WEATHER WIZARD
(EDITION 2)

USER GUIDE

Transas Marine Ltd. October, 2001

Updating List

List of Weather Wizard software versions and their corresponding documentation:

Source of software	*Weather Wizard software version (issue date)*	*Documentation (issue date)*
Transas Electronic Chart System & World Chart Folio CD 2/2000 – 4/2000	2.00.0 (23.05.2000)	Weather Wizard User Manual (June 2000.)
Transas Dataco Weather Wizard CD	2.00.1 (22.01.2001)	
Transas Electronic Chart System & World Chart Folio CD 1/2001 – 3/2001	2.00.1 (06.03.2001)	
Transas Dataco Weather Wizard (v. 2.02.0) CD	2.02.0 (07.09.2001)	Weather Wizard User Manual (edition 2) (October 2001)

Revisions made to the documentation for Weather Wizard ver. 2.02.0 software as compared to the documentation for Weather Wizard ver. 2.00.1 software

№	*Brief description of revisions and additions in the documentation*	*Where the revision was made*	*How to find the description of the revision in the document*
1	*2*	*3*	*4*
1	The list of operating systems ensuring the correct operation of the Weather Wizard program has been extended. Windows Me (Millennium Edition) has been added	Paragraph 3.1 Requirements on the computer and software environment capabilities	Item 3.1.1 OS requirements
2	It has become possible to process weather mail by using Microsoft Outlook Express program. To enable this, however, the version should not be inferior to 5.50. Requirements on Outlook 98/2000 mail program have remained unchanged	Paragraph 3.1 Requirements on the computer and software environment capabilities	Item 3.1.3 Mail program requirements
3	In connection with a newly implemented capability to process weather mail by using MS Outlook Express program, the description of the procedure for setting Weather Wizard mail parameters has been fully changed	Paragraph 3.2 Software Installation “Setting of Mail Parameters” item	Item 3.2.1 Setting of Mail Parameters

№	*Brief description of revisions and additions in the documentation*	*Where the revision was made*	*How to find the description of the revision in the document*
4	As some buttons for a prompt selection of the fixed time values (steps) have been removed from the software, the relevant section of the WFM utility description has been changed.	Item 4.1.3 Utility Description "Request Page" Item 4 "Time Steps"	Item 4.1.3 Utility Description "Request Page" Item 4 "Time Steps"
5	In connection with changes in the set of WFM utility mail menu buttons, the contents of the relevant item in the documentation has been changed. The purpose of <Send current request> and <Settings> buttons has also been changed	Item 4.1.4 Main Menu Buttons	Item 4.1.4 Main Menu Buttons
6	As the procedure for sending a weather forecast order has undergone considerable modifications, appropriate corrections have been made in the documentation	Item 5.1.2 Despatch of a Weather Forecast Order	Item 5.1.2 Despatch of a Weather Forecast Order
7	As the procedure for the reception of a weather forecast and its processing has undergone considerable modifications, appropriate corrections have been made in the documentation	Item 5.1.3 Reception of a Weather Forecast and Its Processing	Item 5.1.3 Reception of a Weather Forecast and Its Processing
8	The description of MS Outlook 2000 program installation has been moved to Annex A and supplemented with the description of Microsoft Outlook 98/2000 and Outlook Express programs adjustment for the operation with the e-mail	Paragraph 3.2 Software Installation "Installation of Microsoft Outlook 2000"	Annex A Installation of Microsoft Outlook 2000
9	Tables of Weather Wizard program's compatibility with different versions of mail programs during the operation in different OS's have been added		Annex B
10	Description of the troubleshooting procedure during the despatch, reception and display of weather forecasts, has been added		Annex C

Contents

1. ABOUT THIS MANUAL

1.1 How to Use this Manual

1.1.1 General Review

This User Manual (hereinafter referred to as Manual) deals with issues connected with various aspects of using the Weather Wizard software (hereinafter referred to as the WW) in the process of its operation.

The Manual is so arranged that the user can promptly obtain information on the procedures required for accomplishing certain tasks, using the WW facilities.

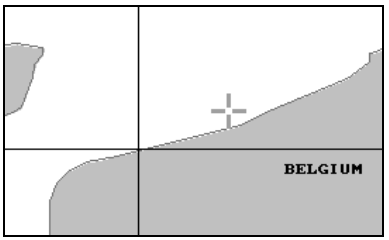
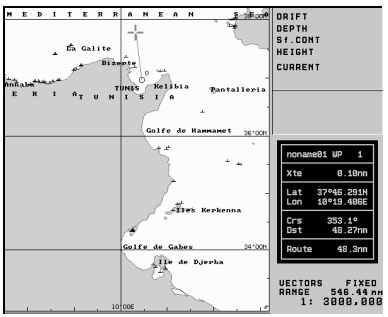
The Manual consists of five parts:

1. “About this manual”, containing some general notes and principles of using this Manual.
2. “General”. This part describes the structure of the software, purpose of all its components and operating principle the reception of weather forecasts is based on.
3. “Technical reference”. Description of requirements to the computer and OS, installation and adjustment procedures.
4. “Utilities”. Detailed description of all the capabilities of the utilities included in the “Weather Wizard” software.
5. “User Work with the Weather Wizard Software”. This is the principal part of the Manual which contains the list of tasks which can be performed using the Weather Wizard, and the procedures involved.

1.1.2 Data Required for Work with the Manual

Tables The document has predominantly a tabular structure. If the table consists of 2 columns, the first is normally used for the indication of an operation which is required to be performed, whilst the second column shows what happens in the “Weather Wizard”.

E.g.:

1. Start PA utility	*See paragraph 4.2.2*
2. ROUTE\New	A cursor appears in the *Chart Area:* 
3. Set the first WP:	
Position the cursor in the required point. Use <+> and <-> keys to set the scale suitable for plotting the initial waypoint	*The cursor can also be manipulated by the manual input of the first waypoint coordinates. To do this, first press <Tab> key to activate the input window, then enter the required coordinates*
Press the left trackerball (mouse) button	The symbol of the first waypoint is plotted in the selected point: 

Where: [1], [2], [3] are operations, whilst “Move...” and “Press...” are steps within a single operation.

For the rest of the tables, the names of the columns are provided in the heading.

Conventional Symbols

<…> is a button on the panels, in the utility windows or a keyboard key.

E.g.:

<OK> is “OK” button (on the utility panel);

<F11> is “F11” functional keyboard key.

Expanded Italics is used for the names of the panels, utility areas described in the appropriate sections of the document.

E.g.:

Speed loss table (detailed in section 4.4.3);

Request page (detailed in section 4.1.3).

"…" means names of the panels, windows and utilities themselves, as well as subtitles in the documentation sections.

E.g.:

"Management" panel (see item 4.1.3 "Forecast Page" [2]).

Italics is used to mark off notes.

E.g.:

	Cancel last request	To send a notification to Transas Marine weather server cancelling all the previously made orders. *The use is recommended in case of a mistakenly send orders under which a considerable amount of weather information is expected, which may bring about unplanned expenses in the way of payment for the communication session and receipt of services from Transas Marine.*

(see paragraph 4.1.4).

- to list the ways to perform a certain action; to list versions and functions.

E.g.:

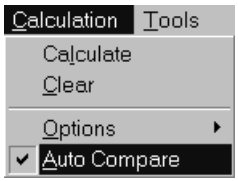
4. Time steps:	To select fixed time value (step) which the forecast for the selected weather parameters will be provided for, counting the number of hours from the beginning of the GMT day for the forecast receipt date *E.g.,* – *+0 will mean that the weather forecast is provided for 00 h (GMT only for the date of its receipt;*

	– *+12 – the forecast corresponds to 12:00 GMT of the current date;* – *+36 – the forecast is provided for 12:00 of the date following the forecast receipt date.* During the visualisation of the received weather forecast, the data is considered to be original (UKMO for the source) for these selected time points only; in the intervals between them. Visualised weather parameters are interpolated

(see paragraph 4.1.3 “Request” page).

[…] is used to show the number of operation in the procedure used for accomplishing a certain task.

E.g.:

8. Ascertain that Calculation\Auto Compare option is enabled *(see also paragraph 4.3.4)*	

(see paragraph 5.1.7 [8]).

1.1.3 Abbreviations Used in the Manual

DT – Drift Table;

ETA – Estimated Time of Arrival;

ETD – Estimated Time of Departure;

GC – Great Circle;

GMT – Greenwich Mean Time;

LAN – Local Access Network (see paragraph 1.1.4);

OS – Operating System;

PA – Play Ahead;

RE – Route Editor;

RL – Rhumb Line;

WFM – Weather Forecast Manager;

WP (WPs) – Way Point (-s);

WW – Weather Wizard;

XTE – cross track error;

Fig. – figure;

h – hour;

m – metre;

s – second;

sq. m – square metre;

1.1.4 Terms Used in the Document

Internet – a global network consisting of thousands of smaller computer networks and millions of commercial, educational, governmental and personal computers.

Mail Configuration (Current profile) – a group of settings of mail software, which determined, for a specific user, the configuration of the computer, communication facilities and installed software for access to the Internet.

Mailbox – a place allotted on the Microsoft Exchange Server for the delivery of the user's electronic mail. The administrator sets an individual mailbox for each user.

Internet Service Provider (ISP) – a company providing access to the Internet for a certain payment. There are two ways to connect to the Internet network:

1. Via telephone network by using the modem ("Remote access"). In this case, the ISP supplies the user with software required for the connection, telephone number via which access to the Internet will be obtained, user name and personal ID password.
2. Via local computer network (LAN). In this case, the organisation provides the external access to the Internet via the computer connected to LAN. The administrator of this network supplies the user with a name, registration password and network protocol.

In either case, when working with the electronic mail, it is necessary to know the name of mail servers processing the incoming and outgoing mail. This information can be provided by the ISP or system administrator.

Server – computer (within a local network running the administrator software) enabling access to the resources of the given computer (including access to the Internet) for all the other computers involved in this network.

Layer – one out of several components on PA objects presentation on the chart. Data of a certain type only can be loaded in each of the graphics layers, e.g.,

- Chart information – layer 1;
- Routes – layer 2;
- User chart A– layer 3;

  A – layer 4.
- Cursor – layer 5.

Layers are displayed in a certain order and, as a result, each presentation is formed by superimposing several graphic layers.

Chart Information Layer – a “sub-layer” relative to the layers described above. The layer containing chart information has, in its turn, one more sub-layer structure where the “sub-layers” are chart objects of a certain type, e.g.:

- Objects included in “Base Display” layer (coastline, recommended routes, aids to navigation, etc.) make up layer 1;
- “Standard Display” objects (drying areas, landmarks, warnings, etc.) forms layer 2;
- etc.

User Chart – a graphics information layer created by the user by means of PA graphics editor.

1.2 Controls

1.2.1 Trackerball or Mouse

The only difference between the mouse and trackerball is the way the ball moves. These units may have 2 or 3 pushbutton switches. If your unit has 3 switches, the centre button is not used.

LEFT BUTTON – corresponds to <Enter> key on the keyboard.

RIGHT BUTTON – corresponds to <Esc> key on the keyboard.

By rolling the ball, you can control the cursor's position on the display and select menu options.

1.2.2 Keyboard

The principal PA control is a mouse/trackerball. However, all the control capabilities are duplicated on the keyboard. <Enter> key serves for the input of parameters, activating menu and submenu functions and corresponds to the trackerball's left button. <Esc> key serves for exiting from a function when its use is cancelled, in case of erroneous data input and corresponds to the trackerball's right button.

The cursor control keys correspond to the trackerball's movement and perform same functions.

2. GENERAL

2.1 Purpose and General Principles of “Weather Wizard” Program Operation

“Weather Wizard” program is a unique module which enables the reception of weather forecasts (up to 5 days in advance) for any area on the globe, and the display of this forecast as an additional layer in the electronic chart system based on the world known Navi-Sailor series videoplotters.

The following capabilities are implemented in this weather module:

- Reception of weather forecasts (5 days ahead) by using communication facilities (satellite communication, mobile communication, modem) with the aid of e-mail (Microsoft Outlook 98/2000, Outlook Express) via Internet global network (see Fig. 2-1);
- Display of weather parameters in a vector form against the electronic chart background;
- Viewing of the weather forecast in dynamics;
- Viewing of the ship’s passage route, weather parameters displayed at the same time (Play Ahead mode);
- Generation of the route passage schedules and their comparison for selecting the optimum one;
- Calculations of the ship’s speed loss depending on three components: tidal currents, surface currents and weather conditions (wind, wind induced waves and swell).

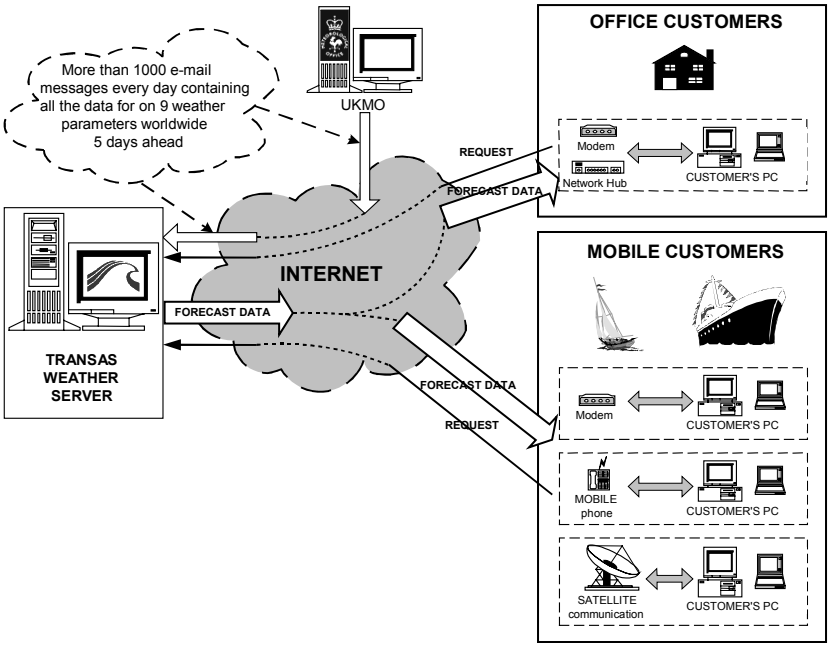


Fig. 2-1 General layout of the weather forecast reception

2.2 Software Components

"Weather Wizard" software (Weather Wizard in what follows) consists of the following principal components:

- Weather Forecast Manager;
- Play Ahead;
- Route Editor;
- Drift Table.

A general layout of the interaction of utilities is shown in Fig. 2-2.

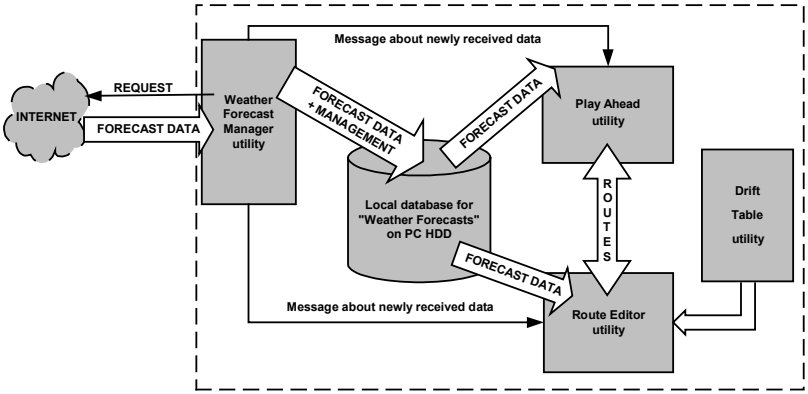


Fig. 2-2

The purpose of each of the utilities is specified below:

Weather Forecast Manager (WFM)

- Making up of weather forecast orders;
- Processing of a weather forecast and saving to the database;
- Selection of the weather forecast from the "Weather Forecast" database for the further viewing and use in Play Ahead and Route Editor programs.

  Among the specific features of this utility is the forecast order flexibility: order for any of the weather parameters (wind, pressure, wind induced waves, etc.) for any area which the user may require with different resolution grids for each specific parameter. E.g., it is possible to order "pressure" with the global coverage and with the finest resolution grid (the highest available accuracy), and "wind induced waves" – for a small area with a larger resolution grid.

Play Ahead (PA)

- Visualisation and animation of the received weather forecasts;
- Generation of route plans in a graphic form;
- Play ahead of the ship's motion along the route with a simultaneous visualisation of received weather forecast in dynamics.

Route Editor (RE)

- Generation, editing and deleting of routes;
- Route calculations for the routes made both, in the “RE” and in the “PA”, taking into account the effect of weather conditions and tidal and surface currents;
- Comparison of routes to select the optimum one with regard to the following criteria: speed loss caused by the currents and weather conditions, time underway and overall length of the passage route;
- Playing ahead of the route passage (in conjunction with Play Ahead utility) taking into account calculations made.

Drift Table (DT)

- Calculations of the wind and sea induced losses in the ship’s speed with regard to its own geometric parameters;
- Input of the ownship parameters for their further use in the route calculations taking into account weather data in Route Editor program;
- Making up by the user of own tables of ship speed losses with regard to the weather conditions.

3. TECHNICAL REFERENCE

3.1 Requirements to the Computer Capabilities and Software Environment

3.1.1 Minimum Hardware Requirements

Components of the equipment	Pentium166 32 Mb RAM 3,5”fl-drive CD drive 2 Mb VRAM HDD>600
Monitor	14” 800x600

3.1.2 OS Requirements

Weather Wizard program is intended for operation with the following OS:

- Microsoft Windows 98;
- Microsoft Windows ME;
- United States or Pan European version of Microsoft Windows NT 4.0 Service Pack 5;
- Microsoft Windows 2000.

3.1.3 Requirements to the Mail Programs

To function, the “Weather Wizard” program requires communication facilities and mail programs ensuring the despatch/reception of electronic letters (E-mail) via global Internet network.

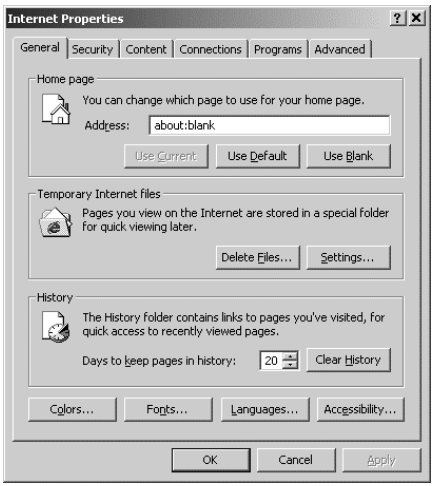
For a guaranteed operation of the Weather Wizard program one of the following mail programs is required to be available:

- Microsoft Outlook Express version 5.50 and higher;
- Microsoft Outlook 98;
- Microsoft Outlook 2000.

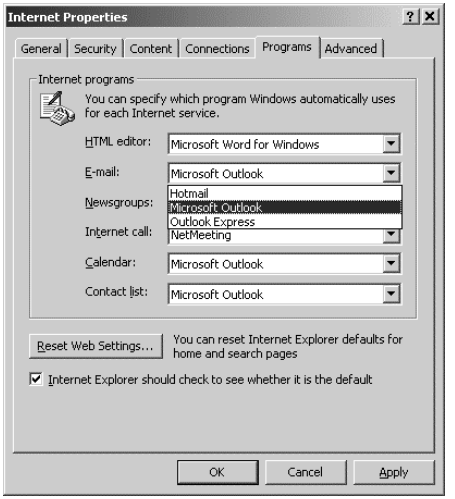
The installed mail software can be adjusted for handling mail either via the remote access (by using a modem), or via a corporate network (depending on the concrete user possibilities). The samples of the mail program adjustment are provided in Annex A.

Where Microsoft Outlook 98/2000 programs are used, it is necessary that this software should be configured for operation in “Corporate or Workgroup” mode (see Annex A).

In case of a joint use of Microsoft Outlook Express and Microsoft Outlook 98/2000 programs, in the sending/reception of weather mail it is necessary to taken into account the fact that Weather Wizard program operates with the mail program only which is set for handling the e-mail by default. There can be no despatch/reception of weather mail via the mail program which is not a default setting of the e-mail operation. To determine which mail program which is a default setting for handling the e-mail, use the following procedure:

1. Open the menu by pressing the right mouse button on Internet Explorer icon and select Properties option	

2. Switch to “Programs” page and use E-Mail line to set the program with the help of which you expect to handle the weather mail



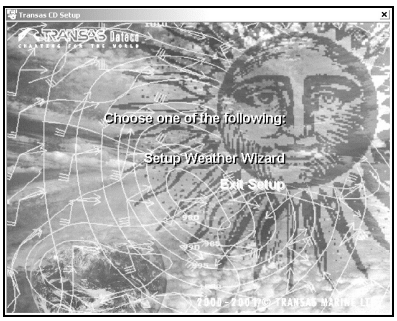
Attention! it is NOT ALLOWED to change the E-Mail setting from one mail system to another, or to switch mail systems from one profile or account to another, with Weather Forecast Manager utility running.

3.2 Software Installation

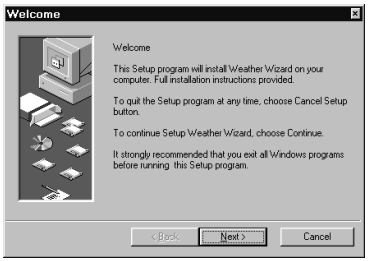
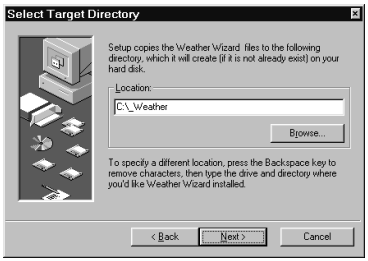
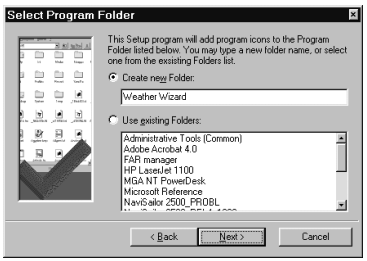
Installation of “Weather Wizard” software consists of two stages: installation of the software product itself and setting of mail parameters.

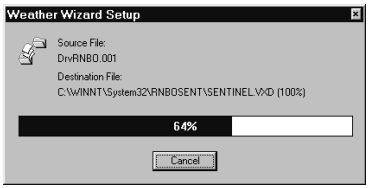
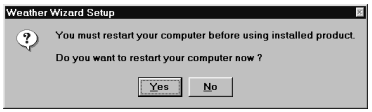
Installation of “Weather Wizard” Software

Installation of the software is made from TRANSAS – Electronic Chart System & World Chart Folio CD by using dedicated Transas CD Setup program which is run automatically after the CD is inserted in the drive (or “manually” – Setup.exe file in the disk root directory):



Select Setup Weather Wizard line (the line turns yellow) and press the left trackerball button (<Enter>)

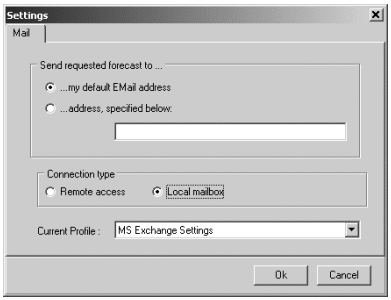
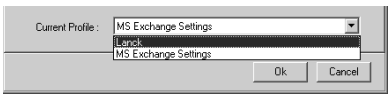
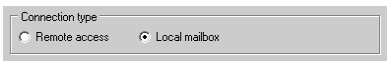
	<Next>
	Select a path to the directory where the product will be installed (C:_Weather by default). The name should not exceed 8 characters without spaces or punctuation marks <Next>
	Leave the name of Weather Wizard group window without changes <Next>
	<Start>

The program performs the product installation: 	
The program has performed the product installation: 	Complete the product installation procedure: <Exit>
	Re-start the computer: <Yes>

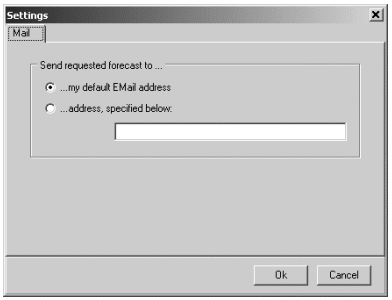
3.2.1 Setting of Mail Parameters

Depending on which mail program (Outlook Express or Outlook 98/2000) is set by default for the e-mail operation (see paragraph 3.1.3), different settings of Weather Forecast Manager utility are made.

WFM Adjustment for the Operation with Outlook 98/2000

Start the WFM	*See paragraph 4.1.2*
Press  button (Settings)	
Use "Send requested forecast to…" field to specify the e-mail address which the ordered weather forecasts should arrive to. By default, "…my default Email address" mode is activated	• "…my default Email address" – the ordered weather forecasts will be arriving to the e-mail address of that mailbox which was used for the sending of the order. • "…address, specified below" – the ordered weather forecasts will be arriving to the e-mail address specified by the user. *It is, therefore, possible to send an order from one computer and to receive and display the weather forecast on another computer*
Were several adjusted mail profiles are available in the Outlook, select that profile in "Current profile" line which will be used for the sending of the orders and reception of forecasts	
Check that "Connection type" switch is in "Local mailbox" position	
After making all the settings, press <OK> button	

WFM Adjustment for the Operation with Outlook Express

Start the WFM	*See paragraph 4.1.2*
Press  button (Settings)	
Use "Send requested forecast to…" field to specify the e-mail address which the ordered weather forecasts should arrive to. By default, "…my default Email address" mode is activated	• "…my default Email address" – the ordered weather forecasts will be arriving to the e-mail address of that mailbox which was used for the sending of the order. • "…address, specified below" – the ordered weather forecasts will be arriving to the e-mail address specified by the user. *It is, therefore, possible to send an order from one computer and to receive and display the weather forecast on another computer*
Press <OK> button	

Attention! In case of the WFM operation with the Outlook Express, the dispatch of orders and reception of forecasts is via the local mailbox of the account, which is set by default.

