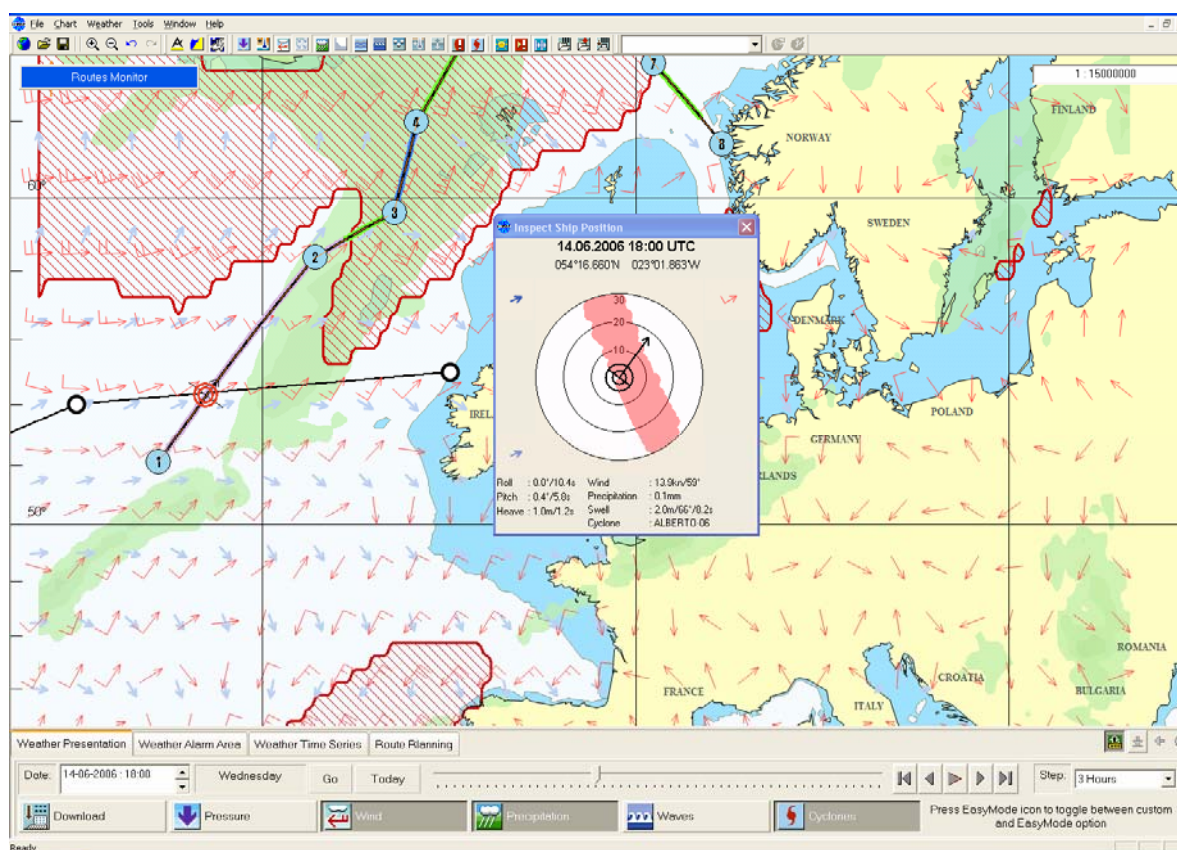
Transverse metacentric height is the vertical separation of the center of gravity and the transverse metacenter

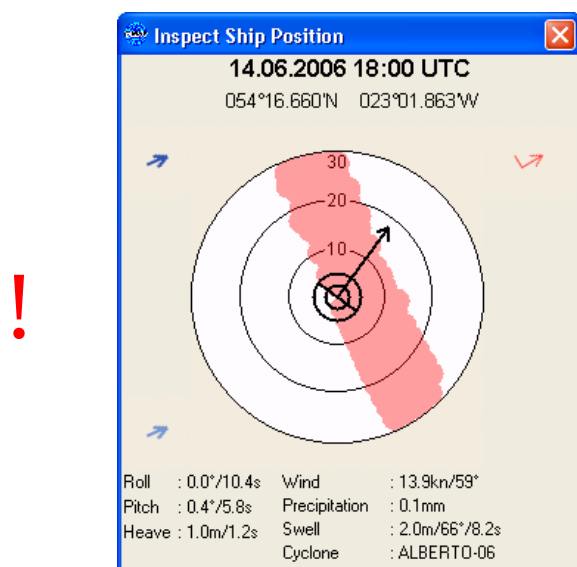
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By saving the ship dataset, the user may load this information for further use.

2.0 Inspect the Ship Position

Now, click on **Weather** → **Ship Response** → **Inspect Ship Position**, to obtain the information related to the sea state and response by each timestep of a planned route. A window called “Inspect Ship Position” will appear. After that, click on the desired ship symbol along a plotted route. WeatherView™ will mark the position of your vessel with a red color. This is shown in the figure below informing the user about the sea state and response for this specific position (Note that the route is crossing the path of the cyclone ALBERTO-06):





The Inspect Ship Position window will inform you about the Roll, Pitch and Heave information on the bottom left.

On the bottom right, you can see the weather information for the position of the vessel, for example, Pressure, Temperature, Wind, Cyclone, etc, according to your selections (See Figure on the left, Cyclone: ALBERTO-06).

The upper dark blue arrow represent the direction and period of the **total sea**. The lower blue arrow represent the direction and period of the **swell**.

Wind arrow in upper right corner

The ship is plotted in the middle. The arrow pointing outwards shows the **direction and velocity of the vessel**.

“Red Shadow” zone indicates the danger of having a sudden increase in *roll amplitude* (and in worst case capsizing) of the vessel having given combination of speed and bearing. The conclusion is made from comparison of ship's **natural roll period** with **relative wave period**: *if the difference between values is less than 30% then resonance can occur*. This combination can in some cases be dangerous. An alarm for a given threshold of roll amplitude can be made in the Alarm Panel.

IX. PREPARATION OF PRESENTATIONS

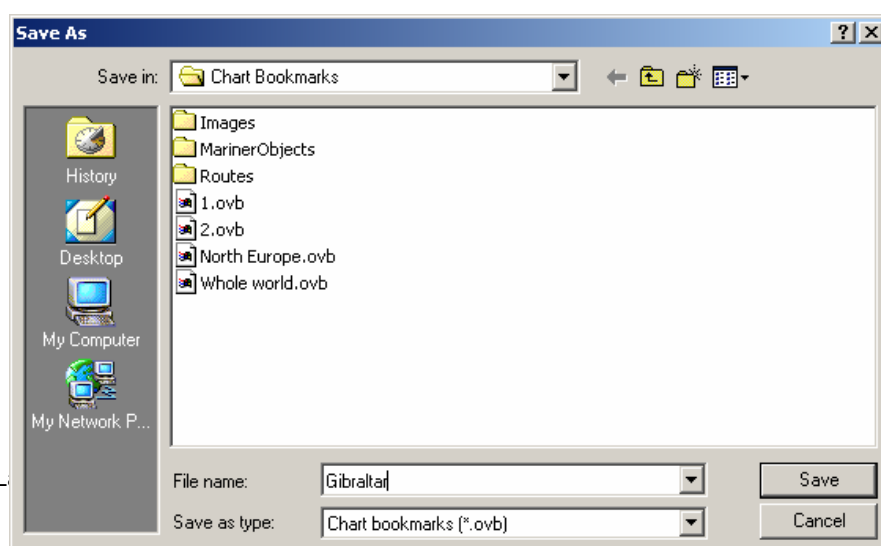
1.0 OVB Bookmarks

OVB means OceanView Bookmark. These bookmarks are an external WeatherView™ bookmarking system. The principal difference of the external bookmarks from the internal ones is the following: External bookmarks are saved as standard MS Windows files (with .ovb extension) in a user predefined folder. You can work with these bookmark files just like any other MS Windows files. For example, you may send and receive them from other WeatherView™ users.

When you double click on a file with an .ovb extension in the MS Windows environment, it will automatically run WeatherView™ with the saved view at the startup instead of world map.



Press the button and the standard **Save As** window appears.



Here you can type a file name (name of bookmark) and save it.



Pressing the button on the **Toolbar** will open a similar window where you can open a bookmark.

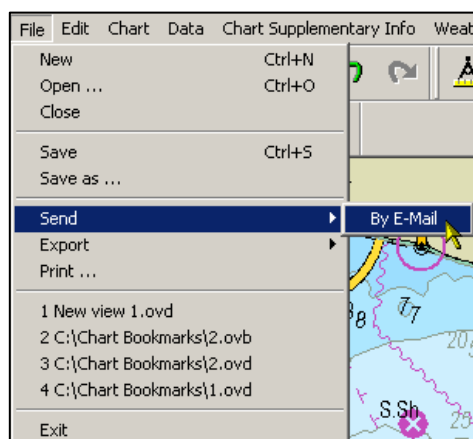
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Instead of using these icons you may use the **File → Open ...** and **File → Save** commands. **File → Save as** saves the bookmark with a different name. The four last opened bookmarks can be accessed in the **File** menu. Deleting and renaming can be performed as usual in the **Open** and **Save** windows.