4. UTILITIES

4.1 Weather Forecast Manager

4.1.1 Purpose

- To compile orders for weather forecasts;
- To process a weather forecast and place it in the database;
- To select a weather forecast from the database for the use in Play Ahead and Route Editor utilities.

See also section 2.2.

4.1.2 Start of and Exit from the Utility

To start WFM utility, use the procedure shown in Fig. 4-1:

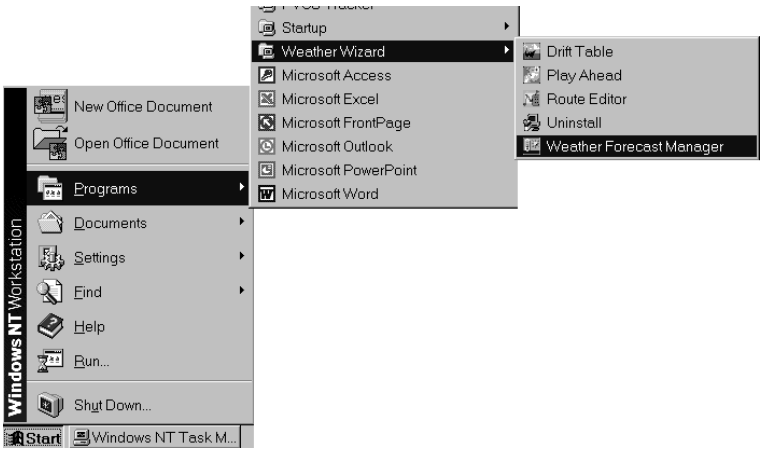


Fig. 4-1

To exit from the utility, use  button located in the *Main menu toolbar* on every utility page.

4.1.3 Description of the Utility

The utility consists of 3 main panel pages:

- Request;
- Delivery;
- Forecast;

as well as *Main menu toolbar* and Auxiliary Information panel.

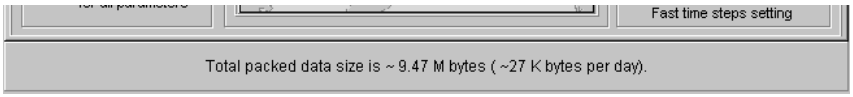
Main menu Toolbar

The *Main menu toolbar* is located in the top part of the utility screen and contains program control buttons:

The set of button varies from page to page. Their complete set and purpose are described in paragraph 4.1.4.

Information panel

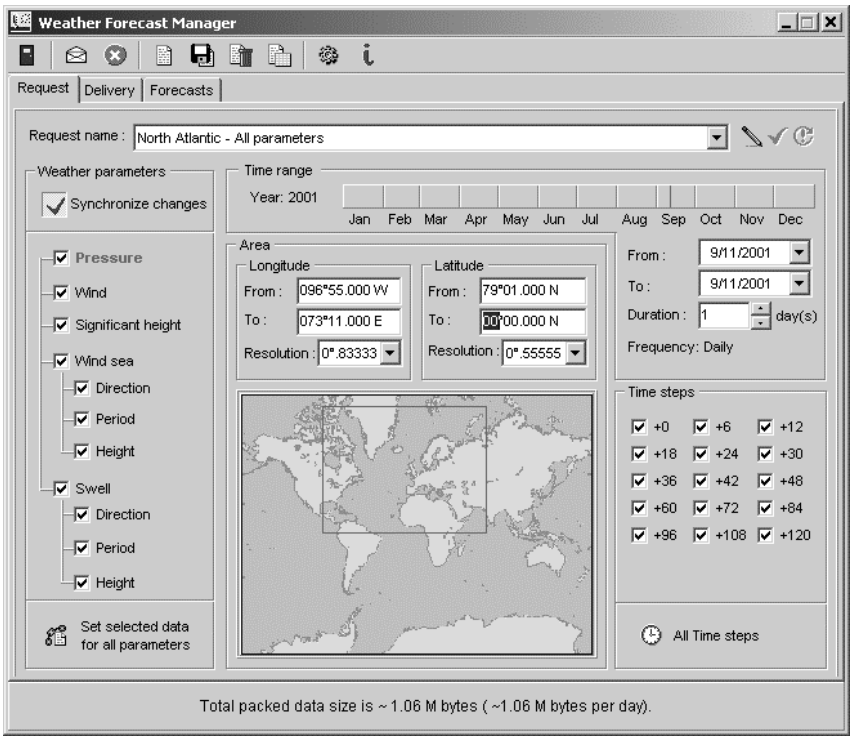
The Information panel is located in the bottom part of the utility screen and contains assessment of the received data size, information of auxiliary nature and indicators of the processes underway:



Attention! Information Panel presents the assessment of the compressed data which will be received by the user. The size of actually received data may differ from the data size specified on the Information panel being larger or smaller than the latter; however, calculations of payment for the supplied forecast is based exclusively on the data size assessment specified on the Information panel.

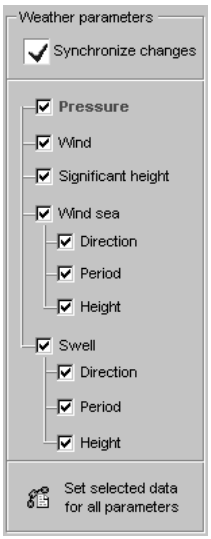
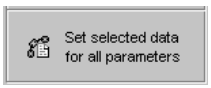
Request Panel

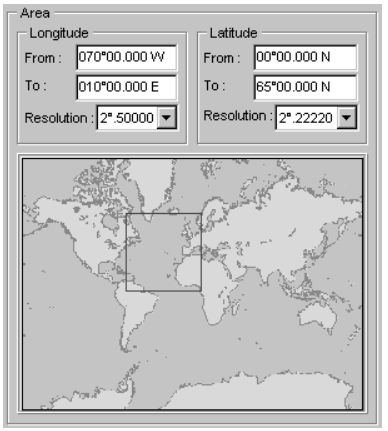
Request page is used for the formation of an order for the weather forecast and its despatch:

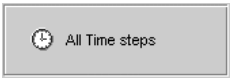
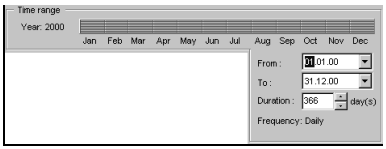
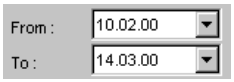


The page contains several panels where you should enter data required for the making up of an order:

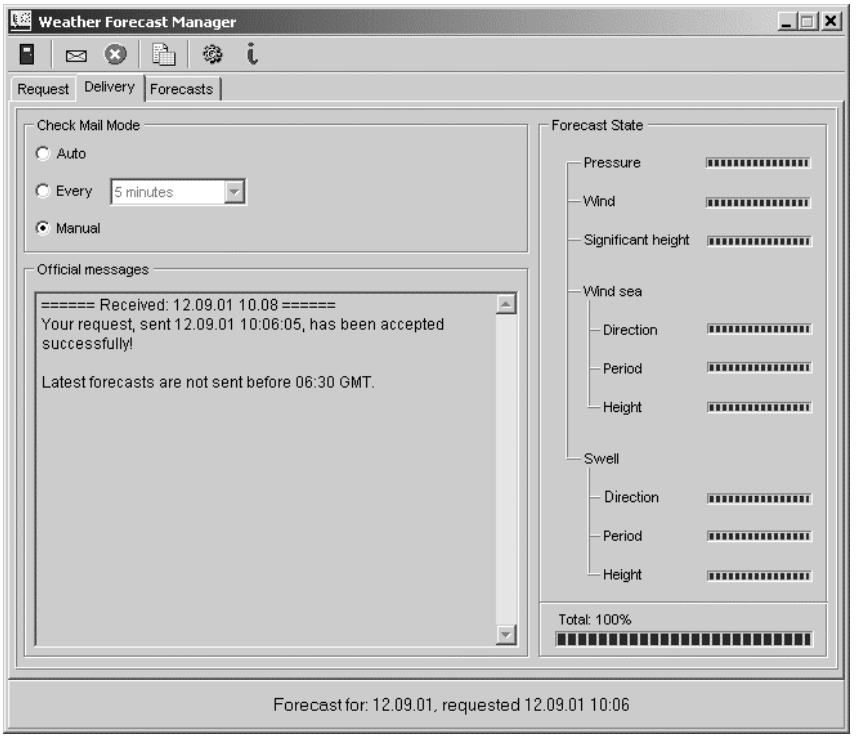
Panel	***Purpose***
1	2
1. Request name:	To save a formed order for the further use:
"Request name" line Request name : North Atlantic - All parameters	1) to enter the name of the order
Button	2) to display the list of the previously generated orders
	3) to activate the line for the input of the order name

Panel	Purpose
	4) to save the entered/edited order name *(not activated until*  *button is pressed)*
	5) to cancel the input/editing of the order name *(not activated until*  *button is pressed)*
2. Weather parameters: 	1) To select weather parameters which the sent weather forecast will contain data. 2) To activate one of the parameters whereupon: • Geographic area; • Resolution; • Time step; • subscription time will be selected for this parameter only. *E.g., in the drawing, "Pressure" parameters is activated (highlighted in red); this will mean that the settings made on all the other panel of "Request" page refer to this parameter only*
 *(option is enabled by default)*	3) To synchronise the selection of the geographic area, resolution, time step and subscription time for all the selected weather parameters at once
	4) To synchronise "manually" the selection of the geographic area, resolution, time step and subscription time for all the selected weather parameters when "Synchronize changes" option is disabled

Panel	Purpose
3. Area: 	1) To select a geographic area which the weather forecast will be ordered for *The area is set:* – *by the "manual" input of co-ordinates;* – *with the cursor on the map of the world. To do this, use the left mouse/trackerball button click to indicate the position of the top left corner and the right mouse click to indicate the bottom right corner of the required area, whereupon it will be delineated in red, and its coordinates will be displayed on "Latitude" and "Longitude" panels*
	2) To select accuracy of the presented data: resolution grid. This parameter represents a step of the coordinate grid (in degrees) over which the base values of the ordered parameters will be displayed. Parameter values in other points of the set geographic area are calculated by interpolation
4. Time steps: 	To select fixed time value (step) which the forecast for the selected weather parameters will be provided for, counting the number of hours from the beginning of the GMT day for the forecast receipt date. *E.g.,* – *+0 will mean that the weather forecast is provided for 00 h GMT only for the date of its receipt;* – *+12 – the forecast corresponds to 12:00 GMT of the current date;* – *+36 – the forecast is provided for 12:00 of the date following the forecast receipt date.*

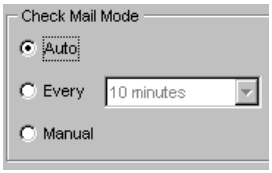
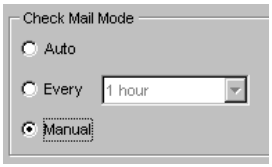
Panel	***Purpose***
	During the visualisation of the received weather forecast, the data is considered to be original (UKMO for the source) for these selected time points only; in the intervals between them visualised weather parameters are interpolated
	*Button for the prompt selection of all the fixed values*
5. Time range: 	Selection of the subscription time for the daily reception of weather forecast. *The "subscription" time interval is set:*
	– *with the cursor on the graphics panel. To do this, position the cursor on the required subscription start mark, press the left mouse button and, without releasing it, "stretch" the red indicator band to the required end point. Such setting should be checked by "From" and "To" dates (see below);*
	– *by the manual input of start and end dates via the calendar after pressing button;*
	– *by the input of the subscription "length"*

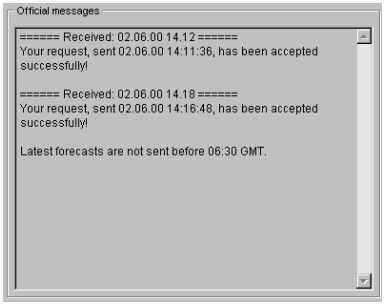
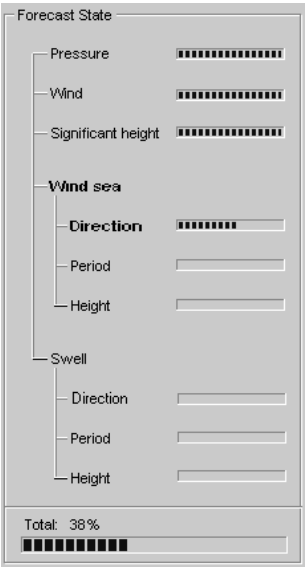
Delivery Page Forecasts are received and processed on Delivery page.



Attention! The reception of the weather forecast order takes place on "Delivery" page only. The recommended interval time between the despatch of the order and request for its delivery ("Remote access" type communication) is 30 minutes.

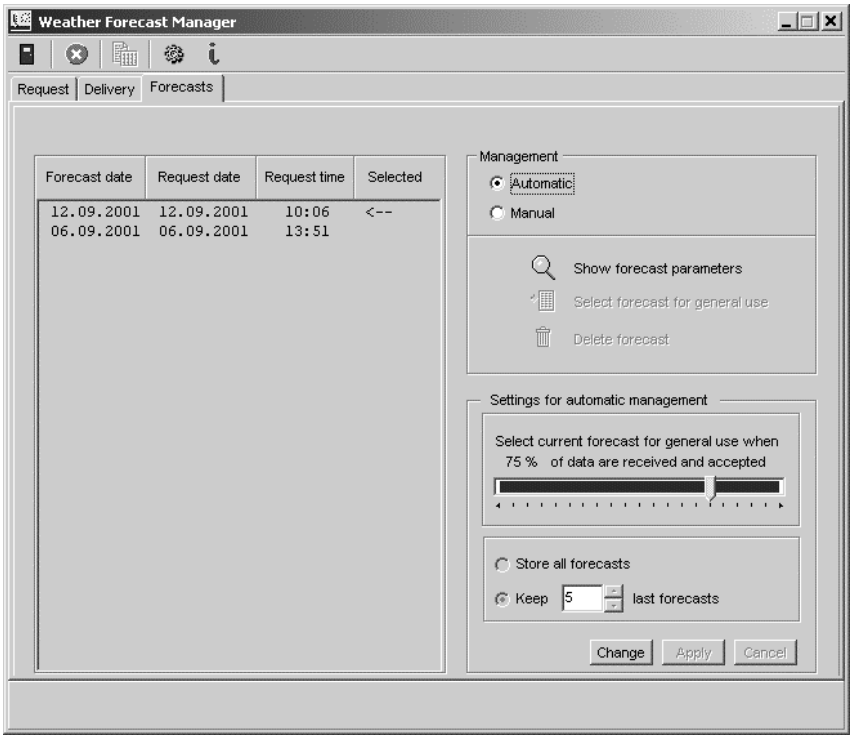
The page contains 3 panels:

Panels	***Purpose***
1	2
1. Check mail mode:	To set the way of receiving weather forecasts:
	1) Automatically. In this case, the WFM is permanently in the stand-by mode. The processing of mail containing weather forecast files starts immediately upon their reception I the mailbox of the given user. This way is available and recommended for “Local mailbox” communication type only.
	2) Semi-automatically. In this mode, the WFM automatically holds communication sessions with Internet provider (for “Remote access” type) or checks contents of the mailbox of the given E-mail addressee (for “Local mailbox” type communication) over the time intervals determined by the user. The timer in the right hand part of the panel shows time until the next connection
	3) Manually In this mode, connection with the provider for the reception of mail including weather forecast files is performed at an arbitrary moment of time at the user's request by pressing button on the *Main menu toolbar* of “Delivery” page. This is recommended for “Remote access” communication time, the cost of a communication sessions being quite high.

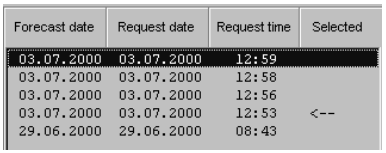
Panels	Purpose
2. Official messages:  	To display logs of weather forecast reception and processing, as well as of some other messages.
3. Forecast State:  	Data processing monitoring. The status of each parameter is indicated by the colour: – Blue for parameters which have been ordered and their receipt expected; – Red for the parameters whose data is being processed; – Black for parameters whose data has already been processed and placed in the database; – Grey for the parameters which have not been ordered. The bottom indication bar shows the size of processed data on all the parameters (in per cent)

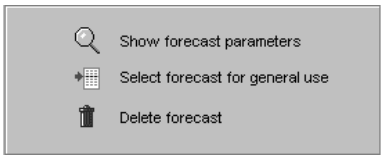
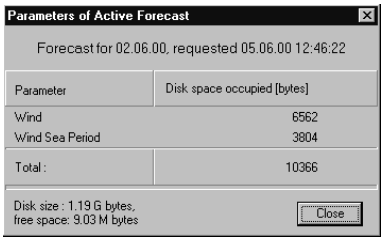
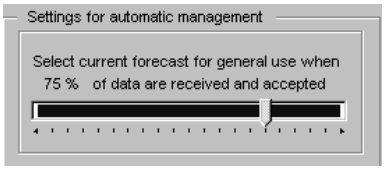
"Forecast" Page

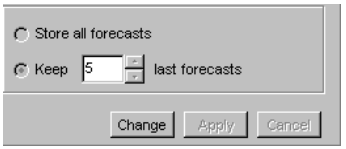
Forecast page is used for the selection of weather forecast for its further use in "Play Ahead" and "Route Editor" utilities (see paragraph 5.2.1):



The page has 5 panels:

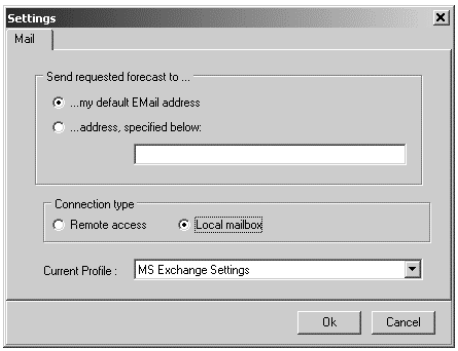
Panel	***Purpose***
1	2
1. List of received weather forecasts:  	To display brief information on the received forecasts where: – "Forecast date" is the date which the forecast is provided for; – "Request date" is the order despatch date; – "Request time" is the order despatch time; – "Selected" is an indicator of the order selected for the further use

2. Management: 	To set the forecast selection mode for the further operation: • "Automatic" whereby the last received forecast is automatically selected; • "Manual" whereby the forecast is selected by the user
3. Function for the viewing of brief forecast contents and manual selection:  *"Select forecast for general use" and "Delete forecast" functions are activated in "Manual" mode only (see above)*	• "Show forecast parameters" – viewing of the active (cursor selected) forecast parameters:  • "Select forecast for general use" – manual selection of the highlighted forecast for further work; • "Delete forecast" – deleting of the selected forecast from the database
4. Setting for automatic management:  *The "sufficiency" criterion can only be changes in "Automatic" by using <Change> and <Apply> buttons located on the panel below*	To set the "data sufficiency" criterion during the processing of the received weather forecast. This criterion determines the completeness level (in per cent) of the weather parameter processing whereby this forecast is considered to be "capable of operation" and is accepted for the further operation in PA and RE utilities
5. Panel for adjusting the number of forecasts stored in the database:	• "Store all forecasts" – to store each received forecast in the database; • "Keep … last forecasts" – to store the set number of the latest received forecasts

 *To set the number of forecasts stored in the database, use <Change> and <Apply> buttons*	

4.1.4 Main Menu Buttons

Outward appearance	***Name***	***Purpose***
1	2	3
	Close all and exit	To exit from the program
	Send current request	Dispatch of a weather forecast order formed on "Request" page. Depending on the connection type, the following operations are performed: **1) Connection Type – "Local mailbox"** An electronic letter with an order is placed in "Outbox" folder of the local mailbox and can be sent by using the default mail software *(see the description of <Settings>* button*);* **2) Connection Type –"Remote Access" (in case of operation with Microsoft Outlook 98/2000 only)** In this case, an electronic letter containing the order will be sent automatically with all the mail currently stored in "Outbox" folder of Outlook mail utility
	Cancel last request	Despatch of a mail notification to Transas Marine weather server about the cancelling of all the previously made orders. *This is recommended for use in case of an erroneous despatch of an order under which the receipt of a considerable volume of data is expected, which may cause unscheduled expenses connected with the payments for the communication session and services from Transas Marine*

Outward appearance	*Name*	*Purpose*
	Add new request	To make up a new order
	Save current request	To save the current order without changing its name
	Delete existing request	To delete the current order
	View request as table	To display the current order data in the form of a summary table. *This is recommended for use every time before the despatch of the order, to check its correctness and to avoid the incorrectly entered data which may cause a considerable increase of the communication session time and cost of the forecast*
	Settings	To adjust mail components (operation required to be performed at the software installation stage). Upon the press on this button, “Mail settings” window is displayed, it is intended for the input/editing of settings:  **1) Send requested forecast to** • “…my default Email address” – the ordered weather forecasts will be arriving to the e-mail address of that mailbox which was used for the sending of the order.

Outward appearance	*Name*	*Purpose*
		• "…address, specified below" – the ordered weather forecasts will be arriving to the e-mail address specified by the user. *It is, therefore, possible to send an order from one computer and to receive and display the weather forecast on another computer.* **2) "Connection type" Panel** • "Remote access" – connection type whereby the despatch of orders and reception of forecasts are performed by the Weather Forecast Manager utility itself, without use of the MS Outlook program. • "Local mailbox" – connection type whereby mail is handled via the local mailbox. In this case, orders are stored in the local Outbox and are sent by using the default mail program (e.g., MS Outlook). The reception of forecasts is also by using the default mail program. As this is done, data is stored in the local Inbox and is extracted from it by using the Weather Forecast Manager utility
		3) "Current profile" The selection of a profile which will be used for the dispatch of orders and reception of weather forecasts (where"…my default Email address" option is used). *The default setting if the profile set as a default in the MS Outlook operation.* Attention! The mail settings described in items 2 and 3 are not available unless MS Outlook is used as a default mail program (see item 3.1.3)
	About this program	Information on the utility.

4.2 Play Ahead

4.2.1 Purpose

- Visualisation and animation of the received weather forecasts;
- Generation of route plans in a graphic form;
- Play ahead of the ship's motion along the route with a simultaneous visualisation of received weather forecast in dynamics.

4.2.2 Start of and Exit from the Utility

To start Play Ahead utility, use the procedure shown below Fig. 4-2:

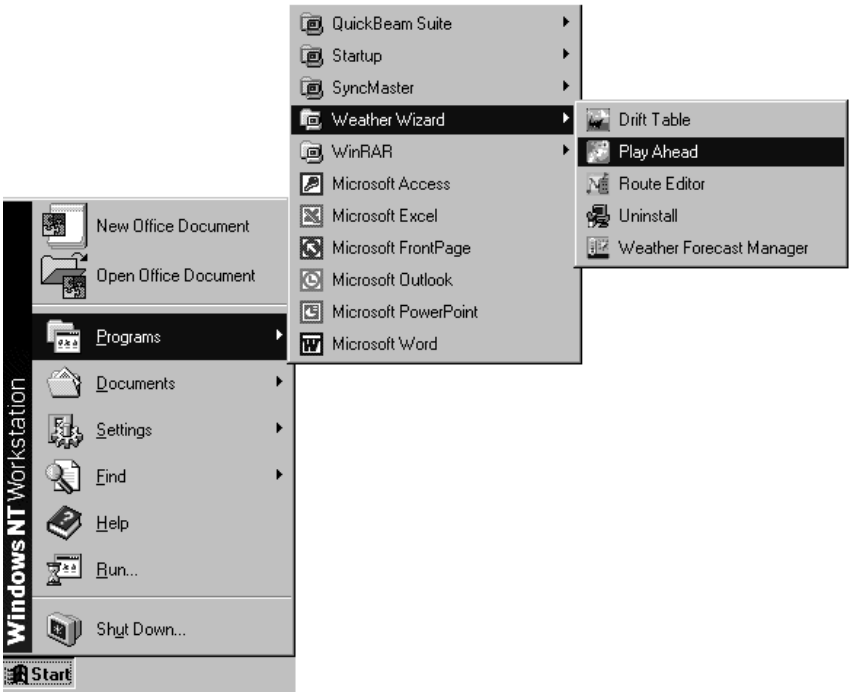


Fig. 4-2

To exit from the utility, use the following procedure:

Press CONFIG main menu item and execute <Exit> command 	The screen displays a window asking to confirm exit from the utility: 
<Yes>	

4.2.3 Description of the Utility

The PA screen includes three areas (see Fig. 4-3). The left hand part is the *Chart area*. The right hand part is taken up by *Information area* and *Menu area*. Sometimes when it is necessary to display some additional information command, e.g. HELP text, tide information window etc. (as required by operator), a window opens up in the left bottom part of the screen. At this time the chart is re-displayed in the top part of the screen.