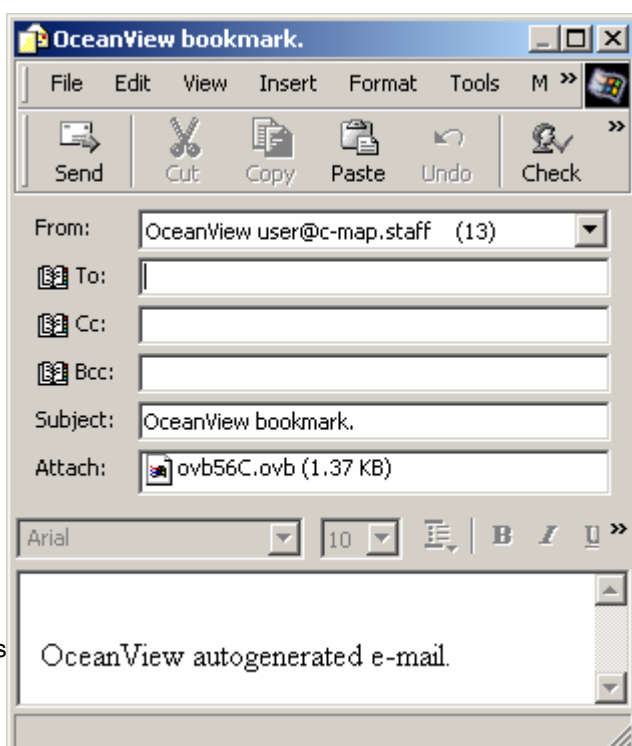
A default folder for external bookmarks can be set up in the **Tools → Options → File locations** dialog box.

2.0 Sending OVB Bookmarks by E-Mail

It is also possible to send OVB Bookmarks by E-Mail directly from WeatherView™.



Select the **File → Send → Bookmark** command.



Your default E-mail program will be run. The OVB bookmark will be attached to the auto-generated E-Mail.

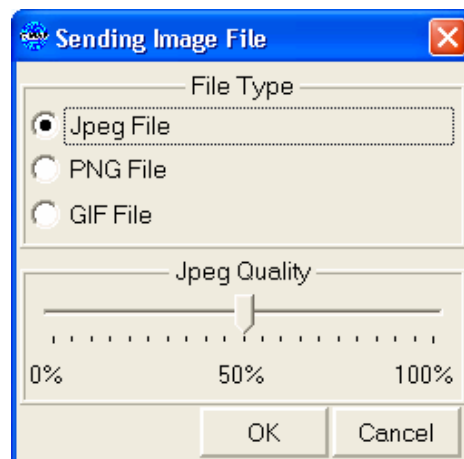
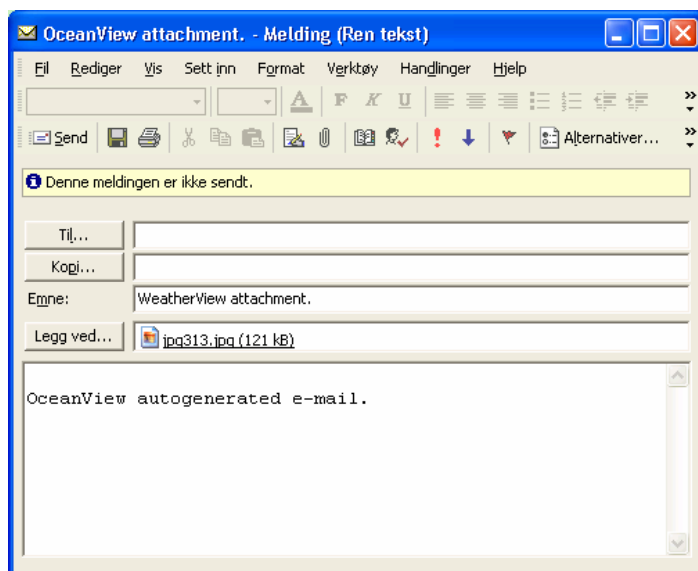
Select a Recipient and send the E-Mail.

3.0 Creating Figures

The current view (chart, routes, weather overlays, cyclones etc.) can be saved as a figure. These figures can either be sent to an e-mail address or saved in your computer:

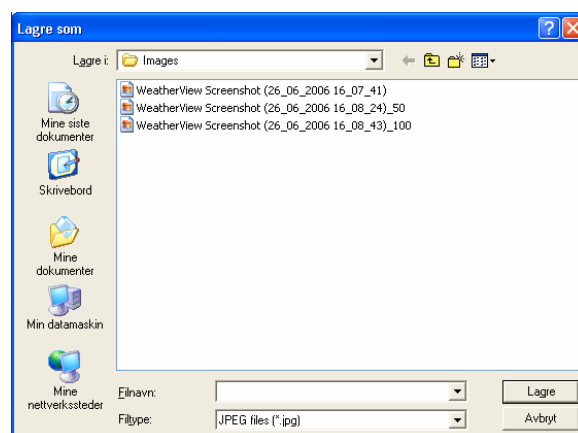
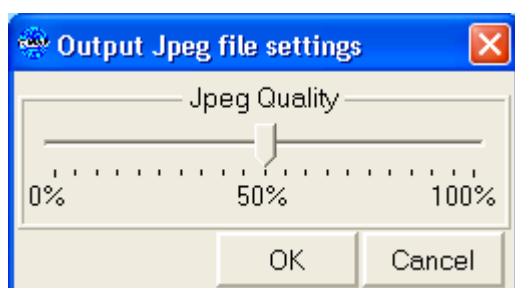
3.1 Save Figure to an E-MAIL

1. Select the menu: **File → Send → Image File;**
2. Choose the file type you want to save: JPEG, PNG, BMF or GIF. The JPEG format allows you to select the quality (compression) of the figure;
3. WeatherView™ will add the figure as an attachment to an e-mail. After that, you are ready to send it!



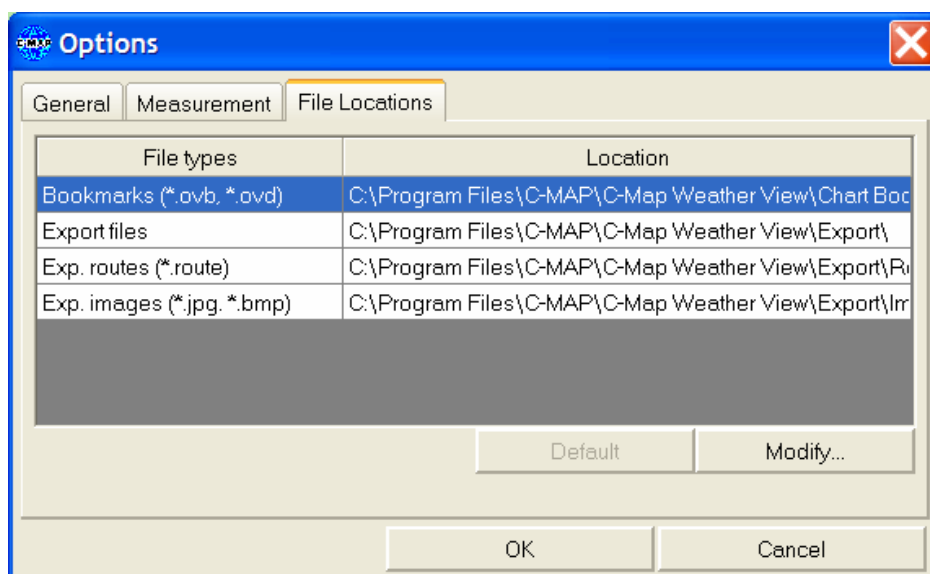
3.2 Save Figure to a File

1. First, select **Export** → **To Image File** from the menu;
2. The **Save As** window will allow you to select the name of the picture and the kind file you want to save: JPEG, BMP, PNG or GIF;
3. If you select JPEG, the *Output JPEG File Settings* window will prompt you to choose the quality of the picture. Select it and press **OK**. Your picture has now been saved in the folder C:\...\My C-MAP Files\Export\Images or in the folder you selected;

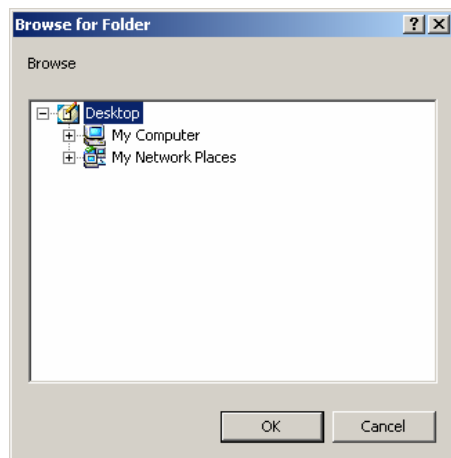


4.0 File locations

The **Tools** → **Options** → **File Locations** dialog box allows the user to define a default folder for saving external bookmarks, routes (see [chapter VI. 2.0](#)) or images:



The **Modify...** button opens **Browse for folder** window where you can select a new default folder for the selected File type.



Please note that you cannot create a folder in this window.

i

The **Default** button is highlighted only when **Exp. Routes** or **Exp. images** file types are selected. It creates the **Route** or **Image** folders within the folder defined for Bookmarks and assigns it.

If you change the folder for bookmarks and did not change other folders (for routes, images, etc.) before, these folders are assigned within the bookmarks folder automatically



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