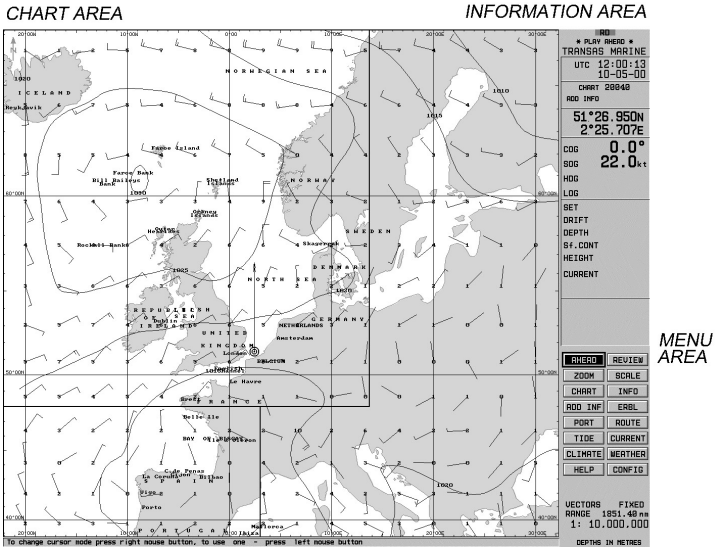


Fig. 4-3

Chart Area This area may display the following information:

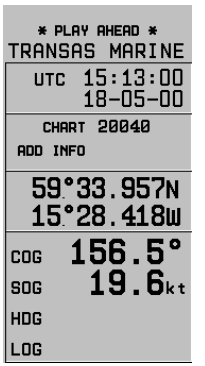
- ownship symbol;
- electronic charts;
- outlines and ID numbers of all the charts available in the collection (for the displayed charts the frames are shown in a bold line and numbers are in the bold type);
- numbered coordinate grid;
- additional information plotted by the user via ADD INF\Graphic editor\Add a new object function;
- route plan(s) with numbered waypoints;
- ownship track (during the play-ahead of the ship's passage along the route);
- cursor and ERBL;
- current vectors;
- tide data;
- climate data;
- received weather forecast data.

In the right bottom corner of the electronic chart there is an accuracy indicator in the form of an angle made up of bold red lines. This is a graphic presentation of the largest possible error of object plotting on the chart. When the chart is displayed on the original scale, the error line value is assumed to be 2 mm. With the growth of scale, line dimensions of the indicator also change, indicating how much chart information can be trusted.

Information Area

1. The data displayed continuously in the *Information area* includes the following:

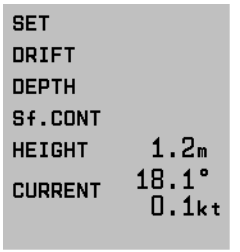
- TRANSAS MARINE trademark (displayed in the absence of "POSITION DROPPED" indicator meaning that the vessel symbol is not shown on the screen);
- modelled time and date during the route passage play-ahead (when play-ahead mode is disabled, the current computer time is displayed);
- loaded electronic chart number;



- current ship position coordinates during the route passage play-ahead (with the play-ahead mode disabled, it is the coordinates of the last ship position on the previous route which are displayed);
- current ship course and speed during the route passage play-ahead (with the play-ahead mode disabled, it is the course and speed in the last ship position on the previous route which are displayed);
- HDG – **not used**;
- LOG – **not used**.

2. There are 5 types of changeable display in the PA *Information Area*.

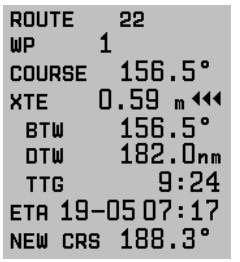
Display System Mode presents general data on the sailing conditions:



- SET – **not used**;
- DRIFT – **not used**;
- DEPTH – **not used**;
- Sf.CONT – **not used**;
- HEIGHT – calculated tidal rise in the closest reference point as of the current time;

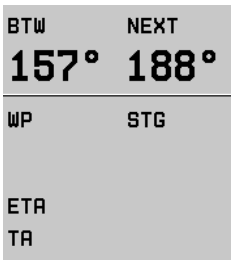
  CURRENT – calculated direction and speed of current in the vessel's position at the current time.

Display Route Mode – data on the ship position relative to the "monitored" route loaded by ROUTE\Load route function:



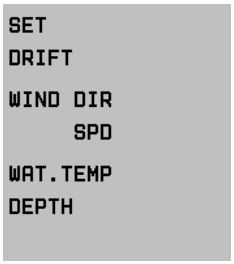
- ROUTE – route name;
- WP – number and name of the currently monitored waypoint;
- COURSE – direction of the current ship leg (or "GC" – value of the initial course when sailing along the Great Circle);
- XTE – cross track error with the indication of direction;
- BTW – bearing to the next waypoint (or "RL-GC" – difference between the Rhumb Line and Great Circle in sailing along the Great Circle);
- DTW – distance to the WP;
- TTG – time to go to the next waypoint;
- ETA – estimated date and time of arrival in the next waypoint;
- NEW CRS – direction of the next route leg.

Display Pilot Mode:

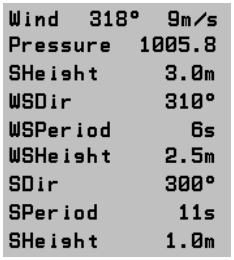


- BTW – bearing to the current WP;
- NEXT – direction of the next route leg;
- WP – **not used**;
- STG – **not used**;
- ETA – **not used**;
- TA – **not used**.

Display Weather Mode – not used

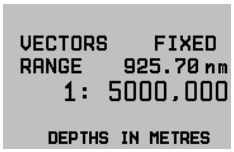


Display Weather Forecast Mode – received forecast data in the ship position:



- Wind – true wind direction and speed;
- Pressure – atmospheric pressure (kPa);
- SHeight – significant wave height;
- WSDir – direction of the wind induced waves;
- WSPeriod – period of the wind induced waves;
- WSHeight – height of the wind induced waves;
- SDir – swell direction;
- SPeriod – swell period;
- SHeight – swell height.

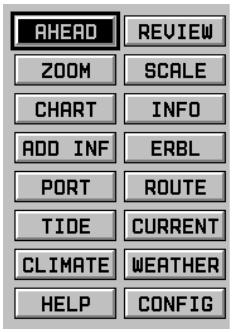
3. The lower part of the *Information area* displays:



- length of speed vectors and the range in nautical miles across the electronic chart display;
- selected scale of the chart display;

- and the following warnings:
  - "NOT RECOMM. SCALE" or "DANGEROUS SCALE", if the scale of the chart displayed on PA screen is up to 5 or over 5 fixed points (respectively) larger than that of the paper original;
  - "LAYERS LOST", if not all the Standard display (see paragraph 1.1.4) information layers are shown;
  - "LOOK UP BETTER CHART", if there is a larger scale chart available for the vessel position than that loaded.

Menu Area The multi-level *Main menu* is displayed in this area of the utility.



The following information and dialogue windows can be displayed in the *Menu area* during the PA operation:

- data input window served for the input of required numeric values, names, etc.;
- objects, colours, names selection window.

4.2.4 Brief Description of the Menu Functions

Information set forth in this document is presented in the form of a table:

Play Ahead Main menu function	***Brief statement of purpose***
1	2

When the menu functions are specified in the first column, the following designations are used:

- capital letters designate the PA *Main menu* keys;
- "\" means that the function belongs to the submenu of the *Main menu* keys specified before;
- "\\" means that the function belongs to the "\" submenu etc.

1	2
AHEAD	To re-draw the screen with the vessel symbol shifting in the direction opposite to the current course
ZOOM	To display the selected chart fragment or the required sailing area on the PA screen

1	2
SCALE	To set the screen scale in the PA *Chart area*
INFO	To obtain information on the electronic chart and objects plotted on it
REVIEW	To view other sailing areas by means of cursor shifting
CHART	To provide access to the functions used for work with charts
\Load-Pos'n	To load any of the charts under the ownship symbol position
\Load-List	To load any chart from the collection by its number
\Charts unload	To unload all the charts from the PA
\Grid lines	To turn on/off the coordinate grid on the PA screen
\Charts autoload	To turn on/off the chart autoloading, associated with the ship's motion
\Charts autoscale	To set the scale of the automatically loaded chart: • current PA screen scale; • original chart scale
\Information layers	To provide access to the functions used for turning on/off the display of individual classes of chart information on the PA screen (*see paragraph 1.1.4*)
\\Standard display	To turn on/off the display of Standard Display objects
\\Spot soundings	To turn on/off the display of all the soundings charted
\\Spot soundings to	To turn on/off the display of soundings larger than set by this function
	To turn on/off the display of the following information layers:
\\Isolated dangers	• isolated dangers to navigation;
\\Cables, pipelines	• submerged cables and pipelines;
\\Ferry routes	• ferry crossings;
\\Names	• names;
\\All depth contours	• all depth contours larger than the safety depths;
\\Seabed	• seabed;
\\Question mark	**not used;**
\\M_Quality objs	**not used;**

1	2
\\Chart boundaries	• boundaries of all the charts in the ship's folio;
\\Rest information \\Marine facilities	• other information; **not used**
\\Scale bar	To turn on/off the display of "Scale bar" on the PA screen, which gives a clear idea of scale for a visual estimation of ranges
\\NavTex	**not used**
\All information	To turn on the display of all chart objects of all classes and categories specified in *Information layers menu*
\Original scale	To set the scale of the current displayed charts equal to the original paper chart scale
ROUTE	To provide access to the functions used for work with route monitoring and planning
\Select next WP \Enter next WP \Load route \Unload route \Arrival circle	To handle the route loaded for monitoring: • to turn on/off the mode of automatic or manual change of WPs; • to manually set the "monitored" WP number; • to load the route; • to unload the route from the PA; • to set the circle around the WP; when this circle is crossed, the route monitoring is switched from the current WP to the next WP
\New \Open \Save \Close \Edit	To handle the route in planning mode: • to generate a new passage route • to load a previously generated route • to save a newly created or edited route • to unload the route from the PA screen • to edit a passage route
ADD INF	To provide access to the function used for work with "user charts" *(see paragraph 1.1.4)*
\Active user chart	To switch the activity of "layers" intended for the loading of user charts *(see paragraph 1.1.4)*
\Color	To turn on/off the facility for plotting and display of coloured objects on the user charts

1	2
\Graphic editor	To provide access to the functions used for work with the graphic editor for creating and editing user charts
\\Add a new object	To display a selection of objects for plotting on the user chart:
\\\Symbols	• navigational symbols;
\\\Manual Correction	• symbols complying with requirements of IHO ECDIS Presentation Library Special Publication No. 52;
\\\External Symbols	• additional (own) symbols;
\\\Depths	• soundings;
\\\Lights	• lights;
\\\Buoys	• buoys;
\\\Racons	• racons;
\\\Lines	• lines and zones;
\\\Guard zones	• guard zones;
\\\Dangers	• symbols of dangers to navigation;
\\\Text	• texts on the chart;
\\\Information	• texts stored under “i” symbol;
\\\Cancelling by hand	• cross-out symbol
\\Edit Info	To enter information stored on the user chart under a symbol of any objects plotted on it and to edit such information
	To edit objects plotted on the user charts in the following manner:
\\Edit object	• to edit texts, lines and zones;
\\Delete object	• to remove objects (with a reconstruction option);
\\Shift object	• to shift an object;
\\Shift all object	• to shift all the objects on the user chart
\\Merge charts	To duplicate data contained on a user chart onto another user chart (from the inactive “layer” to the active one)
\User chart list	To load a previously created user chart into the active “layer” of PA screen

1	2
\Unload active chart	To unload user charts from the active “layer” of PA screen
\Save active chart	To save a created or edited user chart
\Information layers	To provide access to the functions serving for turning on/off the display of the following objects on the user chart:
\\Symbols	• navigational symbols;
\\Depths	• soundings;
\\Lights	• lights;
\\Buoys	• buoys;
\\Racons	• racons;
\\Lines	• lines and zones;
\\Guard zones	• guard zones;
\\Dangers	• symbols of dangers to navigation;
\\Text	• texts on the chart;
\\Info	• “i” symbol storing the information;
\\Cancelling by hand	• cross-out symbols
\\All information	To turn on the facility for plotting and displaying all the user chart objects
\Show deleted	To turn on/off the display of deleted objects (in a special colour)
\Move to Active chart	To re-construct the objects deleted from the user chart by picking them up
ERBL	To turn on the PA ERBL (Electronic Range and Bearing Line)
PORT	To provide access to the functions used for providing brief information on ports, and performing the follo-wing operations on the database:
\Load	• loading into RAM;
\Unload	• unloading
	To select (search for) the port of interest in the following ways:
\By name..	• by the port name;
\By region..	• by the area;

1	2
\By country.. \By cursor..	• by the name of the country; • by the cursor position (in the 30 mile zone)
\Screen ON/OFF	To display information on the port, provided during the last access to the function
\Units	To select the measurement units for depths and heights in the information provided on the selected port: • in metres; • in feet
TIDE \Load \Unload	To provide access to the functions used for providing information on tides and performing the following operations on the database: • loading into RAM; • unloading
\By name.. \By cursor..	To select (search for) the required reference point in the following ways: • by the name of the point; • by the cursor position (in the 30 mile zone)
\Screen ON/OFF	To display the information on tides supplied during the last access to the function
\Nearest place	To display the name of the nearest reference point
\Units	To select measurement units for tidal rise in the provided information: • in metres; • in feet
\Time	To select the time system which the tidal curve will be shown in: • local time; • ship's time
\Visible	To turn on/off the display of tidal rise in all the reference points available in the PA database
\By hour..	To view the dynamics of changes in the tidal rise in the reference points within the selected chart fragment with the change of time with 1 hour discretion

1	2
CURRENT	To get access to the functions used for providing information on tidal and surface currents, and performing the following operations on the database:
\Load	• loading into RAM;
\Unload	• unloading
\Visible	To turn on/off the display of currents vectors:
\By hour..	To view the dynamics of changes in the current acting in the selected chart fragment hour-by-hour
\By month..	To view the dynamics of changes in the current acting in the selected chart fragment month-by-month
CLIMATE	To enable access to the functions used for providing information on wind and waves, and performing the following operations on the database:
\Load	• loading into RAM;
\Unload	• unloading
	To turn on/off the display of vectors
\Result wind	• for the resulting wind;
\Prevail wind	• for the prevailing wind
\Wave height	To turn on/off the display of wave height contour lines
\Winds by month..	To view the dynamics of changes in the direction and value of wind vectors within the selected chart fragment with the change of time with 1 month discretion
\Wave by month..	To view the dynamics of changes in wave height contour lines with the change of time with 1 month discretion
WEATHER	To enable access to the functions used for providing information on the received weather forecast
\Animation	To view changes in the weather forecast in dynamics with a set time step
\Auto mode On/Off	To turn on/off automatic display of the weather parameters change dynamics
\By hour	To set the time step for the weather parameters change
\Options	To provide access to the functions used for weather data visualisation parameters

1	2
\\Wind (Pressure, Signif. Height etc.)	To provide access to the functions used for changing the following visualisation parameters:
\\\Color	• colour (for Wind parameter only)
\\\Length	• vector length (for Wind parameter only)
\\\Contours Visible On\Off	• turning on/off the display of contour lines
\\\Contour step	• discreteness of contour lines
\\\Contours number On\Off	• numbers on contour lines
\\\Grid number On\Off	• turning on/off the display of numeric values on the contour lines
\\\Base grid On\Off	• turning on/off the display of base values only for the given weather parameter
\\\Calculated grid On\Off	• turning on/off the display of calculated (interpolated) values only
\Wind (Pressure, Signif. Height etc.) On\Off	To turn on/off visualisation of the given weather parameter
HELP	To obtain information on the PA operation
CONFIG	To provide access to the functions used for making initial PA settings, as well as for obtaining additional information in the process of utility operation
\Display color set	To select the screen colour palettes (to suit the time of the day):
\\Daylight	• Daytime;
\\Twilight	• Twilight;
\\Dusk	• Moonlit night (PA *Information area* is shown against white background);
\\Night	• Moonless night (PA *Information area* is shown against white background);
\\Dusk Inverted	• Moonlit night (PA *Information area* is shown against black background);
\\Night Inverted	• Moonless night (PA *Information area* is shown against black background)
\Display	To select one of the 5 display types in the PA *Information Area* (see item 4.2.3 “Information area” [2])

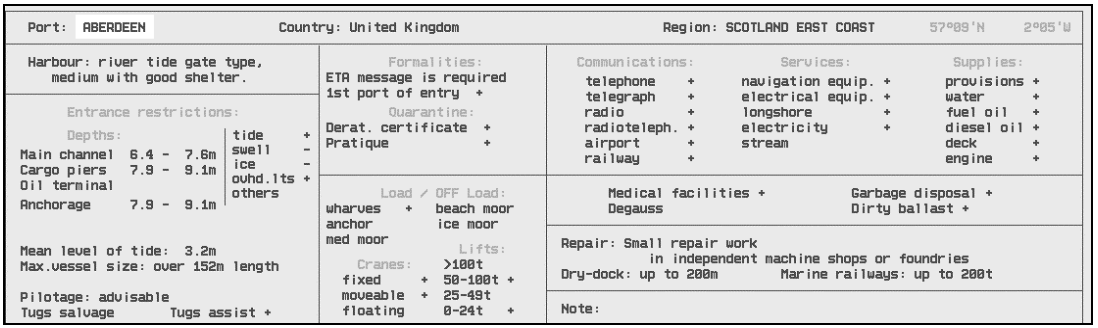
1	2
\Cursor	To select the type of the PA *Graphics cursor* (see paragraph 4.2.6 ”Graphics cursor”)
\Precision	To select the precision of the own vessel coordinates displayed in the PA *Information area*: • .001 – with a precision of up to three digits after the decimal point; • .HIGH – with a precision of up to 5 digits after the decimal point (degrees not displayed)
\Monitor	To set the size (along the diagonal) of the monitor’s active zone (from 250 to 800 mm)
\Help mode \Prompt mode	To turn on/off the mode of permanently displaying Help information on the PA *Main menu* functions (when the cursor is positioned on them) in the following form: • window with information in the bottom part of the PA screen; • brief information in a utility’s bottom bar
\Exit	To turn the PA off

4.2.5 Additional Capabilities in the Use of PA Utility

Obtaining Information on Ports

Information on the ports is based on document PUB 150, “World Port Index” published by the Defense Mapping Agency, USA. It should be noted that this is only approximate information which does not necessarily include all the navigational and other features affecting the safety at sea, or the latest updates.

Information on the selected port is displayed in a window in the bottom part of the PA screen, and contains the following groups of data:



- Name of the port, country and area which the port belongs to (in the top line of the information window);
- Harbour – harbour type and size;
- Entrance restrictions – list of natural factors restricting the vessels' entrance;
- Depths – depths in the main channel, at the principal cargo berth and/or at the oil terminal and at the principal anchorage;
- Pillage;
- Tugs;
- Formalities – port formalities;
- Load/OFF Load – cargo handling operations;
- Communications – available communications;
- Services – provided port services;
- Supplies – supplies;
- Medical facilities – medical institutions;
- Repair – repair facilities;
- Note – comments.

To obtain information on the required port use the following procedure:

The PA menu function involved and/or actions required to be taken	***Indicator of the function and/or menu button (keyboard key)***	***PA display of the actions performed and/or notes***
1	2	3
PORT\Load	<Enter>	To load the database on ports in the RAM

The PA menu function involved and/or actions required to be taken	*Indicator of the function and/or menu button (keyboard key)*	*PA display of the actions performed and/or notes*
Select depth measurement units:		
PORT\Units	METRES	Soundings and heights in the port information are displayed in metres
	FEET	Depths and heights are measured in feet

To select (or search) for the port of interest, use one of the following procedures.

- By the port name:

1	2	3
PORT\By name..	<Enter>	The bottom part of the screen displays an information window containing the list of all the ports available in the database, arranged in the alphabetical order
Use the keyboard for typing the first letters of the port name as required for the search	<Enter>	The same window displays information on the selected port (in case of an incorrect input, or when the required port is not available in the database, a small question mark appears to the left of the cursor)
Repeat the procedure as required	<Esc>	A window with the list of ports appears again
	<Esc>	To remove the information window from the screen

☞ *Note: when a port has several known names, the list contains all of them, alternative names having references to the principal one.*

- By the area:

1	2	3
PORT\By region..	<Enter>	The bottom part of the screen displays an information window with the list of all the areas arranged in the alphabetical order
Position the cursor on the required area, or use the keyboard for typing the first letters of its name as required for the search	<Enter>	The same window displays a list of ports belonging to this area
Position the cursor on the required port, or use the keyboard for typing the first letters of its name as required for the search	<Enter>	Information on the selected port is displayed
Repeat the procedure as required	<Esc>	A window with the list of ports is displayed again
	<Esc>	To remove the information window from the screen

- By the country name:

1	2	3
PORT\By country..	<Enter>	The bottom part of the screen displays an information window with the list of all the countries arranged in the alphabetical order
Position the cursor on the required area, or use the keyboard for typing the first letters of its name as required for the search	<Enter>	The same window displays a list of ports belonging to this country
Position the cursor on the required port, or use the keyboard for typing the first letters of its name as required for the search	<Enter>	Information on the selected port is displayed
Repeat the procedure as required	<Esc>	A window with the list of ports is displayed again
	<Esc>	To remove the information window from the screen

- By the cursor position:

1	2	3
PORT\By cursor..	<Enter>	A *Graphics cursor* appears
Position the cursor in the place of interest on the chart	<Enter>	The bottom part of the screen displays an information window with the list of all the ports within the range of 30 miles from the cursor position
Position the cursor on the required port, or use the keyboard for typing the first letters of its name as required for the search	<Enter>	The same window displays information on the selected port
Repeat the procedure as required	<Esc>	A window with the list of ports is displayed again
	<Esc>	A window with the list of ports is displayed again

Having once viewed information on the required port, you will be able to use the PA facilities for referring to this information without having to repeat the above procedures (in this case the database should be loaded in the RAM):

1	2	3
PORT\Screen ON/OFF	<Enter>	To display/hide a window with information provided during the latest access to the function

Obtaining Information on Tides

Attention!

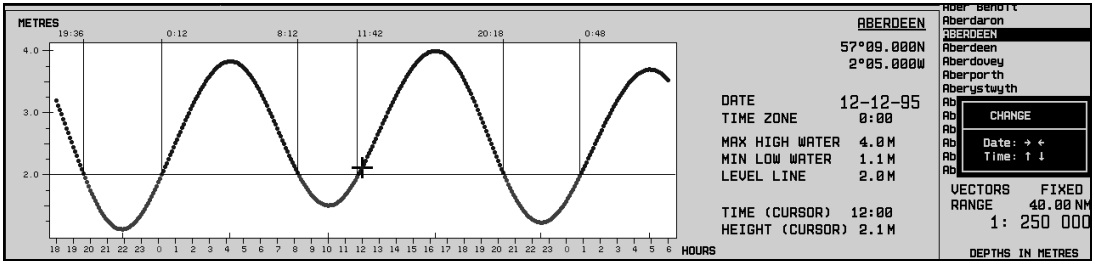
The following limitations are imposed on the used of databases on tides, tidal currents and surface currents:

information cannot be displayed unless a weather forecast received from Transas Marine weather server is available;

upon the expiry of 14 day period after the receipt of the latest weather forecast, supply of information is terminated.

Tides are calculated in full compliance with the procedure and from the data described in the UK Admiralty Tables NP 158 and with accuracy commensurate with this procedure.

Information on tides at the selected reference point is displayed in a window in the bottom part of the PA screen, and contains the following data:



- tide curve showing the tidal rise (in metres or feet) in accordance with time (local or ship's time);
- critical water level value set by the navigator using the vessel's draft and the least depth of channel;
- time intervals marked with vertical lines and highlighted with colour, when the water level is higher than the set level;
- additional information section:
  - reference point name and its coordinates;
  - Date – the set date which the calculations were made for;
  - Time zone (or Ship's time) – time shift with reference to GMT (or an indication that the ship's time is used);
  - Max high water – maximum high water;
  - Min low water – minimum low water;
  - Level line – set water level;
  - Cursor: time, height – time and water rise corresponding to the cursor position.

To control the cursor when working with the tide curve, use the trackerball or cursor control keys on the keyboard. Use the trackerball sideways motion (or the appropriate keys on the keyboard) to change the set calculations data which is in this case shown in the orange colour. To determine the water rise at any set time, move the trackerball up and down (or use the appropriate keys on the keyboard) thus moving the cursor from this moment of time and obtaining the water rise readout in the additional information section.

Information on tides can be obtained both, for the nearest point to vessel position and for the required reference point. In addition the PA

allows viewing the dynamics of changes in the tidal rise in all the reference points available in the PA database with discretion of 1 hour.

1. The tidal rise in the closest reference point to the current vessel position (if there is any within the range of 30 miles). To determine it use the following procedure:

The PA menu function involved and/or actions required to be taken	***Indicator of the function and/or menu button (keyboard key)***	***PA display of the actions performed and/or notes***
1	2	3
TIDE\Load	<Enter>	To load the database on tides in RAM
Turn on the display of data on the tidal rise: CONFIG\Display (or press <Tab> hot key successively)	SYSTEM	Display System Mode is turned on the PA *Information area*, where the tidal rise is specified
If required, determine the closest reference point which this information was provided for:		
TIDE\Nearest place	<Enter>	The *Menu area* displays an information window containing the reference point name, its coordinates and distance from the vessel position If there are no reference points within the range of 30 miles, the *Menu area* displays a “Not found” message which is acknowledged by pressing any key

2. To obtain information on tides at the selected reference point use the following procedure:

1	2	3
TIDE\Load	<Enter>	To load the database on tides in RAM

Select the tidal rise measurement units: TIDE\Units	 METRES FEET	 To show tidal rise in meters To show tidal rise in feet
Select the time measurement option which the tide curve will be referenced to: TIDE\Time	 TZONE SHIP'S	 To obtain information for the local time To obtain information for the ship's time

To select a reference point of interest use one of the following procedures.

- By the reference point name:

1	2	3
TIDE\By name..	<Enter>	The *Menu area* displays a name input window
Use the keyboard to type the reference point name or several beginning letters for the search	<Enter>	If several beginning letters of the name were entered, the *Menu area* displays a list of reference point names arranged in the alphabetical order and starting with the typed letters; if the database on the reference points contains the entered name, the *Menu area* displays a data input window *(see below)*; if the database does not contain the entered name, the *Menu area* displays a "Not found" message (which is acknowledged by pressing any key)
Position the cursor on the required item, or use the keyboard to enter several starting letters from its name sufficient for its search	<Enter>	The *Menu area* displays an input window containing the name and coordinates of the selected reference point, as well as the default data: current date and water level above the datum equal to 2 m

- By the cursor position:

1	2	3
TIDE\By cursor	<Enter>	A *Graphics cursor* appears
Position the cursor in the place of interest on the chart; or *use <Tab> key to switch activity to the information window and enter the coordinates manually*	<Enter>	The *Menu area* displays a list of all the reference points within the range of 30 miles from the cursor position; if there are no reference points within the range of 30 miles, the *Menu area* displays a "Not found" message (which is acknowledged by pressing any key)
Position the cursor on the required reference point, or use the keyboard for typing the first letters of its name as required for the search	<Enter>	The *Menu area* displays an input window containing the name and coordinates of the selected reference point, as well as the default data: current date and water level above the datum equal to 2 m

After the data input window has appeared in the *Menu area*, use the following procedure to display the tide curve:

1	2	3
Enter the required date group by group of digits	<Enter>	"Level" line is activated
Enter the water level above the datum you are interested in	<Enter>	Information on tides is displayed in the bottom part of the PA screen
Move the cursor to read off the required tide parameters		*Procedure to work with the tide curve is specified in the introductory part of this chapter*
	<Esc>	To remove the tide curve from the PA screen

Having once viewed information on the tide, you will be able to use the PA facilities for referring to this information without having to repeat the above procedures (in this case the database should be loaded in the RAM):

1	2	3
TIDE\Screen ON/OFF	<Enter>	To display/hide a window with information provided during the latest access to the function

3. To display the tidal condition in the reference points in the navigation area of interest over a certain time interval use the following procedure:

1	2	3
TIDE\Load	<Enter>	To load the database on tides in RAM
TIDE\Visible	ON	To turn on the display of tidal rise in reference points on the PA screen
Use REVIEW and SCALE function to display the required fragment in the *Chart area* and set the scale suitable for the display of currents' vectors		*vectors of currents do not appear on an electronic chart unless its scale is larger than 1:4,000,000.*
TIDE\By hour..	<Enter>	The *Menu area* displays an information window showing the number of hours counted from current moment and scales of visual estimates of the tidal rise
By incrementing the time interval (one hour at each press) set the required moment of time	<↑>, <↓>	Tide levels in the reference points displayed on electronic chart fragment are changing with the change of time

Obtaining Climatic Data

The climate database includes information on wind and sea. The source of this database of information obtained from NOAA – CD-Rom U.S. Navy "Marine Climatic Atlas of the World", Naval Meteorology and Oceanography Command, which contains processed data of meteorological observations accumulated over the period from 1854 until 1969.

The PA has a facility for showing vectors of prevailing and resulting wind which are displayed in the green colour and originate in the same reference points located in the corners of a 1x1 degree grid (in latitude and longitude). It is assumed that the resulting wind is the summary vector of the “wind rose” components, whilst the prevailing wind is represented by the largest vector.

Information on sea is shown in the PA in the form of a line equal to the wave height (in the green colour). The wave height value which this contour line corresponds to is specified next to it.

Apart from the display of wind vectors and a line equal to the wave height for the current month, the PA provides a facility for viewing the dynamics of their change with one month discretion.

1. To display wind vectors on the PA screen and view the dynamics of their changes by months use the following procedure:

The PA menu function involved and/or actions required to be taken	***Indicator of the function and/or menu button (keyboard key)***	***PA display of the actions performed and/or notes***
1	2	3
CLIMATE\Load	<Enter>	To load the wind and sea database in RAM
CLIMATE\Result wind	ON	To turn on the display or resulting wind vectors
CLIMATE\Prevail wind	ON	To turn on the display of prevailing wind vectors
Use REVIEW and SCALE function to display the required fragment in the *Chart area* and set the scale suitable for the display of currents’ vectors		*wind vectors and sea contour lines do not appear on an electronic chart unless its scale is larger than 1:75,000,000.*
CLIMATE\Winds by month..	<Enter>	The *Menu area* displays an information window with the indication of the calendar month which the displayed vectors correspond to, and the scales of visual estimates of the wind speed (in m/sec) shown by the vector

The PA menu function involved and/or actions required to be taken	*Indicator of the function and/or menu button (keyboard key)*	*PA display of the actions performed and/or notes*
Set the required month of the year by the successive pressing of a key	Any key except <Esc>	The wind vectors on the displayed electronic chart fragment are changing with the change of time

2. To display the wave height contour lines on the PA screen and view the dynamics of their changed by months, use the following procedure:

1	2	3
CLIMATE\Load	<Enter>	To load the database on wind and sea in RAM
CLIMATE\Wave height	ON	To turn on the display of a corresponding to the wave height
CLIMATE\Wave by month..	<Enter>	The same line shows the names of calendar months which the displayed lines correspond to
Set the required month of the year by the successive pressing of a key	Any key except <Esc>	The wind vectors on the displayed electronic chart fragment are changing with the change of time

Obtaining Information on Currents

Attention!

The following limitations are imposed on the used of databases on tides, tidal currents and surface currents:

information cannot be displayed unless a weather forecast received from Transas Marine weather server is available;

upon the expiry of 14 day period after the receipt of the latest weather forecast, supply of information is terminated.

PA database on tidal currents has been created on the basis of information presented on paper nautical charts where the tidal current vectors are calculated for each hour for individual points of navigation area covered by the given chart. Information on the surface currents was created after the processing of the initial (observed) data of the US National Oceanography Centre (NODC and NOAA).

The PA has a facility for displaying vectors and taking into account the effect of tidal and surface currents. Vectors of tidal currents are shown on the PA screen in the blue colour, whilst the surface currents are shown in the black colour (in the daylight palette). Vectors originate in the reference points for which the coordinates and parameters of currents were taken from the aforementioned sources. For the point of the current vessel position the acting current is determined by interpolation between the closest reference points.

In addition to displaying vectors for the current moment of time, the PA permits viewing the dynamics of changes in the currents with discretion of one hour (for the tidal currents) and a month (for surface currents). It should be noted that the viewing of changes in the tidal currents can be combined with a simultaneous display of dynamics of changes in the tidal rise in all the reference points available in the PA database.

1. To display vectors of currents on the PA screen use the following procedure:

The PA menu function involved and/or actions required to be taken	***Indicator of the function and/or menu button (keyboard key)***	***PA display of the actions performed and/or notes***
1	2	3
CURRENT\Load *(in both sections of CURRENT submenu)*	<Enter>	To load the databases on currents into RAM
TASK\CURRENT\Visible *(in both sections)*	ON	To display vectors of currents on the PA screen
Turn on the display of data on the tidal status and the current acting in the vessel position: CONFIG\Display *(or press successively <Tab> hot key)*	SYSTEM	Display System Mode is switched on in the PA *Information area*, where the tidal rise, direction and speed of current are displayed

2. To display the condition of the acting current in the navigation area of interest over a certain time interval, use the following procedure:

1	2	3
CURRENT\Load *(in both sections of CURRENT submenu)*	<Enter>	To load the database on currents into RAM
CURRENT\Visible *(in both sections)*	ON	To display vectors of currents on the PA screen
Use REVIEW and SCALE function to display the required fragment in the *Chart area* and set the scale suitable for the display of currents' vectors		*The vectors of currents are not displayed on the electronic charts on scales larger than 1:3,000,000*

- For the tidal currents:

CURRENT\By hour.. *(in 'Tidal currents' sections)*	<Enter>	The *Menu area* displays an information window showing the number of hours to be counted from the current moment, and the scale of visual estimation of the current's speed represented by the vector
Set the required time by incrementing (one hour at each press) the time interval	<↑>, <↓>	Vectors of currents in the displayed electronic chart area are changing with the passage of time *(see Fig. 4-4)*

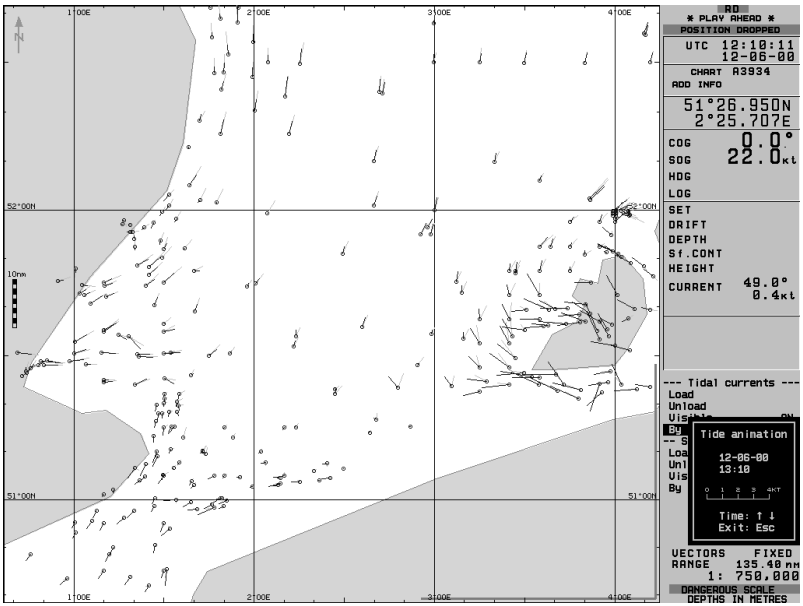


Fig. 4-4

- For the surface currents:

CURRENT\By month. *(in Surface currents section)*	<Enter>	The *Menu area* displays an information window showing the calendar month, which the displayed vectors and scales of visual assessment of current's speed represented by the vector, correspond to
Set the required month of the year by the incrementing (one month at each press)	<↑>, <↓>	Vectors of currents in the displayed electronic chart area are changing with the passage of time

4.2.6 Additional Controls

"Hot Keys"

Keys	*PA function*	*Brief statement of purpose of the other functions*
1	2	3
<F1>	HELP	
<F5>	REVIEW	
<F6>	SCALE	
<F7>	ZOOM	
<F8>	AHEAD	
<F10>	ROUTE\WP Editor	
<F11>	INFO	
<F12>	ERBL	
<Ctrl>+<Print Screen>		To make a graphic copy of the PA screen
	CONFIG\Display color set\:	
<Alt>+<F1>	Daylight	
<Alt>+<F2>	Twilight	
<Alt>+<F3>	Dusk	
<Alt>+<F4>	Night	
<Alt>+<F5>	Dusk Inverted	
<Alt>+<F6>	Night Inverted	
<Alt>+<F8>	CHART\Information layers	
<Alt>+<F10>	ADDINF\Graphic editor	
<Alt>+<L>		To turn ON/OFF the electronic chart display of circles standing for the lighthouse sectors
<Alt>+<R>		To have the screen regenerated (re-drawn)
<Insert>		To attach the vessel's symbol to the chart

Keys	PA function	Brief statement of purpose of the other functions
<Delete>		To detach the vessel's symbol to the chart
<Tab>	CONFIG\Display	
<+>		To increase the chart display scale
<->		To reduce the chart display scale
<*>	CHART\Original scale	

Free Cursor This control facility is a cursor which is moved by the trackerball over the entire screen taking on different shapes and functional capabilities in different display areas.

Free cursor's functional capabilities listed below depend on its position on the PA screen (some of them are not duplicated by the keyboard).

1. In the *Menu area* the *Free cursor* takes a shape of a box marking off the PA *Main menu* keys, similar to the operation of an ordinary cursor.
2. In the PA *Information area* the *Free cursor* has a shape of an arrow which can be used for performing the following functions:

Functional capability	Procedure required for implementing it
1	2
To attach the vessel's symbol to the chart	Position the cursor on "Position Dropped' warning (in the third line of the PA *Information area*) and press the left trackerball button
To change the accuracy of coordinates obtained from the positioning system	Position the cursor in the section containing the current vessel position coordinates and press the left trackerball button
To select one of the five display modes in the *Information area*	Position the cursor in the appropriate section and press the left trackerball button successive
To change scale	Position the cursor on the line with the current electronic chart scale, press the left trackerball button and select the required scale

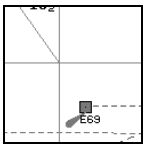
3. In the *Chart area* the *Free cursor* may have a shape of various tools switched by pressing the right trackerball button:

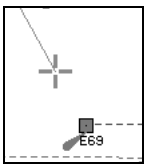
Free cursor's shape	*Functional capabilities implemented by pressing the left trackerball button*
1	2
View	To activate REVIEW function
View (when the cursor is positioned on a light-house)	To display a window with the parameters of bearing and range to this lighthouse
View (when the cursor is positioned on the chart boundary)	To load the selected chart
View (when the cursor is positioned on the route)	To select a route for editing
Zoom	To activate ZOOM function
ERBL	To activate ERBL function

If you position the *Free cursor* on the bottom edge of the *Chart area* and press the left button, the CONFIG\Prompt Mode information line will be enabled\disabled.

Graphics Cursor

Graphics cursor is used in the operation of some PA functions and has a shape of an intersection of lines corresponding to the latitude and longitude of the given point, the shape of the cursor, however, can be changed as required:





1	2	3
CONFIG\Cursor	LONG	The cursor is shown as an intersection of two lines corresponding to the latitude and longitude of the given point *(see Fig.)*
	SHORT	The cursor is shown as a small cross *(see Fig.)*

Information window which appears in the *Menu area* simultaneously with the *Graphics cursor* contains the following data:

- this window's name reflecting the PA facility which the *Graphics cursor* is used within;
- cursor position coordinates;
- values of bearing/reciprocal bearing and range to the cursor from the ownship position (in miles and metres).

"Acquisition marker" is a modification of the *Graphics cursor*. This auxiliary PA tool is a square box with a dot in the centre; it is used in different functions for acquiring objects displayed on the PA screen. To control the acquisition marker and obtain information on its position use the procedure similar to that used for controlling the *Graphics Cursor*.

4.3 Route Editor

4.3.1 Purpose

- Generation, editing and deleting of routes;
- Route calculations for the routes made both, in the "RE" and in the "PA", taking into account the effect of weather conditions and tidal and surface currents;
- Comparison of routes to select the optimum one with regard to the following criteria: speed loss caused by the currents and weather conditions, time underway and overall length of the passage route;
- Playing ahead of the route passage (in conjunction with Play Ahead utility) taking into account calculations made.

See also item 2.2.

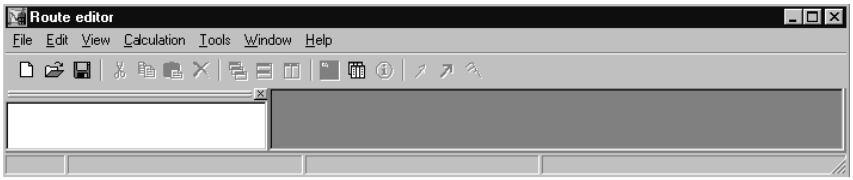
4.3.2 Running and Exiting from the Utility

To run RE utility use the procedure shown in fig:

To exit from the utility, use Exit function from File menu, or button in the top right corner of the utility window.

4.3.3 Description of the Utility

The utility window consists of the *Main menu* bar, *Auxiliary Menu Toolbar*, and the utility's *Main window*:



Main Menu

The *Main menu* is located on the top panel in the utility window and enables access to the utility's control functions via a number of pull-down menus:

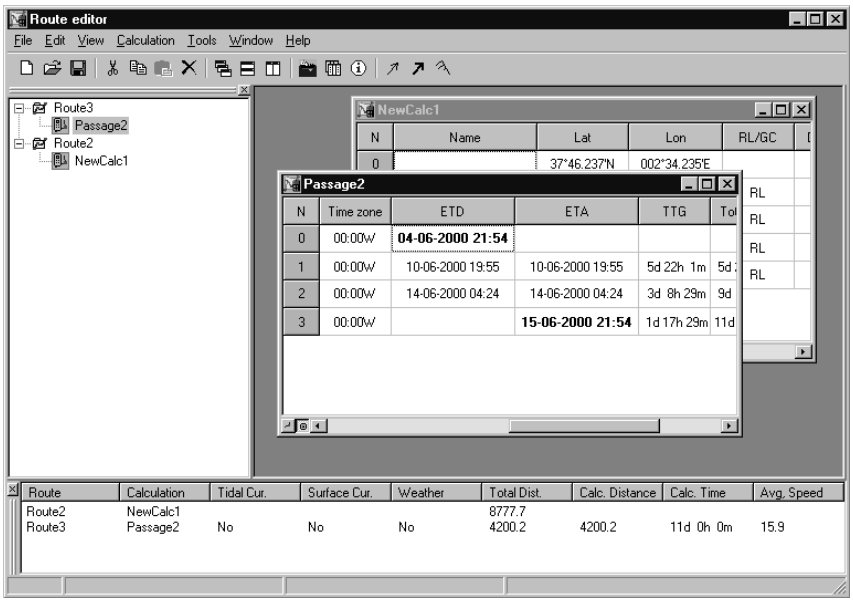
Auxiliary Menu Toolbar

The buttons are ranged on the toolbar below the *Main menu* bar and contain pictograms of the most frequently used utility functions:

The functions and buttons of the program's Main and Auxiliary Menus are detailed in paragraph 4.3.4.

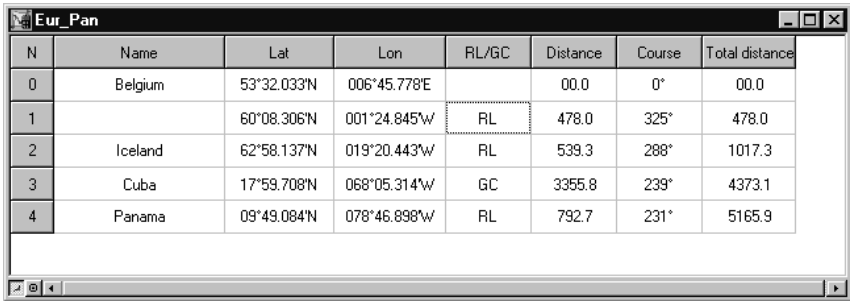
Main Window

The *Main window* is intended for the display of *Route Tables*, dedicated "*Route Explorer*" facility for handling route files, as well as of the special "*Comparison" panel*:



Route (or Voyage Schedule) Table

Rows in the *Route Table* contain waypoints (WP) data, columns contain route parameters:

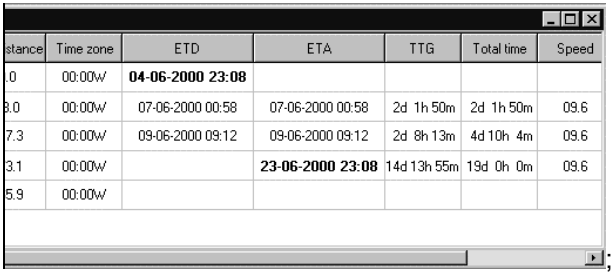


Eur_Pan

N	Name	Lat	Lon	RL/GC	Distance	Course	Total distance
0	Belgium	53°32.033'N	006°45.778'E		00.0	0°	00.0
1		60°08.306'N	001°24.845'W	RL	478.0	325°	478.0
2	Iceland	62°58.137'N	019°20.443'W	RL	539.3	288°	1017.3
3	Cuba	17°59.708'N	068°05.314'W	GC	3355.8	239°	4373.1
4	Panama	09°49.084'N	078°46.898'W	RL	792.7	231°	5165.9

The number of rows in the table is specified automatically from the last WP number. There are several ways to set the number of displayed route parameters:

- By using the *Main menu* functions – View\As route which turns on the display of geographic route parameters (see above) or View\As Calculation which adds parameters of the route passage schedule calculations to the geographic parameters;



stance	Time zone	ETD	ETA	TTG	Total time	Speed
.0	00:00W	**04-06-2000 23:08**				
3.0	00:00W	07-06-2000 00:58	07-06-2000 00:58	2d 1h 50m	2d 1h 50m	09.6
7.3	00:00W	09-06-2000 09:12	09-06-2000 09:12	2d 8h 13m	4d 10h 4m	09.6
3.1	00:00W		**23-06-2000 23:08**	14d 13h 55m	19d 0h 0m	09.6
5.9	00:00W					

;

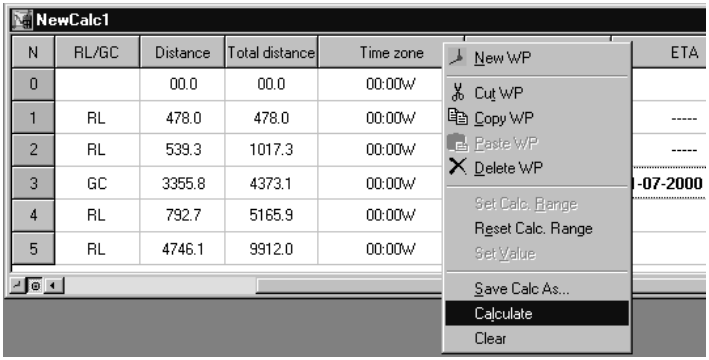
- By using  buttons in the left bottom corner of the *Route Table*, which have the same functionality as View\As route and View\As Calculation functions accordingly;
- By using View\Select columns of *Main menu* function which enables the user to turn on/off the display of any required parameters out of those listed below:

Route parameter	***Meaning***
1	2
"Route view"	**Group of geographic parameters**
Name	WP name (may not be available)

Route parameter	*Meaning*
Lat and Lon	WP geographic coordinates
RL/GC	Type of the line connecting two WP's (Rhumb Line or Great Circle)
Distance	Distance between two WP's
Course	Bearing from a WP to the next WP
Total Distance	The total distance from the start of the route to the given WP
Port (Stb.) Width	XTE value to the port (starboard) of the current route leg
Arrival circle	Radius value of the circle described around the given WP; when this circle is crossed, the route monitoring is switched from this WP to the next WP on the ship's route
Turn rate	Rate of turn planned for the given WP
Turn radius	Radius of the turning circle planned for the given WP
"Calculation view"	**The aforementioned geographic parameters are supplemented with a group of parameters required for the generation a schedule of the ship's progress along the given route**
Time zone	Time zone for the geographic area which the given WP belongs to
ETD	Estimated time of departure from the given WP
Stay	Estimated time of staying in the given WP
ETA	Estimated time of arrival in the given WP
TTG	Travel time between two WP's
Total Time	Total time underway counting from the ETD from the first WP
Speed	Travel speed on the route leg
Average Speed	Average speed on the route

Context Menu in the Route Table

Route Tables are handled either via the menu (see paragraph 4.3.4), or by using the context menu (menu displayed by clicking the right mouse/trackerball button):

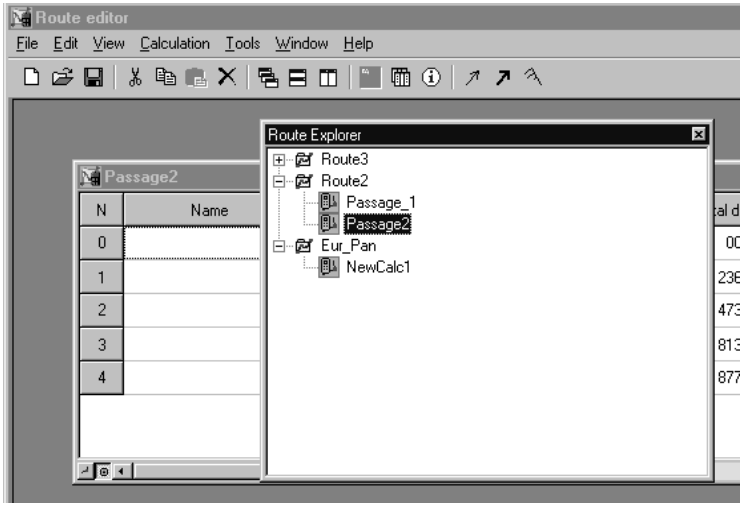


Functions included in the context menu perform the following actions:

Name of the function	***Its Main menu counterpart***	***Purpose***
1	2	3
New WP	Edit\New WP	To add a new waypoint
Cut WP	Edit\Cut WP	To cut out a point from the active route into the clipboard
Copy WP	Edit\Copy WP	To copy a point from the active route into the clipboard
Paste WP	Edit\Paste WP	To insert a waypoint from the clipboard
Delete WP	Edit\Delete WP	To delete a waypoint from the active route
Set Calc. Range		To select several WP's for specifying the route segment which the schedule is intended to be generated for. *To do this, use the following procedure:* – *"drag" the cursor with the left mouse button pressed, from the first to the last WP of the selected segment;*

Name of the function	Its Main menu counterpart	Purpose
		– *call the context menu by pressing the right mouse button and execute "Set Calc. Range" command*
Reset Calc. Range		To cancel the selected WP's intended for the voyage schedule generation
Set value		To set one and the same value of a certain parameter for several WP's simultaneously *To do this, use the following procedure:* – *set the value in the top (bottom) cell;* – *"drag" the cursor with the left mouse button pressed, through all the other cells in the column;* – *call the context menu by clicking the tight mouse button and execute "Set value" command*
Save Calc. As…	File\Save Calc. As…	To save the generated schedule with a possibility to change the file name
Calculate	Calculation\Calculate	To start the route calculations process (disabled if some of the parameters are entered incorrectly or missing)
Clear	Calculation\Clear	To delete the results of voyage schedule calculations from the *Route Table*

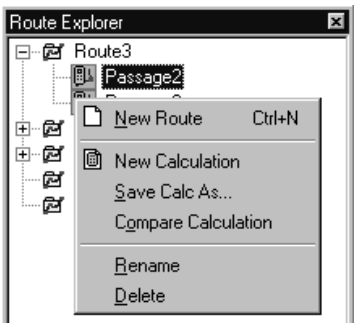
"Route Explorer" "*Route Explorer*" facility is designed for handling route files and voyage schedules based on these routes. This data is stored in ROUTE subdirectory of the product directory (C:_Weather by default) and is presented in "*Route Explorer*" file in the form of a file tree, very similar to "Windows Explorer" program:



"*Route Explorer*" window can be removed from the screen by pressing [X] button in its top right corner. To display it again, use View\Route explorer *Main menu* function or <F11> functional key.

Context Menu in the Route Explorer

The "*Route Explorer*" is handled either via the menu (see paragraph 4.3.4), or by using the context menu (menu displayed by clicking the right mouse/trackerball button):

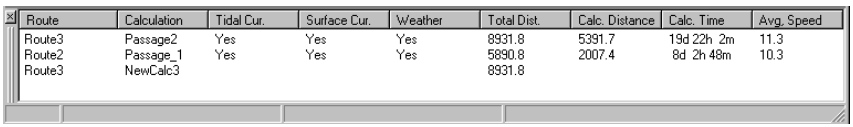


Functions included in the context menu perform the following actions:

Name of the function	***Its* Main menu *counterpart***	***Purpose***
1	2	3
New Route (<Ctrl>+<N>)	File\New Route	To generate a new route (to open a "clear" *Route Table*)
New Calculation		To generate a new voyage schedule based on the given route (a

Name of the function	*Its* Main menu *counterpart*	*Purpose*
		new voyage schedule table is opened)
Save Calc. As…	File\Save Calc. As…	To save the generated schedule with a possibility to change the file name
Compare Calculation	Tools\Compare	To load a schedule in the *"Comparison" panel*, which serves for comparing several routes and/or schedules with each other
Rename	File\Save As...	To rename the schedule
Delete		To turn off the display of previously generated schedules in the utility's *Main window*

"Comparison" Panel



Route	Calculation	Tidal Cur.	Surface Cur.	Weather	Total Dist.	Calc. Distance	Calc. Time	Avg. Speed
Route3	Passage2	Yes	Yes	Yes	8931.8	5391.7	19d 22h 2m	11.3
Route2	Passage_1	Yes	Yes	Yes	5890.8	2007.4	8d 2h 48m	10.3
Route3	NewCalc3				8931.8			

This panel displays data for an easy comparison of two or more schedules for the selection of the optimum one with regard to the following criteria:

Assessment criterion	*Meaning*
1	2
Tidal Current	Tidal current effect as the ship is proceeding under the given schedule
Surface Current	Surface current effect
Weather	Effect of weather conditions
Total Distance	Overall route length
Calculated Distance	Summary distance between the WPs, constituting the calculated route segment
Calculated Time	Calculated time of passing the route segment selected for the calculations
Average Speed	Average travel speed on the selected segment

"*Comparison*" *panel* can be removed from the display by pressing ☒ button in its top left corner. To display it again, use Tools\Compare *Main menu* function or toolbar button.

The calculated voyage schedules can be moved to the panel for comparison:

- Automatically if Calculation\Auto Compare *Main menu* function is enabled (for the "newly" calculated schedules only);
- Manually by "dragging" the route/schedule file from *"Route Explorer"* panel to *"Comparison" panel*.

Context Menu in "Comparison" Panel

Some more functions for handling *"Comparison" panel* are only accessible via the context menu:

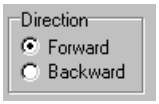
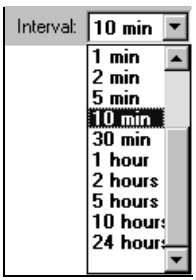
Functions included in the context menu perform the following actions:

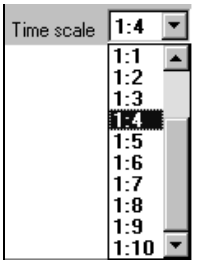
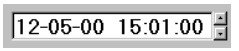
Name of the functions	***Purpose***
1	2
Remove calculation	To delete a selected voyage schedule from the panel
Stay On Top	To move a selected voyage schedule to the top line
Dockable	To activate the panel's capability to move from the bottom part of the screen and side with the left- or right hand border of the utility window

Motion Control Panel

This panel appears during the interaction of "Route Editor" and "Play Ahead" utilities and serves for the control of the ownship's symbol motion when modelling the passage of the route segment which the schedule was calculated for (see paragraph 5.1.8):

Switches and buttons arranged on this panel perform the following functions:

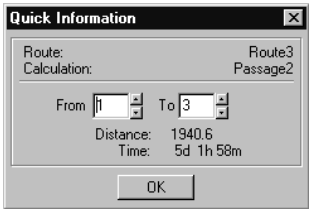
Name of the button/switch	***Purpose***
1	2
	To start the play-ahead of the ship's passage along the route
	To stop the play-ahead
	To pass to the start WP of the voyage schedule
	To pass to the end WP of the voyage schedule
	To pass to the previous WP of the voyage schedule
	To pass to the next WP of the voyage schedule
	To set direction of the play-ahead of the ship's passage along the route
	To set the time interval for the display of the ship's position during the play-ahead of the passage along the route

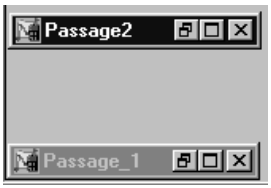
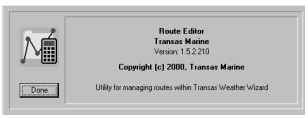
Name of the button/switch	*Purpose*
	To select the time scale for the play-ahead of the ship's passage along the route
	Number of the current WP
	Current (modelled) time

4.3.4 Program's Main and Auxiliary Menus

Utility Main menu function	*Auxiliary Menu (toolbar) button*	*Name*	*Purpose*
1	2	3	4
File\New Route		New Route (Ctrl+N)	To open a "blank" table for the generation of a new route
File\Open		Open (Ctrl+O)	To open a table with the previously generated and saved route
File\Close			To close an active *Route Table*
File\Save		Save (Ctrl+S)	To save an edited route under its old name
File\Save As…			To save a newly generated/edited route under a new name
File\Save Calc. As…			To save a generated route passage schedule under a new name
Edit\New WP			To add a new WP (after the end WP)

Utility Main menu function	*Auxiliary Menu (toolbar) button*	*Name*	*Purpose*
Edit\Cut		Cut Way Point	To remove WP data from the *Route Table* placing it in the Clipboard
Edit\Copy		Copy Way Point	To copy WP data into the Clipboard
Edit\Paste		Paste Way Point	To restore WP data from the Clipboard
Edit\Delete		Delete Way Point	To delete a line with WP data
View\As Route View\As Calculation View\Route explorer View\Select columns…			*See paragraph 4.3.3 "Route Table" and "Route Explorer"*
Calculation\ Calculate			To start the schedule calculations process
Calculation\ Clear			To delete the results of voyage schedule calculations from the table
Calculation\ Options			*To calculate the voyage schedule taking into account the effect:*
\\Surface currents		Surface currents	• of surface currents
\\Tidal currents		Tidal currents	• tidal currents
\\Weather		Weather	• weather factor (from the data if the weather forecast received via WFM facilities)
Calculation\ Auto Compare			To turn on the mode for the automatic display of calculation results for the newly generated voyage schedules

Utility Main menu function	*Auxiliary Menu (toolbar) button*	*Name*	*Purpose*
			on *"Comparison" panel (see paragraph 4.3.3)*
Tools\Play Ahead		Play Ahead (F9)	To start "Play Ahead" utility for the playing ahead of the ship's passage along route in accordance with the schedule generated for this passage, as well as for viewing the weather forecasts for the time of proceeding along the route *(see paragraph 5.1.8.)*
Tools\Compare		Calculation Comparison	To turn on the display of *"Comparison" panel* which serves for the comparison of routes and their associated route schedules
Tools\Quick Information		Opens Quick Information Window	To obtain results of calculations made for the range and time of passage from one WP to another: 
Tools\Convert			To start a dedicated program for converting route generated in "Weather Wizard" software to a format compatible with "Navi-Sailor" software and the other way round *(see paragraph 5.2.2)*
Window\Cascade		Cascade	To arrange the *Route Tables*: • in a cascade

Utility Main menu function	*Auxiliary Menu (toolbar) button*	*Name*	*Purpose*
Window\Tile vertically Window\Tile horizontally		Tile vertically Tile horizontally	• in a vertical column • in a horizontal row
Window\Minimize all			To minimise all the *Route Tables:* 
Window\Arrange all			**Not used**
Help\About…			To obtain brief information on the program: 

4.4 Drift Table

4.4.1 Purpose

- To calculate wind and sea induced losses in the ship's speed with regard to its own geometric parameters;
- To enter the ownship parameters for their further use in the route calculations taking into account weather data in Route Editor program;
- To enable the user to make up own tables of ship speed losses with regard to the weather conditions.

Calculations of wind and sea induced losses in the ship's speed are based on Aertssen's formula which takes into account some characteristics of the ship itself (length, breadth and windage).

4.4.2 Running of and Exiting from the Utility

To run DT utility use the procedure shown in Fig. 4-5:

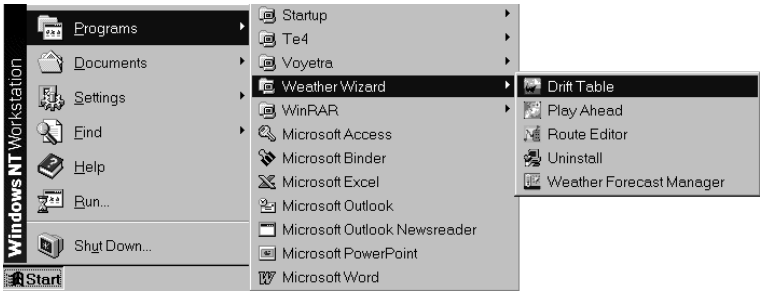


Fig. 4-5

To exit from the utility, use Exit function from File menu, or ☒ button in the top right corner of the utility window.

4.4.3 Description of the Utility

The utility screen contains the *Main menu* bar and the utility's *Main window* displaying the *speed loss table:*

DriftTable - Drift Table Editor

File Edit Test

Wind (m/sec)	0	20	40	60	80	100	120	140	160	180
0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	0	0	0	0	0	0
2	2	2	2	2	1	1	1	1	0	0
3	3	3	2	2	1	1	1	1	0	0
4	5	4	4	3	2	1	1	1	1	0
5	6	6	5	4	2	1	1	1	1	0
6	7	7	6	5	3	2	2	1	1	1
7	8	8	7	6	4	3	2	2	1	1
8	10	9	8	7	5	3	3	2	2	1
9	12	11	10	9	6	4	3	3	2	1
10	15	14	12	11	8	6	5	4	3	2
11	18	16	15	13	10	7	6	5	4	3
12	23	20	17	15	11	8	7	6	5	4

Fig. 4-6

Main Menu

The *Main menu* is located in the utility's top panel and provides access to the utility control functions via drop-down menus:

The functions and buttons of the program's *Main menu* are detailed in paragraph 4.4.4.

Main Window

The utility's *Main window* is designed for the display of the main table containing results of calculations of losses in the ship speed (in per cent) caused by the effect of two weather parameters: wind and sea (see Fig. 4-6).

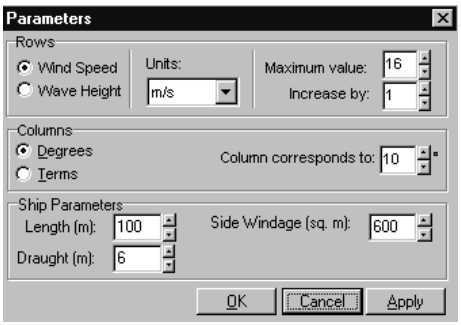
Speed Loss Table

Vertical columns show the direction of the apparent (relative) wind or sea, horizontal rows show the true wind speed or wave height.

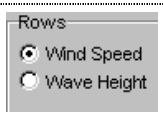
At the intersection of the column containing the wind/sea direction value and the row with the value of wind speed/wave height, the ship speed loss value (in per cent) is read off.

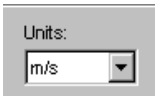
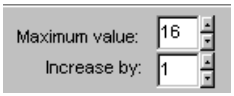
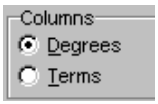
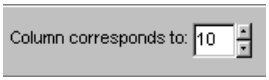
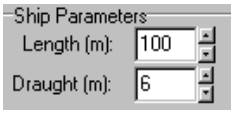
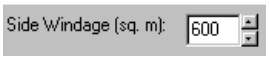
Parameters Window

Parameters Selection of the calculation option (wind or sea effect), measurement units, adjustment of the convenient table display in the window, as well as the ownship parameter input, are made in "Parameters" window called via "Edit\Parameters" *Main menu* function:



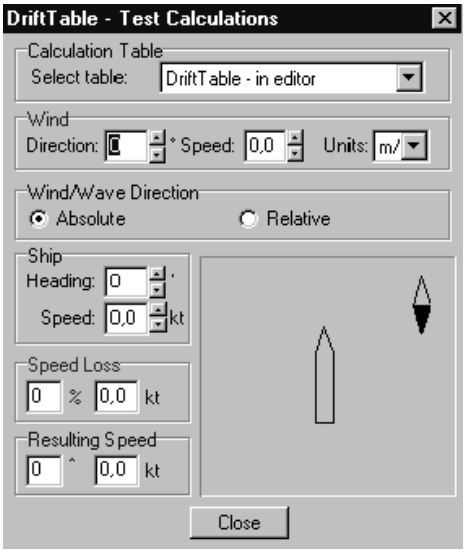
"Parameters" window contains 3 panels:

Panel	***Purpose***
1	2
1. Rows:	
	To select the speed loss calculation option: • to take wind into account; • to take sea into account

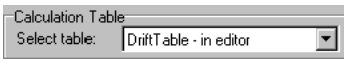
Panel	Purpose
	To set the measurement units used for speed loss calculations in the table: • for wind speed – m/s, km/h, knots; • for wave height – metres or feet
	To set the range of wind speed or wave height variation for the calculations and display in the table: • maximum value; • discreteness of calculations Attention! Aertssen formula used for the calculations "operates" at the maximum permissible wind speed value of 16 m/s and wave or swell height of 6 m
2. Columns: 	To select the type of wind/sea direction presentation in the table: • in degrees with a set discreteness  (in head-up semi-circular measurement system); • in compass points (Head, Cheek-bone, Abeam, Fair) relative to the ship's centreline plane
3. Ship Parameters	
	To enter the ship dimensions: • length; • draft
	To enter windage in square metres *It is worthwhile to leave the default value*

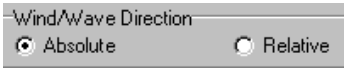
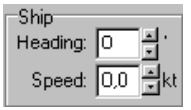
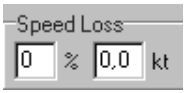
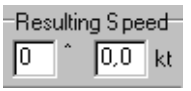
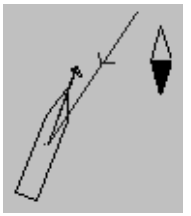
"Test Calculations" Window

"Test" *Main menu* command enables the play-ahead (test calculations) of ship speed changes depending on different values of the two aforementioned weather parameters. With the use of this function, *"Test Calculations" window* is displayed*:*



The window contains the following panels:

Panel	***Purpose***
1	2
1. Calculation Table: 	To select the speed loss calculation table which will be used for the test: • "in editor" – the current table (currently displayed in the utility's *Main window*); • "on server" – *speed loss table,* taken to be the "working" one (for the use by RE utility) by File\Set as current function
2. Wind: 	To set the wind true or relative parameters (*see panel [3])* in the selected measurement units.
	The change of values will be automatically taken into account during the display of calculation results on panels [5] and [6]

Panel	Purpose
3. Wind/Wave Direction: 	To set the wind type: • true; • relative
4. Ship: 	To enter the ownship direction (in degrees) and speed (in knots). *The change of values will be automatically taken into account during the display of calculation results on panels [5] and [6]*
5. Speed Loss: 	Display of absolute (in knots) and relative (in per cent) value of speed loss due to the effect of weather parameters
6. Resulting Speed: 	Display of the resulting ship speed
7. Display panel: 	Graphic display of the entered parameters

4.4.4 Program's Main Menu

Utility's Main menu function	Hot keys	Purpose
1	2	3
File\New	<Ctrl>+<N>	To open a "blank" table for making new calculations expected to be used in the RE utility
File\Open	<Ctrl>+<O>	To open a table with previously made calculations

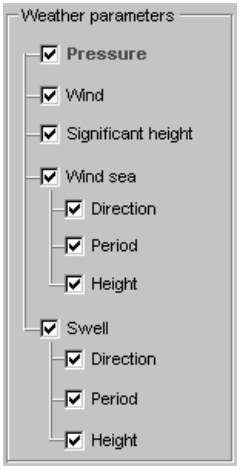
Utility's Main menu function	***Hot keys***	***Purpose***
File\Save	<Ctrl>+<S>	To save an edited table under the previous name
File\Save As…		To save a newly created/edited table with a new name
File\Set As Current		To set the current *speed loss table* for the further use in RE program (during the calculations of schedule taking into account weather parameters)
File\Get Current		To load the *speed loss table* currently used by RE utility in the utility's *Main window*
File\Exit	<Ctrl>+<X>	To exit from the program
Edit\Parameters	<Ctrl>+<P>	To set the ownship parameters, to select the type of calculations, to adjust the table for the display and select the measurement units *(see also paragraph 4.4.3)*
Edit\Clear	<Ctrl>+<C>	To clear the table from the current calculations
Edit\Calculate	<Ctrl>+<A>	To perform the calculations of the ship speed losses
Test		To display "Test Calculations" window for test calculations of the ship's resulting speed, with the set ship speed, direction, wind and sea parameters *(see also paragraph 4.4.3)*

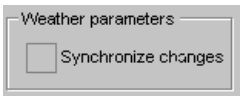
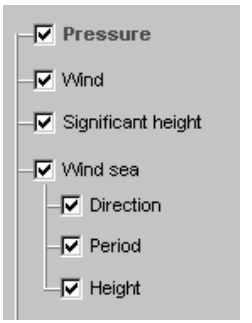
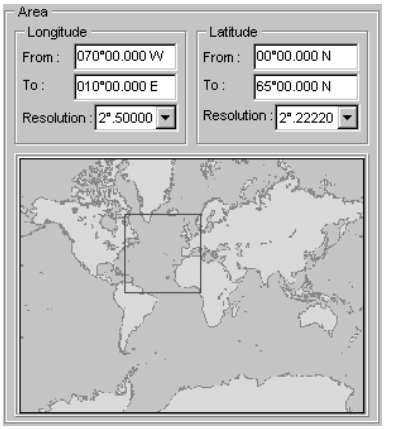
5. USER WORK WITH THE WEATHER WIZARD SOFTWARE

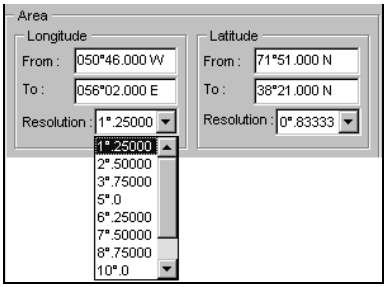
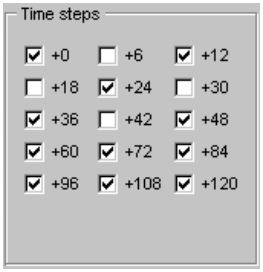
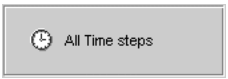
5.1 Description of Type Tasks Accomplished by Using "Weather Wizard" Software

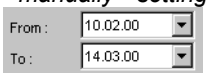
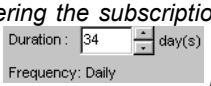
Attention! To display the weather forecast, use the procedures detailed in paragraphs 5.1.1 – 5.1.4.

5.1.1 Making up of a Weather Forecast Order

1. Run WFM utility (see paragraph 4.1.2)	The *Request page* is displayed
2. Select the weather parameters required to be ordered *See also paragraph 4.1.3*	
3. Activate the parameters which is required to be determined/ checked • the geographic area; • resolution; • time step; • subscription period for the daily receipt	*See also item. 4.1.3 "Request page" [2]*
If the aforementioned settings are planned to be identical for all the parameters, it is necessary: to check if "Synchronize changes" option is enabled	

to go on to the next item	
If an individual area, resolution, time step and subscription time is required to be set for any of the selected weather parameters, use the following procedure: Turn off "Synchronize changes" option Position the cursor on the name of the parameter for which the aforementioned settings are required to be made, and press the left trackerball/mouse button Attention! After the input of the area, resolution, time step and subscription time for the first parameter, this procedure should be repeated for each selected weather parameter, one by one	 *On the drawing below, "Wind" parameter is selected (highlighted in the red colour):* 
4. Set the geographic area by using either of the procedures detailed in item 4.1.3 "Request Page" [3]	
5. Select accuracy of data presentation (resolution grid in degrees of latitude and longitude):	*See also item 4.1.3 "Request Page" [3]*

Use  button to open the list of fixed accuracy values	
Select the required value and press the left mouse/trackerball button Attention! The finer the selected resolution grid, the higher will be the accuracy of the received parameter! With the fine resolution grid, however, the size of the received data grows significantly, which affects the mail session duration	
6. Select fixed time value (step) which the forecast for the selected weather parameters will be provided for, counting the number of hours from the beginning of the GMT day for the forecast receipt date(see also item 4.1.3 " Request Page" [4]) Attention! The smaller the set time step, the more accurate the weather forecast dynamic model will be! In this case, however, the size of the received data grows significantly, which affects the mail session duration	 *There are two ways to set the time step:* • *"manually" (by checking the appropriate checkbox ✔);* • *by using*  *button (see item 4.1.3 "Request Page" [4])*
7. Set the subscription time for the daily receipt of a weather forecast (*see item 4.1.3 "Request Page" [5])*	*There are three ways to set the subscription time:*

Attention! Check "From" date. It should not be earlier than the current date	• *with the cursor on*  *panel;* • *by "manually" setting the period on*  *panel;* • *by entering the subscription duration on*  *panel.*
8. Save the order:	*See also item 4.1.3" Request Page" [1]*
Press  button	The order name input line is activated
Enter the name of the order	
Save the order by pressing  button	
9. Check the order data: Press  button of the utility's *Main menu* Attention! This is a compulsory operation which is required for checking the correctness of the order. It is necessary to ascertain that the order does not contain any superfluous data which may considerably increase the mail communication session	The screen displays a table of weather parameters listing all the data ordered for them:

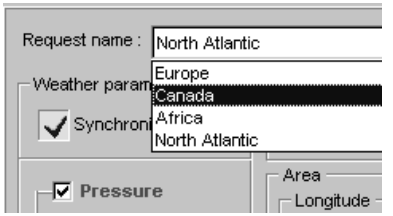
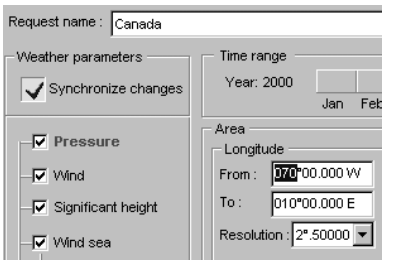
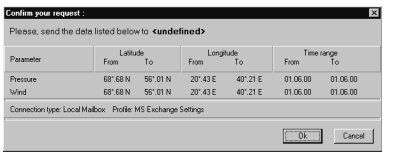
Europe

		Pressure	Wind	Significant Height	Wind sea Direction	Wind sea Period
Longitude	From	3°.28 W	3°.28 W	3°.28 W	3°.28 W	3°.28 W
	To	12°.51 E	12°.51 E	12°.51 E	12°.51 E	12°.51 E
	Resolution	2°.50	2°.50	3°.75	3°.75	3°.75
Latitude	From	69°.18 N	69°.18 N	69°.18 N	69°.18 N	69°.18 N
	To	50°.18 N	50°.18 N	50°.18 N	50°.18 N	50°.18 N
	Resolution	2°.22	2°.22	3°.33	3°.33	3°.33
Grid size (points)		63	63	30	30	30
Time Range	From	02.03.00	02.03.00	02.03.00	02.03.00	02.03.00
	To	22.03.00	22.03.00	22.03.00	22.03.00	22.03.00
	Duration	21 days	21 days	21 days	21 days	21 days
Time steps (count)		11	11	11	11	11
Request Repetition		21	21	21	21	21
Totatl data points		14553	14553	6930	6930	6930

This request is currently loaded to editor

5.1.2 Sending of a Weather Forecast Order

Attention! It is NOT ALLOWED to change e-mail setting from one mail system to another, or to switch mail systems from one profile or account to another, with the Weather Forecast Manager.

1. Run WFM utility (see paragraph 4.1.2)	*Request* page is displayed
2. Select one of the previously compiled and saved orders:	*See also paragraph 5.1.1*
In the order name input line  press  button to display the list of previously made orders	
Select the required order by positioning the cursor on the line with its name and pressing the left mouse button	The name of the order is displayed in "Request name" line, whilst the cursor moves to "Area" panel: 
3. Check the subscription time for the daily receipt of weather forecasts Attention! Check "From" date. It should not be earlier than the current date	*See items 4.1.3 "Request Page" [5] and 5.1.1 [7]*
4. Send the order:	
Press  button	The page displays "Confirm your request" window where it is necessary confirm the correctness of the order and of the mail settings: 

<OK>	Depending on the communication type set in "Settings" window, "Request" page displays: • "Local mailbox"  (in the *Information Panel*) At this stage, the order is placed in the Outbox of the local mailbox. It is then necessary to send it by using the set installed mail program (see step 7). • "Remote access"  (connection time display panel). In this case, the order is sent automatically by the Weather Forecast Manager utility (go on to step 8) Delivery page is automatically switched to: 

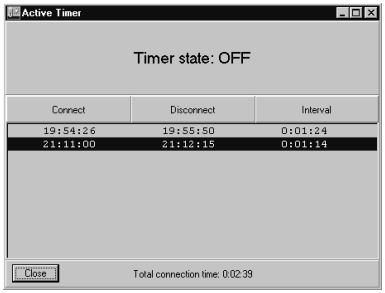
Keep careful watch on all the notices and warnings provided by the WFM while the connection is being established

Attention! If the current "Weather Wizard" configuration is adjusted to the network operation, and access to the Internet is provided via the server ("Local mailbox" communication type), with "Auto" reception of weather forecasts set on "Check Mail Mode" panel on Delivery page, reception and processing of the ordered data will start immediately after receipt of weather forecast files in the mailbox of the given E-mail addressee. The time interval between the dispatch of the order and reception of the weather forecast may vary depending on the network operation, from 5 to 30 minutes.

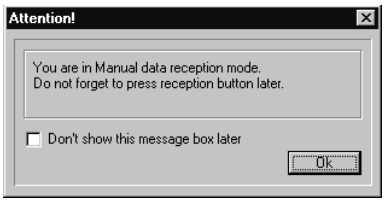
For the further procedure to process the weather forecast, see paragraph 5.1.3

Examples of some notices are provided below:

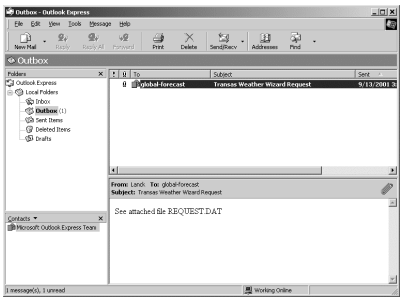
– *information on the time it took to connect to the provide and pass the information*



– *a reminder that "Manual" mode is set (see item. 4.1.3 "Delivery Page" [1]) and that, therefore, the forecast is required to be downloaded from the provider's server*



5. Send the order stored in the local mailbox by using the default mail program (where Local mailbox communication type is set (see paragraph 4.1.4).)



If MS Outlook is used as a default mail program and Remote access type is set the order is sent automatically by the Weather Forecast Manager utility

6. Upon expiry of the recommended time interval (30 minutes) start the procedure of weather forecast reception and processing	*See paragraph 5.1.3*
Attention! The exit from WFM utility before the end of the weather forecast reception procedure is not recommended unless urgently required	

5.1.3 Weather Forecast Reception and Processing

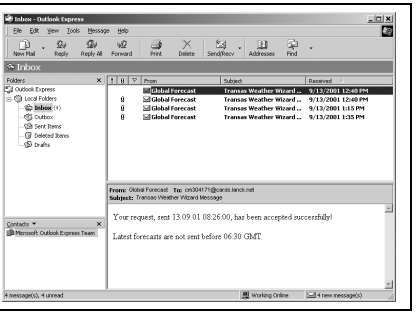
This section consists of 3 parts:

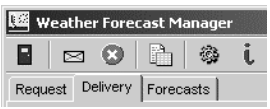
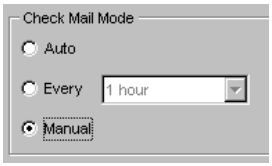
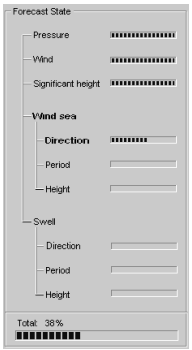
1) "Reception of Weather Forecasts from a Local Mailbox".
   which is a description of the general case of weather forecast reception;
2) "Reception of Weather Forecasts With the Use of Remote Access Connection Type"
3) "Reception of Weather Forecasts in Case of the WFM Re-start".
   which describes the reception of forecasts if the WFM utility was exited from after the despatch of the order.

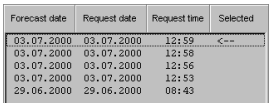
Before the start of the ordered weather forecast reception procedure, it is necessary to determine which of the subsections is applicable to your case and use this subsection only as a guideline.

Attention! It is NOT ALLOWED to change the e-mail setting from one mail system to another, or to switch mail systems from one profile or account to another, with the Weather Forecast Manager utility running.

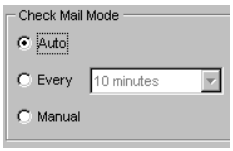
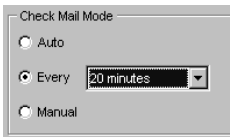
Reception of Forecasts from the Local mailbox

1. Receive the mail containing weather forecast in the local mailbox by using the default mail program	

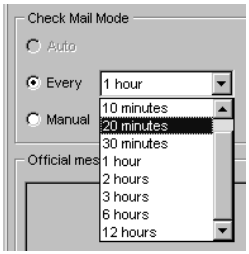
2. Start the WFM utility *(see paragraph 4.1.2)*	*Request* page is displayed
3. Open *Delivery* page	
4. Set "Check mail mode" to "Manual" position	
5. Activate weather forecast reception mode by pressing  main menu button Attention! This operation is required to be performed on Delivery page only	The WFM *information line* displays indication of the process of search for files containing weather forecast, in the local mailbox: 
6. After the "pumping" of files containing forecasts from the mailbox, the process of their automatic processing sets in	The data processing is associated with: • relevant indication on "Forecast state" panel *(see paragraph 4.1.3 " Delivery Page" [3])*  • display of records in the data processing log on "Official messages" panel

	
7. Open *Forecasts* page	
8. Ascertain that the last received forecast has been selected as the "work" forecast from the "List of Received Weather Forecasts *(see paragraph 4.1.3 "Forecasts" page [1])* If the received forecast is not automatically selected for the "work" forecast, perform the procedure detailed in paragraph 5.1.3 "Reception of Weather Forecasts in Case of the WFM Re-start" [5]	 *The "work" forecast is marked with an arrow*
9. Display the received data	*See paragraph 5.1.4*

Reception of Weather Forecasts in case of Use of Remote Access Connection Type

1. The forecast reception procedure depends on the mode set on "Check Mail Mode" panel:	*See paragraph 4.1.3 "Delivery" page [1]*
• Auto In this mode, no additional steps are required for the reception of the forecast *(see Warning in paragraph 5.1.2 [4])* Go on to the next [2] item	 The reception and processing of the weather forecast are performed automatically immediately after its delivery from Transas Marine weather server in the mailbox of the given e-mail addressee
• Every	

Set the required time Interval after which connection with the provider will be established with (search of weather forecast files in the mailbox):



After the selection of “Every” mode, a time is turned on, which counts off time to the first/next connection with the Internet provider:

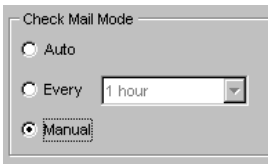
The weather forecast reception procedure which follows, is similar to that in “Auto” mode

Attention! In the Remote Access mode, communication sessions will take place over regular time intervals set by the user. Do not forget to switch to Manual mode after the reception of weather forecasts!

Go on to the next [2] item

The reception and processing of the weather forecast are performed automatically immediately after the next “check” of the given e-mail addressee’s mailbox (local or on the Internet provider’s server) made upon the expiry of the time interval set on the timer, shows that the forecast is available

- Manual

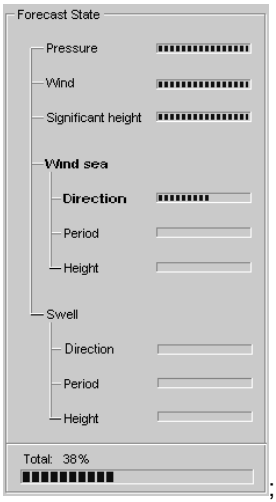
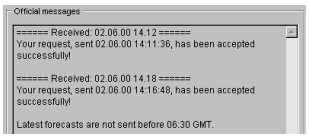


Upon the expiry of the recommended time (30 minutes after the order dispatch) turn on the weather forecast reception mode by pressing  main menu button.

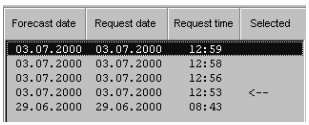
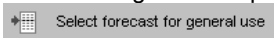
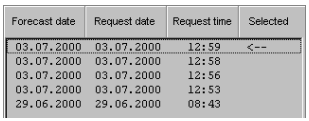
Attention! Thus operation is required to be performed on Delivery page only

“Delivery” page displays:

(indication panel of the time of connection with the provider)

2. After the "pumping" of files containing forecasts from the mailbox on the Internet provider server, the process of their automatic processing sets in	The data processing is associated with: • relevant indication on "Forecast state" panel *(see paragraph 4.1.3 "Delivery Page" [3])*  ; • display of records in the data processing log on "Official messages" panel 
3. Open *Forecasts* page	
4. Ascertain that the Automatic mode of the "work" forecast selection is set on Management panel	 *For more detailed information on the adjustments and settings required to be made on Forecasts page, see paragraph 4.1.3 "Forecasts Page"*
5. Display the obtained data	*See paragraph 5.1.4*

Reception of Weather Forecasts in Case of the WFM Re-start

1. Receive a weather forecast by using one of the procedures described above (from the local mailbox or with the use of Remote Access connection type)	"Delivery" page is displaying the following message during the data reception: 
2. Select the received and processed forecast for the further handling:	
Open *Forecasts* page	
Set Manual mode of the "work" forecast selection on Management panel	 *For more detailed information on the adjustments and settings required to be made on Forecasts page, see paragraph 4.1.3 "Forecasts Page"*
In the list of Received Weather Forecasts *(see paragraph 4.1.3 "Forecasts Page" [1])* position the cursor on the top line with the date of the last received forecast	
On Management panel press  button	
3. On Management panel set Automatic mode of the "work" forecast selection	
4. Display the obtained data	*See paragraph 5.1.4*

5.1.4 Viewing (Animation) of Weather Forecasts

1. Perform the procedure of sending an order and receiving a weather forecast as described above	*See paragraphs 5.1.2 and 5.1.3*
2. Start the PA utility	*See paragraph 4.2.2*
3. Use ZOOM and SCALE functions (or <+> and <-> hot keys) to display the geographic area which the order was made for, in the utility's *Chart Area*	*See paragraph 5.1.1* *By default, display of only two parameters is turned on: Wind and Pressure*

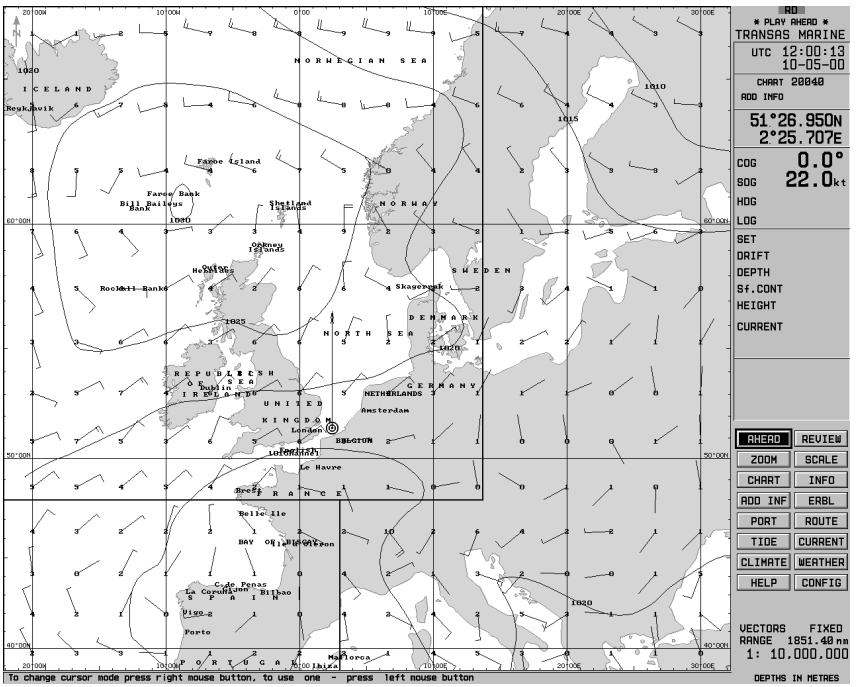
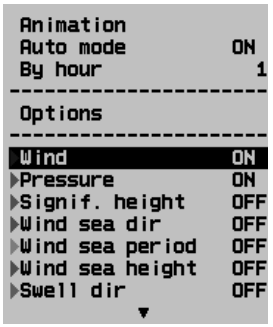
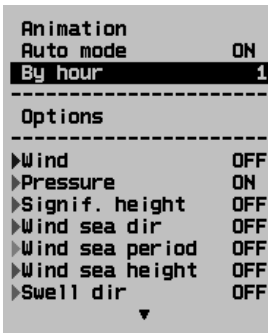
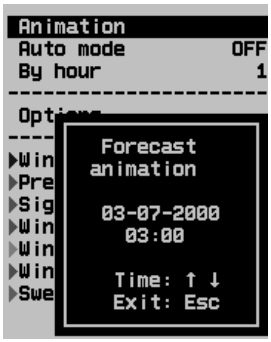
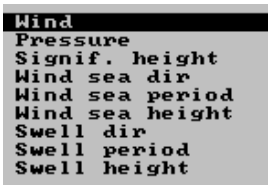
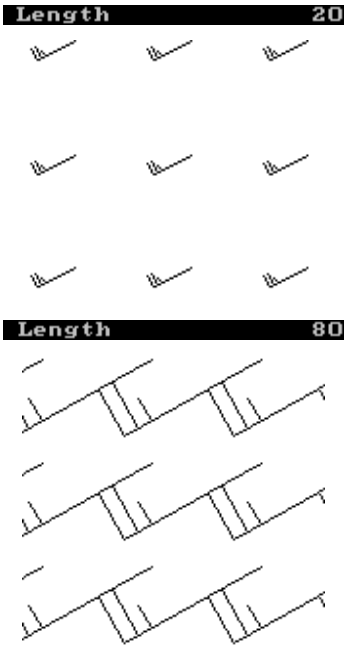
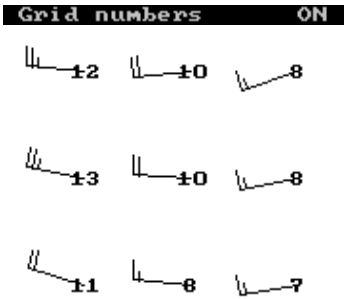
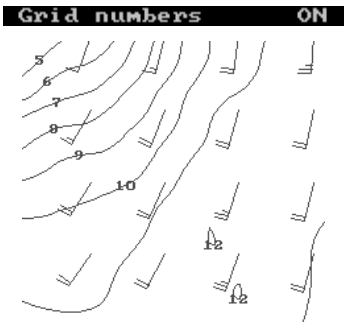


Fig. 5-1

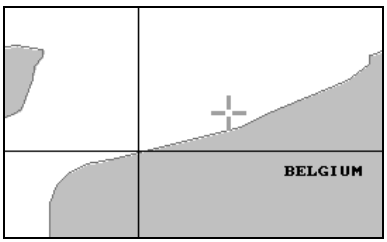
4. Use ON/OFF switch of the appropriate WEATHER menu function to turn ON/OFF the display of a certain weather parameter	
5. View the change dynamics of weather parameters during the ordered time interval (Time steps) at a set discreteness:	*Discreteness is a value of time interval (in hours) over which the modelled time will be changing along with the weather picture on the PA screen*
Set the discreteness of changes in the weather parameters WEATHER\By hour (from 1 to 99 h)	
Set the viewing mode WEATHER\Auto mode (automatic= ON, manual=OFF)	 *The viewing is provided automatically over the time ordered time interval (Time steps) with a discreteness set in WEATHER\By hour function;*  *In this mode, it is necessary to set the viewing start date and time, and, in the process of viewing, to manually change the time value (with a set discreteness by pressing "up-down" cursor control keys*

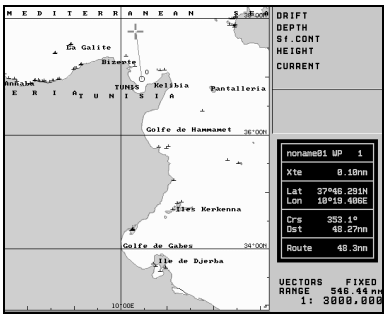
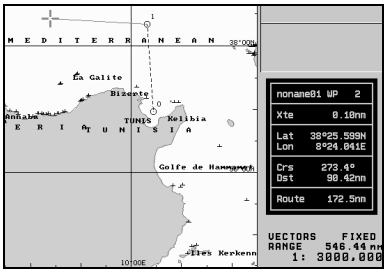
Turn on the weather forecast viewing mode WEATHER\Animation	In the automatic mode, there is a dynamic display of weather parameters using special symbols in the PA *Chart Area*; In the manual mode: 
Enter the viewing start date and time (for the manual mode only) <Enter> (or the left mouse button)	
Use "Up" and "Down" cursor control keys (or a vertical motion of the trackerball/mouse) to view the forecast	*see also fig. 5.1.1*
6. Adjust a convenient display of symbols used for weather parameters on the PA:	
WEATHER\Options	
Select a submenu for the required weather parameter and adjust the symbols	*See paragraph 4.2.4 which illustrates some adjustment examples*

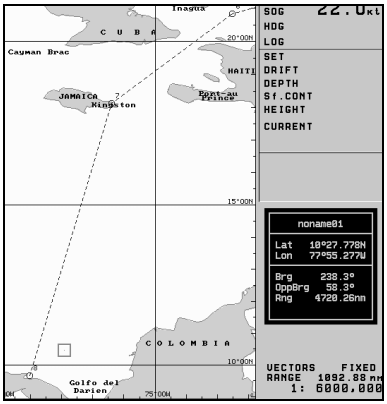
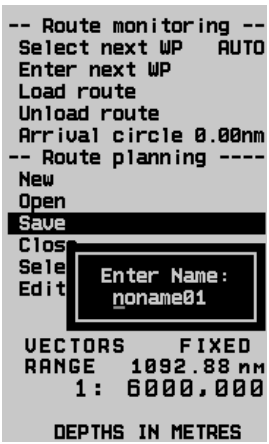
1. Change of the wind symbol length. 	2. Input of the wind force digital value  3. Input of the wind contour lines (turned off by default) 

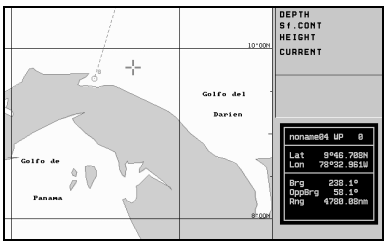
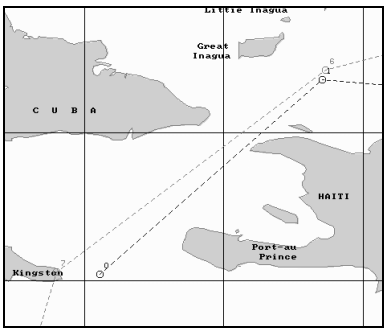
5.1.5 Route Generation and Editing by Using Graphics

Route Generation and Editing in the PA

1. Start PA utility	*See paragraph 4.2.2*
2. ROUTE\New	The cursor appears in the *Chart Area*: 

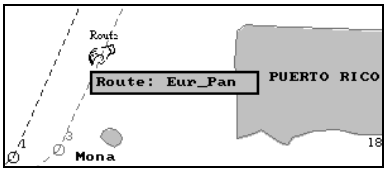
3. Set the first WP:	
Move the cursor to the required point Use <+> and <-> keys to set the scale convenient for the plotting of the route's start point	*The cursor can also be moved by entering coordinates of the route's first point manually. To do this, press <Tab> key to switch the activity to the input window, and enter the required coordinates*
Press the left mouse/trackerball button	The symbol of the first WP is set in the selected point: 
4. Move the cursor and use a similar procedure to set the second WP	The first route leg is plotted: 
5. Use similar procedures to set all the other WP's	*The passage route is plotted in the blue colour (planned route colour)*

6. Exit from the route planning mode:	
<Esc>	The cursor is “detached” from the chart: 
<Esc>	The planning mode is exited from and Route sub-menu is returned to
7. Save the generated route:	
ROUTE\Save	The *Menu area* displays the name input window: 
Enter the route name (8 characters without punctuation marks) <Enter>	

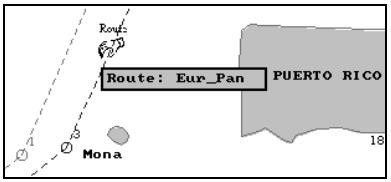
8. Use a similar procedure to generate an alternative route:	*The fundamental difference from NS2400 videoplotter which the "Play Ahead" utility is based on, is the simultaneous display of two and more routes*
ROUTE\New	A cursor appears in the *Chart area*; the presentation of the previously generated route remains on the display but changes its colour (becomes brown): 
Use the algorithm described above to plot all the rest of the alternative route's WP's	
9. Edit the generated route (as required):	
Determine the route for editing ROUTE\Select	The *Menu area* displays a list of all the currently loaded routes: 
Select the route required to be edited and press the left trackerball/mouse button	The selected route is shown on the screen in the blue colour, the rest of the route (inactive") are brown:

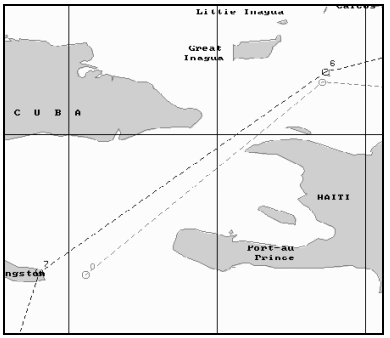
This operation can also be performed by using a "free cursor". To do this, use the following procedure:

- *Press successively the right mouse button to turn on "View" mode;*
- *Position the cursor on the required route and press the left mouse/trackerball button:*



- *Double click the left mouse button to activate the route:*





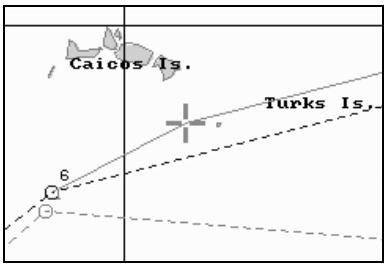
ROUTE\Edit

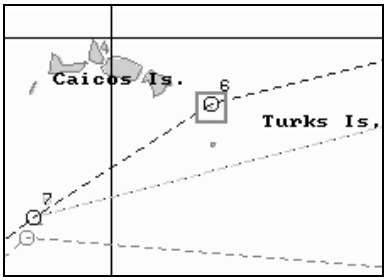
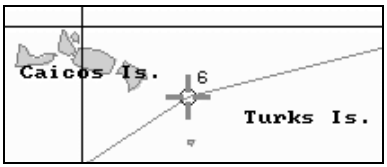
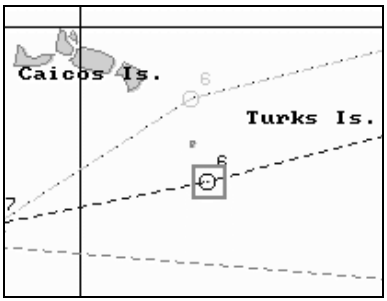
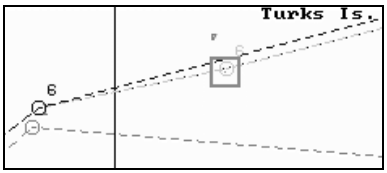
Acquisition marker appears:

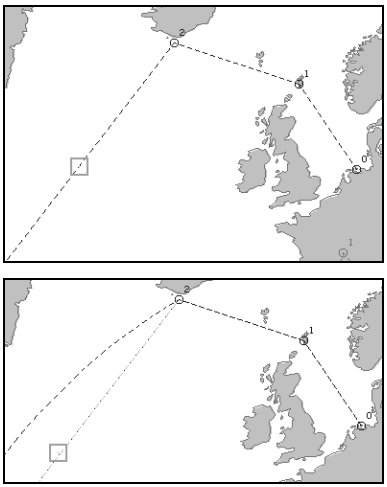
The further editing procedure will depend on the particular route editing action

- To add a WP

Position the cursor on the route leg where a WP is required to be added and
"attach" the cursor to the route by pressing the left mouse/trackerball button

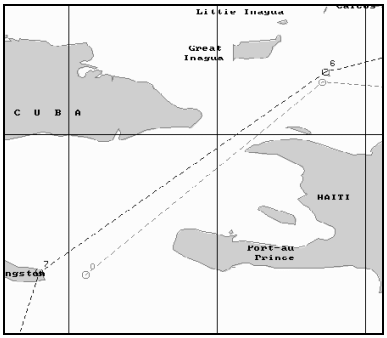


Move the cursor to the point where a WP is required to be set, and press the left mouse/trackerball button	
• To move a WP to a new position Position the cursor on the WP which is required to be moved and "attach" the cursor to the route by pressing the left mouse/trackerball button Position the cursor to a new position and press the left mouse/trackerball button (<Enter>)	 
• To delete a WP Apply the cursor "attachment" procedure described above to the WP which is required to be deleted Press the right mouse/trackerball button (<Esc>)	
• To continue the plotting of the route (from the first or the last WP) Apply the cursor "attachment" procedure described above to the first (last) WP Continue the route plotting	

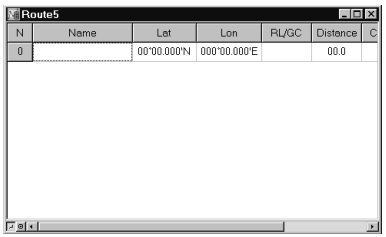
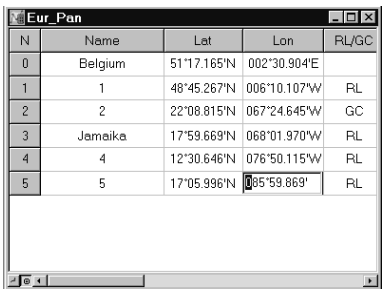
• To change the type of a route leg line (to switch from Rhumb Line to Great Circle) Position the cursor on the route leg whose form is required to be changed Press <Insert> key	
10. Save the edited route (see item [7] of this paragraph)	
11. Unload the currently unused routes from the PA by using ROUTE\Close function	

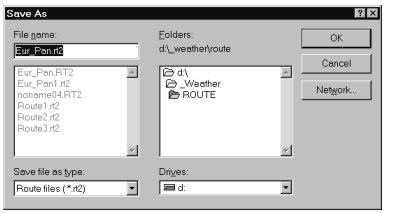
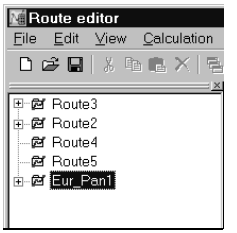
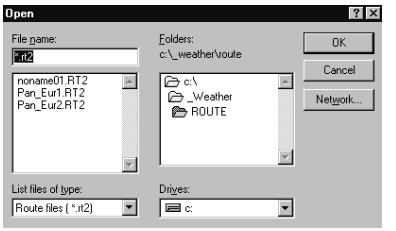
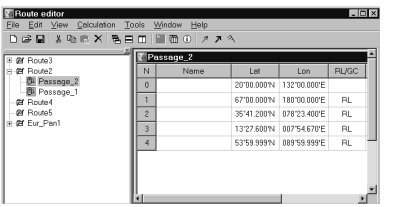
Display of Routes Generated in the RE

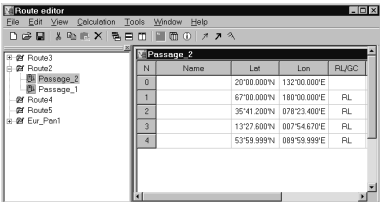
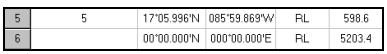
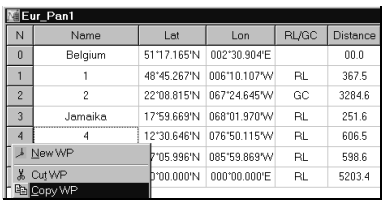
1. Start PA utility	*See paragraph 4.2.2*
2. ROUTE\Open	The *Menu area* displays a list of all the currently loaded routes: Pan_Eur1 Pan_Eur2
Select the route required to be edited and press the left mouse/trackerball button	The selected route is displayed on the screen in the blue colour, whilst all the rest ("inactive" routes) are shown in the brown colour:

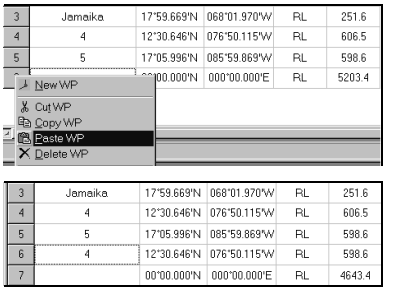
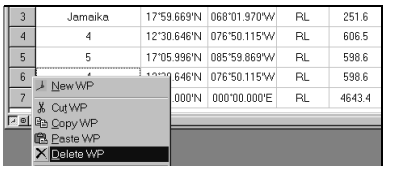
	
3. Edit the route as required using the procedure detailed above	*See item 5.1.5 "Route Generation and Editing in the PA" [9]*

5.1.6 Route Generation and Editing by Using a Table

1. Start RE utility	*See paragraph 4.3.2*
2. Create the route:	
File\New Route *This operation can also be performed by pressing button (see also paragraph 4.3.4)*	A "blank" *Route Table* is displayed (see also paragraph 4.3.3 "Route Table"): 
Use the keyboard to enter the data in "Lat", "Lon", "Name" and "RL/GC" columns *To enter each new WP, use* New WP *function of the context menu or Edit\New WP function*	*(see also paragraph 4.3.3 "Route Table") and 4.3.4* 

3. Save the generated passage route:	
File\Save or Save as… *This operation can also be performed by pressing*  *button (see paragraph 4.3.4)*	
Enter the route name (8 characters without spaces or punctuation marks) in “File name” field <OK>	The name of the generated route is displayed in the heading of the table and appears on *“Route explorer”* panel: 
4. Edit the route as required:	
Load the route required to be edited File\Open *(or*  *button of the auxiliary menu)*	The screen displays a search panel which contains a list of previously generated routes: 
Select the required route and press <OK> button	The utility’s main window displays the selected route’s table: 

Position the cursor on the row of the WP whose data is required to be edited	In the example under consideration, the WP to be edited is WP4: 
The further editing procedure will depend on thee particular route editing action *Each of these actions can be performed in any of the three ways detailed below:* – *By using Main menu functions (see paragraph 4.3.4);* – *By using the auxiliary menu buttons (see paragraph 4.3.4);* – *By using the context (right mouse button) menu functions (see paragraph 4.3.3 "Route Table")*	
• To continue the plotting of the route from the last WP Edit\New WP *(via the Main or Context Menu)*	A new row is added to the *Route Table* (WP6 in this example): 
• To duplicate a WP (copy WP data to another row) Edit\New WP (via the Main menu, Context menu or by using  button)	In the example, data on WP4 is copied to the row of WP6: 

	
• To delete a WP Edit\Delete WP *(via the Main menu, Context menu or by using*  *button)*	In the example under consideration, WP6 is deleted: 
5. Save the edited route File\Save *(or*  *button)*	*See also item [3] of this paragraph*
6. Unload the currently unused routes from the RE as required by using File\Close function	

5.1.7 Generation of Route Passage Schedule

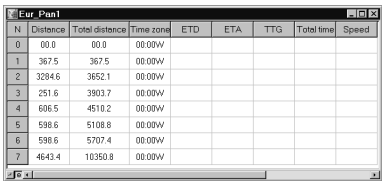
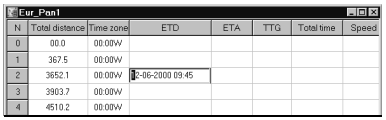
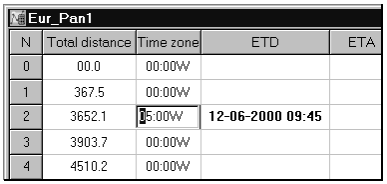
"Route Editor" utility provides a facility for calculating the passage schedule based on the generated route. There are three types of schedules:

- With the set ETD (Estimated Time of Departure) and speed at each route segment (from WP to WP);
- With the set ETD and ETA (Estimated Time of Arrival) in the last selected WP;
- Combined schedule (with set speeds and ETA's in the intermediate WP's).

In addition, route calculations can take into account the effect of three environmental factors:

- Tidal currents (from the database);
- Surface currents (from the database);

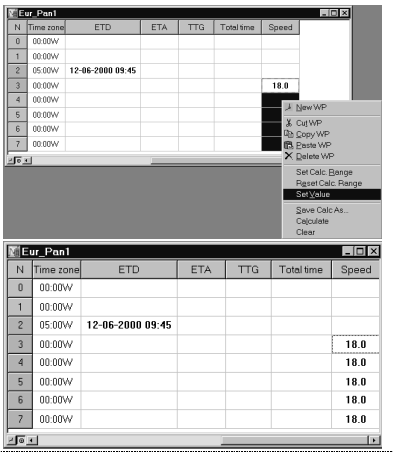
- Weather parameters (wind and wind induced waves) from the forecast received via WFM utility.

1. Start RE utility	*See paragraph 4.3.2*
2. Create or open a *Route Table* which you intend the passage schedule to be based on	*See paragraphs 5.1.5 and 5.1.6*
3. Turn on the display of additional *Route Table* columns designed for the storage of data on the schedule of passage along the given route: View\As Calculation *This operation can also be performed by using buttons in the left bottom corner of the Route Table*	Columns ETD, ETA, TTG, Total time and Speed appears in the table: 
4. Position the cursor in ETD column in the row of the WP which will be used as the route's first WP in the schedule which is being generated (not necessarily WP0) Double click the left mouse button to activate the cell for the ETD input Change the default value to the required date and time of the planned departure from the given WP (via the keyboard) <Enter>	By default, the current date is displayed in the cell: 
5. Use a similar procedure to enter the time zone value for the given WP position area	
6. Depending on the type of the schedule (see Introduction to this paragraph) enter:	
• Speed identical on all the route segments *In this case, ETA calculations will be carried out for all the WP's involved*	*For the input of "Speed" parameter identical for all the WP's, it is worthwhile to use a handy facility provided by the context menu (see also*

in the generation of the voyage schedule

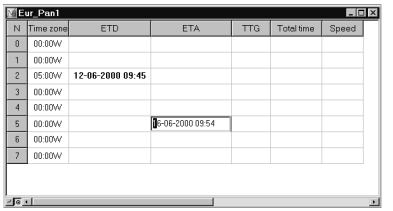
Attention! Ascertain that after this step, cells in the column named "N" (WP numbers) are highlighted in the light blue colour in the interval between ETD and ETA. This means that calculations will only be made for the route segment including these WP

paragraph 4.3.3 "Route table"):

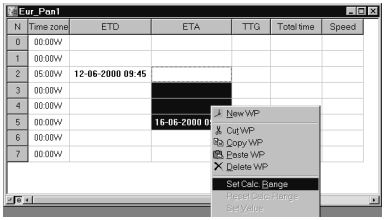


- ETA in the last WP of the selected passage route

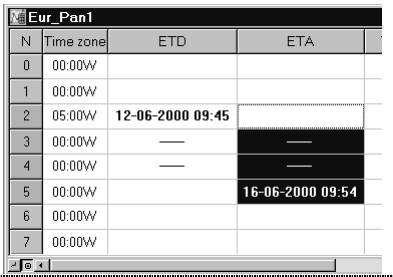
In this case, calculations of speed on the route (the same for all the WP's) will be made



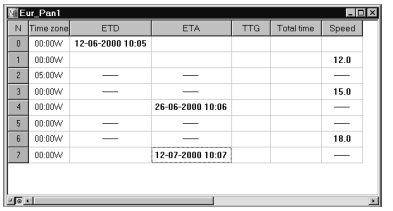
Use "Set Calc. Range" context menu function to select a route segment in the *Route Table* for the calculation of a schedule *(see paragraph 4.3.3 "Route Table")*:

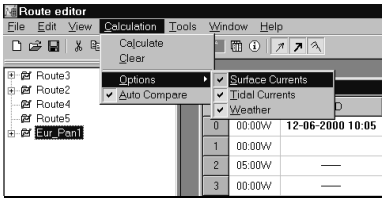
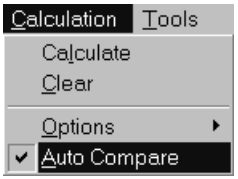
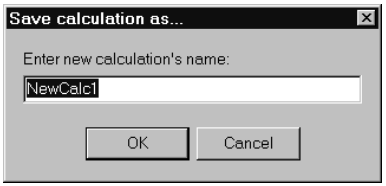
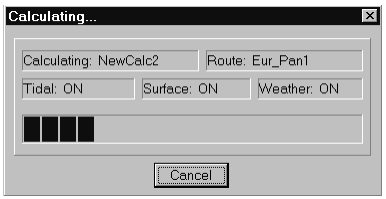


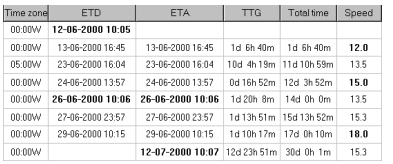
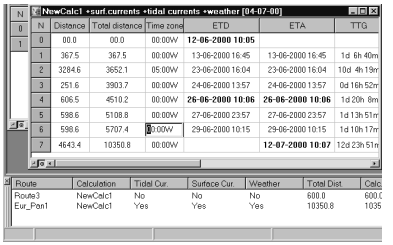
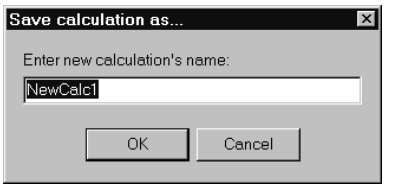
WP's which will be involved in the generation of a schedule will be highlighted with light blue colour in "N" column (WP number):

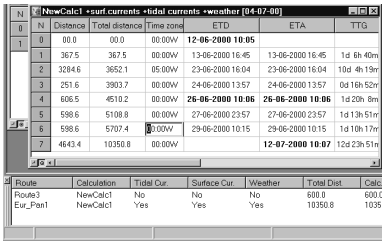


- Combination of an arbitrary number of ETA's (both in the last WP of the selected segment, and in the intermediate WP's) and of various speed values on different route legs

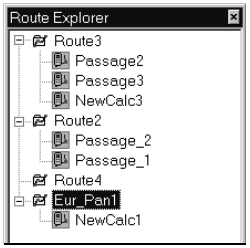


This is performed by using a procedure similar to that detailed above for the data input	
7. Turn on the option for taking into account the effect of environmental factors on the ship's speed on the route:	
Calculation\Options\Surface currents Calculation\Options\Tidal currents Calculation\Options\Weather *This operation can also be performed by pressing*  *auxiliary buttons respectively*	
8. Ascertain that Calculation\Auto Compare option is on *(see also paragraph 4.3.4)*	
9. Make the voyage schedule calculations:	
Calculation\Calculate *This operation can also be performed by selecting the relevant context menu function in the Route Table (see also paragraph 4.3.3 "Route Table")*	The screen displays a window for the input of the name of the voyage schedule intended to be generated: 
Enter the name <OK>	Process indicator of voyage schedule calculations is displayed: 

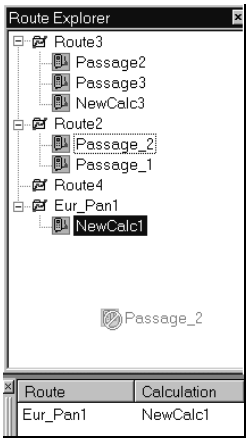
	When the calculations are completed, the results are shown: • in the Schedule Table  	Time zone	ETD	ETA	TTG	Total time	Speed
---	---	---	---	---	---
00:00W	**12-06-2000 10:05**				
00:00W	13-06-2000 16:45	13-06-2000 16:45	1d 6h 40m	1d 6h 40m	**12.0**
05:00W	23-06-2000 16:04	23-06-2000 16:04	10d 4h 19m	11d 10h 59m	13.5
00:00W	24-06-2000 13:57	24-06-2000 13:57	0d 16h 52m	12d 3h 52m	**15.0**
00:00W	**26-06-2000 10:06**	**26-06-2000 10:06**	1d 20h 8m	14d 0h 0m	13.5
00:00W	27-06-2000 23:57	27-06-2000 23:57	1d 13h 51m	15d 13h 52m	15.3
00:00W	29-06-2000 10:15	29-06-2000 10:15	1d 10h 17m	17d 0h 10m	**18.0**
00:00W		**12-07-2000 10:07**	12d 23h 51m	30d 0h 1m	15.3 | *Bold type is used for showing entered values, whilst the grey colour is used for the calculated values;* • on "*Comparison" panel*  NewCalc1 • surf.currents • tidal currents • weather [04-07-00] | N	Distance	Total distance	Time zone	ETD	ETA	TTG
---	---	---	---	---	---	---
0	00.0	00.0	00:00W	**12-06-2000 10:05**		
1	367.5	367.5	00:00W	13-06-2000 16:45	13-06-2000 16:45	1d 6h 40m
2	3284.6	3652.1	05:00W	23-06-2000 16:04	23-06-2000 16:04	10d 4h 19m
3	251.6	3903.7	00:00W	24-06-2000 13:57	24-06-2000 13:57	0d 16h 52m
4	606.5	4510.2	00:00W	**26-06-2000 10:06**	**26-06-2000 10:06**	1d 20h 8m
5	598.6	5108.8	00:00W	27-06-2000 23:57	27-06-2000 23:57	1d 13h 51m
6	598.6	5707.4	00:00W	29-06-2000 10:15	29-06-2000 10:15	1d 10h 17m
7	4643.4	10350.8	00:00W		**12-07-2000 10:07**	12d 23h 51m
Route	Calculation	Tidal Cur.	Surface Cur.	Weather	Total Dist.	Calc
---	---	---	---	---	---	---
Route3	NewCalc1	No	No	No	600.0	600.(
Eur_Pan1	NewCalc1	Yes	Yes	Yes	10350.8	1035
10. Save the generated schedule: File\Save Calc. As… *(or "Rename" context menu on "Route explorer" panel)*	 Save calculation as... Enter new calculation's name: NewCalc1 OK Cancel
Enter/edit the name <OK>	The new name is displayed in the *Voyage schedule table* and on "*Route explorer" panel*
11. Compare several schedules as required on Comparison panel:	*See also paragraph 4.3.3 "Comparison panel"*
Tools\Compare (if "*Comparison" panel* was not turned on before) *This operation can also be performed by pressing*  *auxiliary menu button*	The bottom part of the utility's main window displays *Comparison panel*:



Open and select the voyage schedule for comparison on *"Route Explorer" panel*

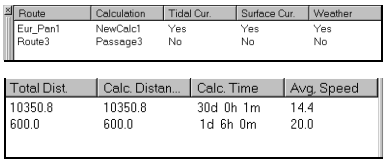


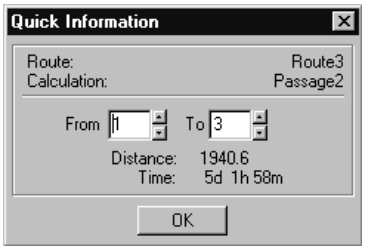
Drag the selected schedule to *"Comparison" panel* keeping the left mouse button depressed



Compare two or more schedules to select the optimum passage route

For detailed information on handling "Comparison" panel, see paragraph 4.3.3



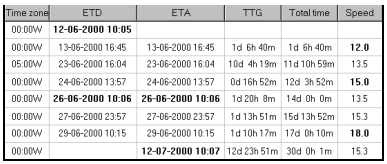
12. Where brief information is required to be obtained on previously generated voyage schedules, use Tools\Quick Information function	

5.1.8 "Playing Ahead" of the Ship's Passage Schedule

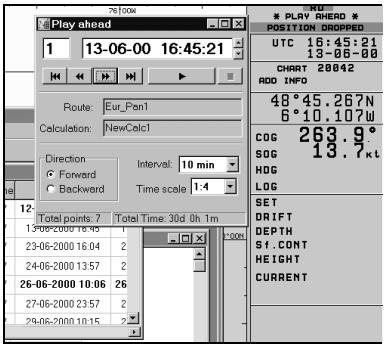
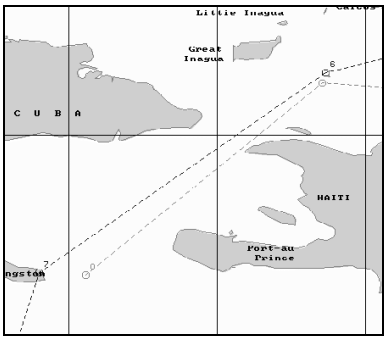
"Route Editor" and "Play Ahead" utilities allow viewing the modelled ship motion along the route in accordance with the calculated schedule, with a simultaneous visualisation of change dynamics in some environmental factors:

- Tidal currents (from the database);
- Surface currents (from the database);
- Weather parameters (wind and wind induced waves) from a forecast received via WFM utility.

This paragraph describes the start procedure and control of the ship's motion in this operating mode.

1. Start the RE utility	*See paragraph 4.3.2*
2. Create or open a table of the voyage schedule generated in paragraph 5.1.7	
3. Turn on the mode for playing ahead the ship's motion along the route: Tools\Play Ahead (or  auxiliary menu button)	PA utility is run automatically, its control panel displayed on the screen:

Time zone	ETD	ETA	TTG	Total time	Speed
00:00W	**12-06-2000 10:05**				
00:00W	13-06-2000 16:45	13-06-2000 16:45	1d 6h 40m	1d 6h 40m	**12.0**
05:00W	23-06-2000 16:04	23-06-2000 16:04	10d 4h 19m	11d 10h 59m	13.5
00:00W	24-06-2000 13:57	24-06-2000 13:57	0d 16h 52m	12d 3h 52m	**15.0**
00:00W	**26-06-2000 10:06**	**26-06-2000 10:06**	1d 20h 8m	14d 0h 0m	13.5
00:00W	27-06-2000 23:57	27-06-2000 23:57	1d 13h 51m	15d 13h 52m	15.3
00:00W	29-06-2000 10:15	29-06-2000 10:15	1d 10h 17m	17d 0h 10m	**18.0**
00:00W		**12-07-2000 10:07**	12d 23h 51m	30d 0h 1m	15.3

	
4. Load in the PA the route which the voyage schedule calculations were based on:	
ROUTE\Open	The *Menu area* displays a list of all the currently loaded routes: 
Select a route and press the left mouse/trackerball button	The selected route is displayed on the screen in the blue colour, whilst the rest of them ("inactive routes") are shown in the brown colour: 
5. Start the play-ahead by pressing  button on the motion control panel	*For a detailed description of the motion control panel see the relevant section of paragraph 4.3.3*

5.2 Description of Additional Capabilities of the "Weather Wizard" Software

5.2.1 Selection of Weather Forecasts for Further Work and Their Deleting from the Database

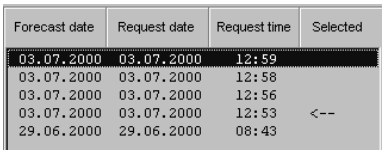
This paragraph describes two ways to select the "working" weather forecast which will further handled via "Play Ahead" (for visualisation) and "Route Editor" (for the route passage calculations to take into account weather factors) utilities:

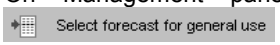
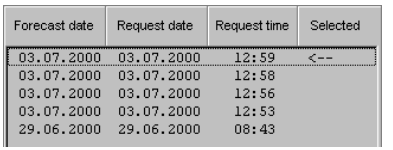
- Manual selection of a weather forecast;
- Forecast selection by the "sufficiency" criterion (which is only used in the automatic mode of selecting received weather forecasts*)*.

It also details procedures to adjust their number in the database:

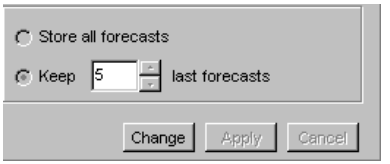
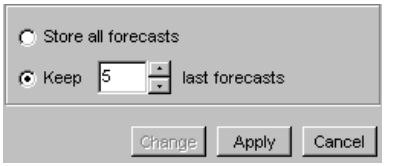
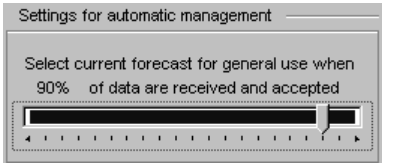
- Manual deleting of a weather forecast;
- Storage of forecasts in the database.

Manual Selection of a Working Weather Forecast

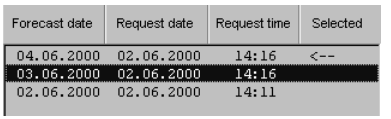
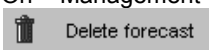
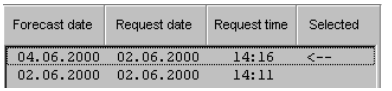
1. Start the WFM utility	*See paragraph 4.1.2*
2. Open *Forecasts page*	
3. On "Management" panel, set "Manual" forecast selection mode	 *For more detailed information related to the settings and adjustments which are required to be made on Forecasts page, see paragraph 4.1.3 "Forecasts Page"*
4. In the "List of Received Weather Forecasts" *(see item 4.1.3 "Forecasts Page" [1]),* position the cursor on the line with the date of the received forecast which should be selected for the further work	

5. On "Management" panel press  button	This forecast is selected as the "working" one: 

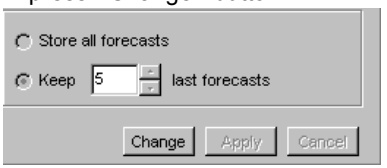
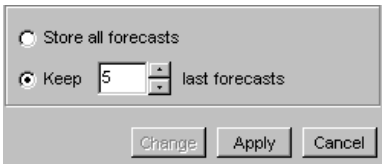
Forecast Selection by the "Sufficiency" Criterion

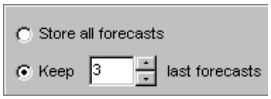
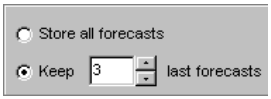
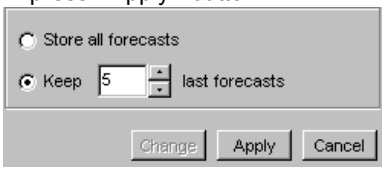
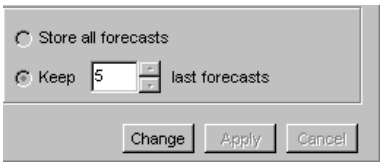
1. Start the WFM utility	*See paragraph 4.1.2*
2. Open *Forecasts page*	
3. On "Adjustment of Forecast Number Stored in the Database" panel press <Change> button 	<Change> button becomes inactive: 
4. On "Setting for Automatic Management" panel, use the mouse/trackerball cursor to move the data "sufficiency" criterion indicator to the require level *(see item 4.1.3 "Forecast Page" [4])*	
5. On "Adjustment of Forecast Number Stored in the Database" panel press <Apply> button 	<Apply> button becomes inactive: 

Manual Deleting of a Weather Forecast

1. Start the WFM utility	*See paragraph 4.1.2*
2. Open *Forecasts page*	
3. On “Management” panel set the “Manual” mode of “working” forecast selection	
4. In the “List of Received Weather Forecasts” *(see item 4.1.3 “Forecasts Page” [1]),* position the cursor on the line with the date of the received forecast which is required to be deleted	
5. On “Management” panel press  button	The forecast is deleted from the database: 

Storage of Forecasts in the Database

1. Start the WFM utility	*See paragraph 4.1.2*
2. Open *Forecasts page*	
3. On “Adjustment of Forecast Number Stored in the Database” panel press <Change> button 	<Change> button becomes inactive: 
4. Set the number of weather forecasts which will be stored in the database:	

• A certain number of forecasts Select "Keep" option and set the required number of forecasts by using buttons	
• All the received and processed forecasts Select "Store all forecast" option	
5. On "Adjustment of Forecast Number Stored in the Database" panel press <Apply> button 	<Apply> button becomes inactive: 

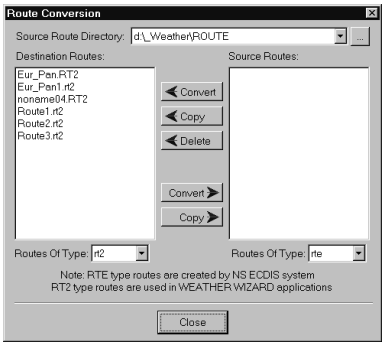
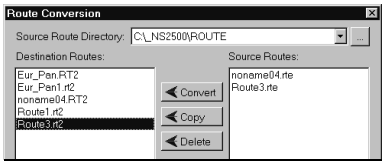
5.2.2 Converting of Routes from "Weather Wizard" Format to the Format Compatible with Navi-Sailor Series Software and Deleting of Routes

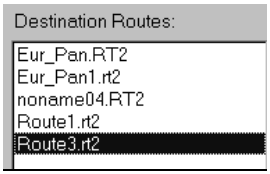
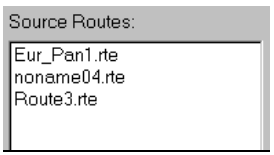
The "Weather Wizard" software uses *.rt2 route format, whilst Navi-Sailor series software (2400 and 2500) operates exclusively with *.rte format. To convert route files from one format to the other, and the other way round, the RE utility has a dedicated converter. This same converter incorporates a facility for the deleting of routes and their copying onto the external memory (and the other way round).

Described below are two procedures which can be implemented by using the aforementioned converter only:

- Converting of routes from.rt2 format to *.rte;
- Deleting and copying of routes.

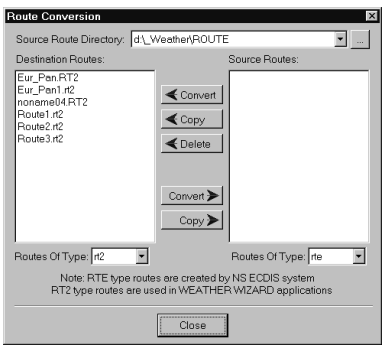
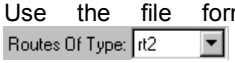
Converting of Routes from *.rt2 format to *.rte

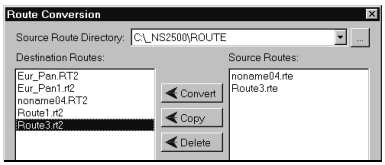
1. Start the RE utility	*See paragraph 4.3.2*
2. Call the converter: Tools\Convert	
3. Set (select) a path for the storage of converted files:	
Press  button to open a search window and set the path to ROUTE directory of NS software	
<OK>	"Source Route Directory" panel displays the set path, whilst "Source Routes" panel displays the available route files in *.rte format stored in ROUTE directory: 

4. On "Destination Routes" panel, use the cursor to select a route which is required to be converted	
5. Press  button	"Source Routes" panel displays the name of converted route: 
6. Check that the converting has been made correctly by loading the route in the Navi-Sailor	*See the documentation on the Navi-Sailor software*

A similar procedure is used for converting files in *.rte format to *.rt2.

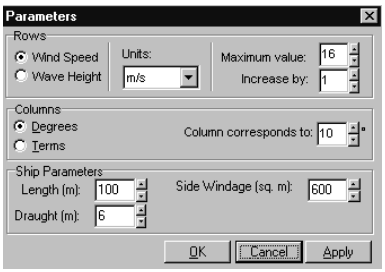
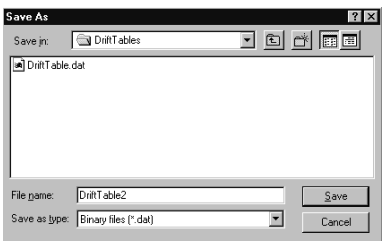
Deleting and Copying of Routes

1. Start the RE utility	*See paragraph 4.3.2*
2. Call the converter: Tools\Convert	
3. Use the file format switch  to set the required type for "Source Routes" and "Destination Routes" panels	
4. Set (select) the path (for "Source Routes" panel):	*For "Destination Routes" panel, the search of route files is always performed in ROUTE directory (by default – <C>:_Weather\ROUTE)*

Use  button to open a search window and set the path to "Navi-Sailor" or "Weather Wizard" software directory	
<OK>	"Source Route Directory" panel displays the set path, whilst "Source Routes" panel displays the available files in the format set by  switch: 
5. Copy/delete files by using the following buttons: •  ; •  – copying of file(s) from "Source Routes" to ROUTE directory ROUTE directory of WW software; •  – copying of file(s) from ROUTE directory to "Source Routes" panel	

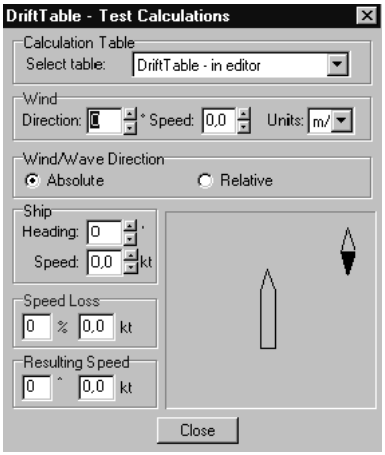
5.2.3 Ship Speed Loss Calculations

This procedure is required for correcting the results of speed loss calculations by the value of wind and sea effect, which is done in RE utility during the generation of route passage schedule (see paragraph 5.1.7).

1. Start the DT utility	*See paragraph 4.4.2*
2. Enter the ship parameters required for calculating *Speed loss table:* Edit\Parameters *For detailed information on the purpose of each of the window panels see paragraph 4.4.3 "Speed loss table"*	"Parameters" window is displayed: 
3. Calculate the *speed loss table*: Edit\Calculate	The data displayed in the table is corrected
4. Save the calculated table under another name: File\Save As…	
<Save>	
5. Classify the currently displayed table as the "working" table to use it for further work on taking the wind and sea effect into account: File\Set As Current	

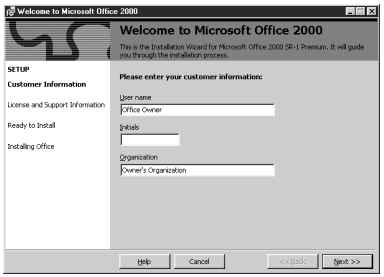
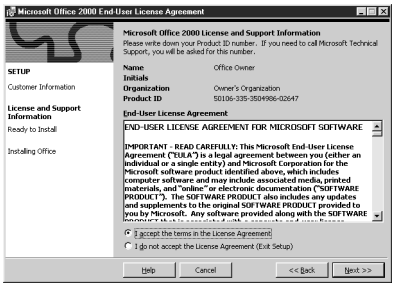
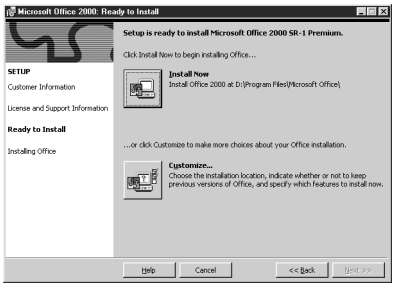
6. Check if required the correctness of speed loss calculations by using Test function

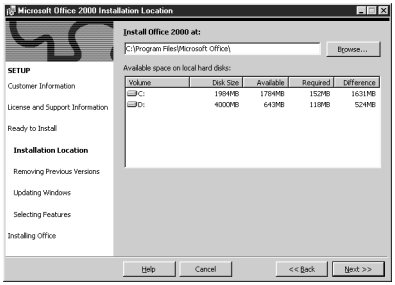
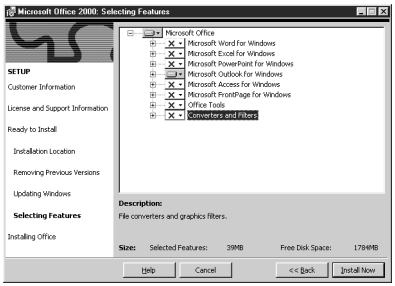
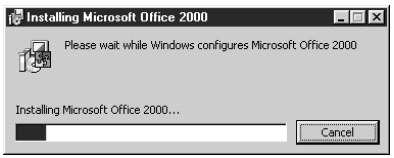
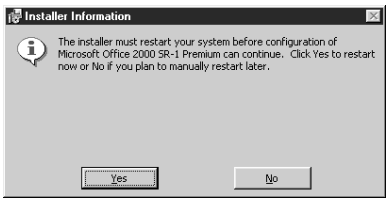
For detailed information on the purpose of each of the window panels see paragraph 4.4.3 "Test Calculations Window"



ANNEX A

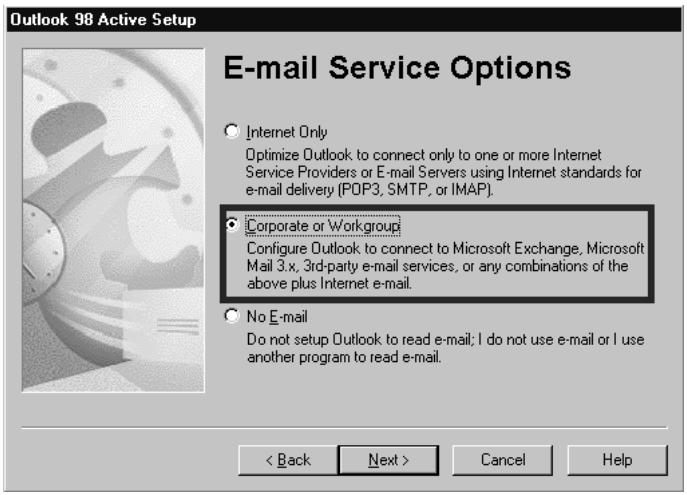
Installation of Microsoft Outlook 2000

	Insert “Microsoft Office 2000” disk in the CD drive. The process of preparation for the installation of Microsoft Office 2000 is underway.
	Enter the required user information. Press <Next> button.
	Accept the licensing agreement. Press <Next> button.
	Press <Customize> button.

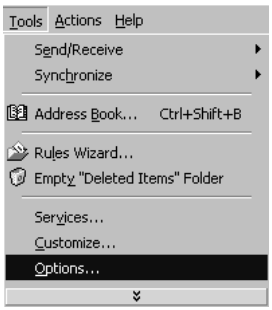
	Specify the installation path for Microsoft Office 2000. Press <Next> button.
	Select “Microsoft Outlook for Windows” option only. Cancel installation of the rest of the components. Press <Install Now> button.
 	The process of Microsoft Outlook 2000 installation is underway.
	Press <Yes> button.

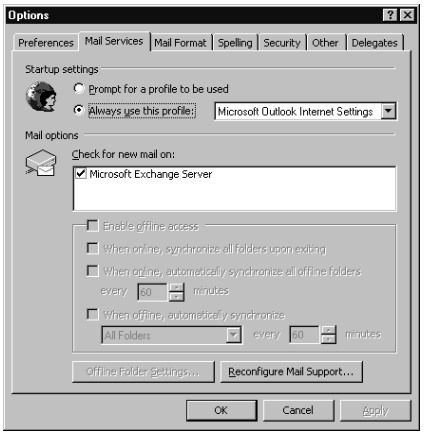
Microsoft Outlook 98/2000 Configuration for the Correct Operation with the Weather Wizard Program

During the installation, Outlook 98 (2000) mail program is required to be configured for operation in “Corporate or Workgroup” mode:



- If Outlook 98 software was initially configured for operation in “Internet Only” or “No E-mail” mode, the program should be re-installed.
- If Outlook 2000 program was initially configured for “Internet Only” or “No E-mail” operation, use the following procedure:

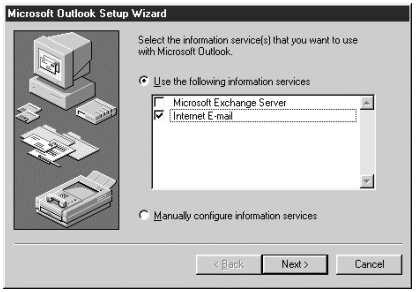
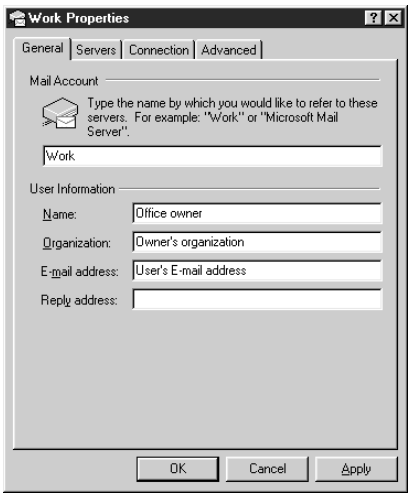
Run Outlook 2000 and select Tools/Options main menu option	

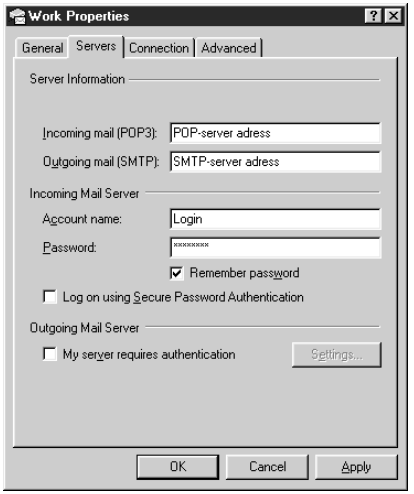
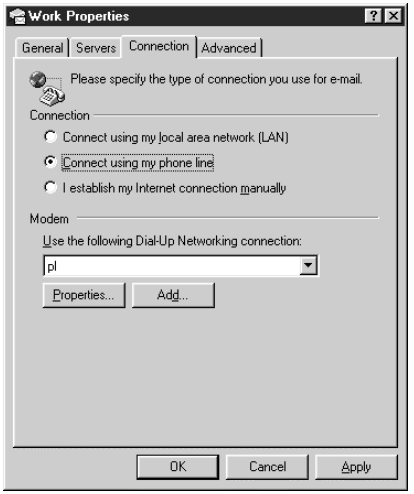
	Open “Mail Service” page and select Reconfigure Mail Support... option
	Select “Corporate or Workgroup” option and confirm the selection by pressing <OK>

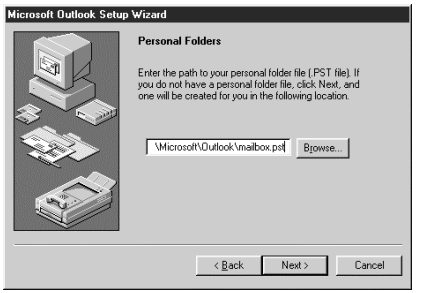
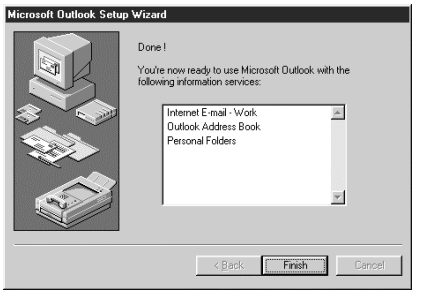
Adjustment of Microsoft Outlook 98/2000 Program for Handling the Mail

Mail Adjustment during the Operation via a Remote Access (Modem)

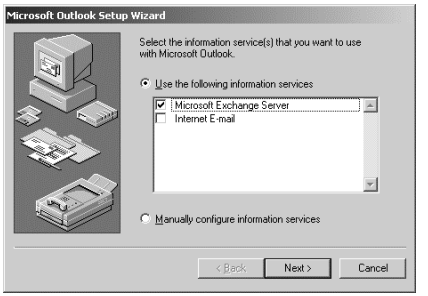
Perform the modem installation and connect it to the telephone net	*See the relevant manual for this device*
Adjust the remote connection in accordance with the directions of the Internet provider	<OK>
Start Microsoft Outlook 98/2000	<OK>

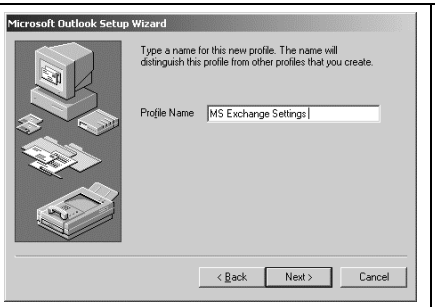
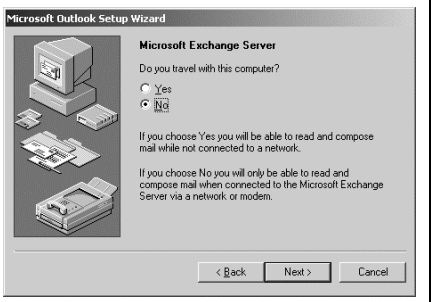
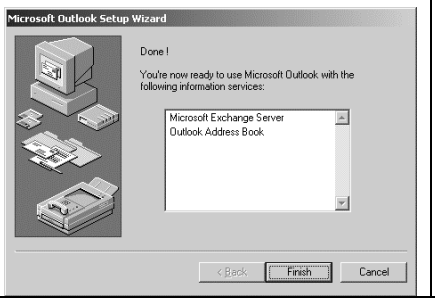
Adjust Microsoft Outlook 98/2000 in "Corporate or Workgroup" mode	*See above*
	Select "Internet E-mail" option Press <Next> button.
	Press <Setup Mail Account> button.
	Fill in the required fields on "General" page. Switch to "Servers" page.

	Fill in the required fields. Switch to “Connection” page.
	Select “Connect using my phone line” option. Select the previously adjusted remote connection. Press <Apply> and <OK> buttons
	Press <Next> button.

	Press <Next> button.
	Press <Finish> button.

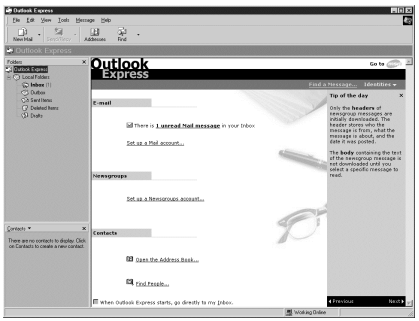
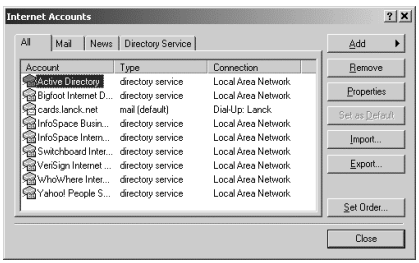
Mail Adjustment during the Operation via the Corporate Network (MS Exchange Server)

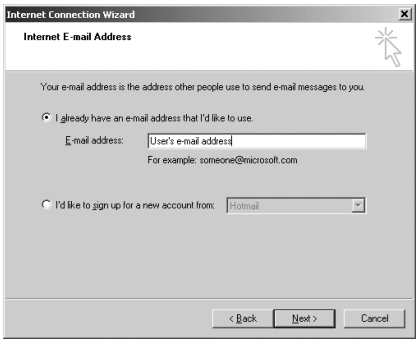
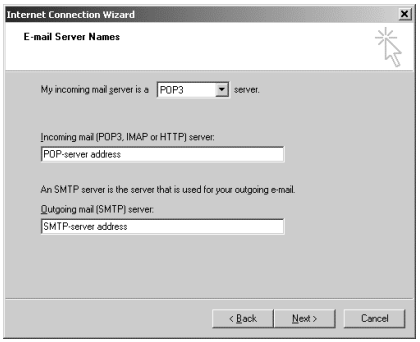
Adjust Microsoft Outlook 98/2000 in “Corporate or Workgroup” mode	*See above*
Start Microsoft Outlook 98/2000	<OK>
	Select “Microsoft Exchange Server” option. Press <Next> button.

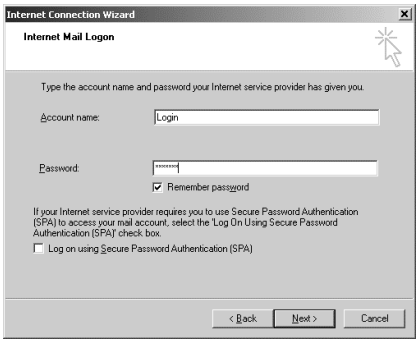
	Enter a new profile name. Press <Next> button.
	Specify the name of the Exchange Server in use and of the user mailbox (where this information is not available, contact the network administrator). Press <Next> button.
	Select “No” option. Press <Next> button.
	Press <Finish> button.

Microsoft Outlook Express Adjustment for Handling the Mail

Mail Adjustment during the Operation via the Remote Access (Modem)

Perform the modem installation and connect it to the telephone net	*See the relevant manual for this device*
Adjust the remote connection in accordance with directions of the Internet provider	<OK>
	Start Outlook Express. Select Tools\Accounts main menu function
	Press <Add> button and select “Mail” option

	Enter the name of the account which is being created. Press <Next> button
	Enter the user E-Mail address. Press <Next> button
	Fill in the required fields Press <Next> button

	Fill in the required fields. Press <Next> button
	Press <Finish> button

ANNEX B

Compatibility of Weather Wizard Program with Different Versions of Microsoft Internet Explorer during the Operation under Different Operating Systems

OS Windows 98

		WW compatibility with E-mail software		
Installed E-mail software		Outlook Express 4.0	MS Outlook 98 / 2000	WW installation warning
IE 4.0	Outlook Express 4.0 only	**No**		**Yes**
	Outlook Express 4.0 + MS Outlook 98	**No**	**Yes**	**No**
	Outlook Express 4.0+ MS Outlook 2000	**No**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**
Installed E-mail software		Outlook Express 5.0	MS Outlook 98 / 2000	WW installation warning
IE 5.0	Outlook Express 5.0 only	**No**		**Yes**
	Outlook Express 5.0 + MS Outlook 98	**No**	**Yes**	**No**
	Outlook Express 5.0+ Outlook 2000	**Yes**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**
Installed E-mail software		Outlook Express 5.5	MS Outlook 98 / 2000	WW installation warning
IE 5.0 SR 1	Outlook Express 5.5 only	**Yes**		**No**
	Outlook Express 5.5 + MS Outlook 98	**Yes**	**Yes**	**No**
	Outlook Express 5.5+ MS Outlook 2000	**Yes**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**
Installed E-mail software		Outlook Express 5.5	MS Outlook 98 / 2000	WW installation warning
IE 5.5	Outlook Express 5.5 only	**Yes**		**No**
	Outlook Express 5.5 + MS Outlook 98	**Yes**	**Yes**	**No**
	Outlook Express 5.5+ MS Outlook 2000	**Yes**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**
Installed E-mail software		Outlook Express 6.	MS Outlook 98 / 2000	WW installation warning
IE 6.0	Outlook Express 6.0 only	**Yes**		**No**
	Outlook Express 6.0 + MS Outlook 98	**Yes**	**Yes**	**No**
	Outlook Express 6.0+ MS Outlook 2000	**Yes**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**

OS Windows NT 4.0 + SP 5

		WW compatibility with E-mail software		
Installed E-mail software		Outlook Express 4.0	MS Outlook 98 / 2000	WW installation warning
IE 4.0	Outlook Express 4.0 only	**No**		**Yes**
	Outlook Express 4.0 + MS Outlook 98	**No**	**Yes**	**No**
	Outlook Express 4.0+ MS Outlook 2000	**No**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**
Installed E-mail software		Outlook Express 5.0	MS Outlook 98 / 2000	WW installation warning
IE 5.0	Outlook Express 5.0 only	**No**		**Yes**
	Outlook Express 5.0 + MS Outlook 98	**No**	**Yes**	**No**
	Outlook Express 5.0+ Outlook 2000	**No**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**
Installed E-mail software		Outlook Express 5.5	MS Outlook 98 / 2000	WW installation warning
IE 5.0 SR 1	Outlook Express 5.5 only	**It is not possible to install IE 5.0 SR 1 until SP 6a or later version for Win NT 4.0 is installed.**		
	Outlook Express 5.5 + MS Outlook 98			
	Outlook Express 5.5+ MS Outlook 2000			
	MS Outlook 2000 only			
	MS Outlook 98 only			
Installed E-mail software		Outlook Express 5.5	MS Outlook 98 / 2000	WW installation warning
IE 5.5	Outlook Express 5.5 only	**Yes**		**No**
	Outlook Express 5.5 + MS Outlook 98	**Yes**	**Yes**	**No**
	Outlook Express 5.5+ MS Outlook 2000	**Yes**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**
Installed E-mail software		Outlook Express 6.	MS Outlook 98 / 2000	WW installation warning
IE 6.0	Outlook Express 6.0 only	**It is not possible to install IE 6.0 until SP 6a or later version for Win NT 4.0 is installed.**		
	Outlook Express 6.0 + MS Outlook 98			
	Outlook Express 6.0+ MS Outlook 2000			
	MS Outlook 2000 only			
	MS Outlook 98 only			

OS Windows 2000

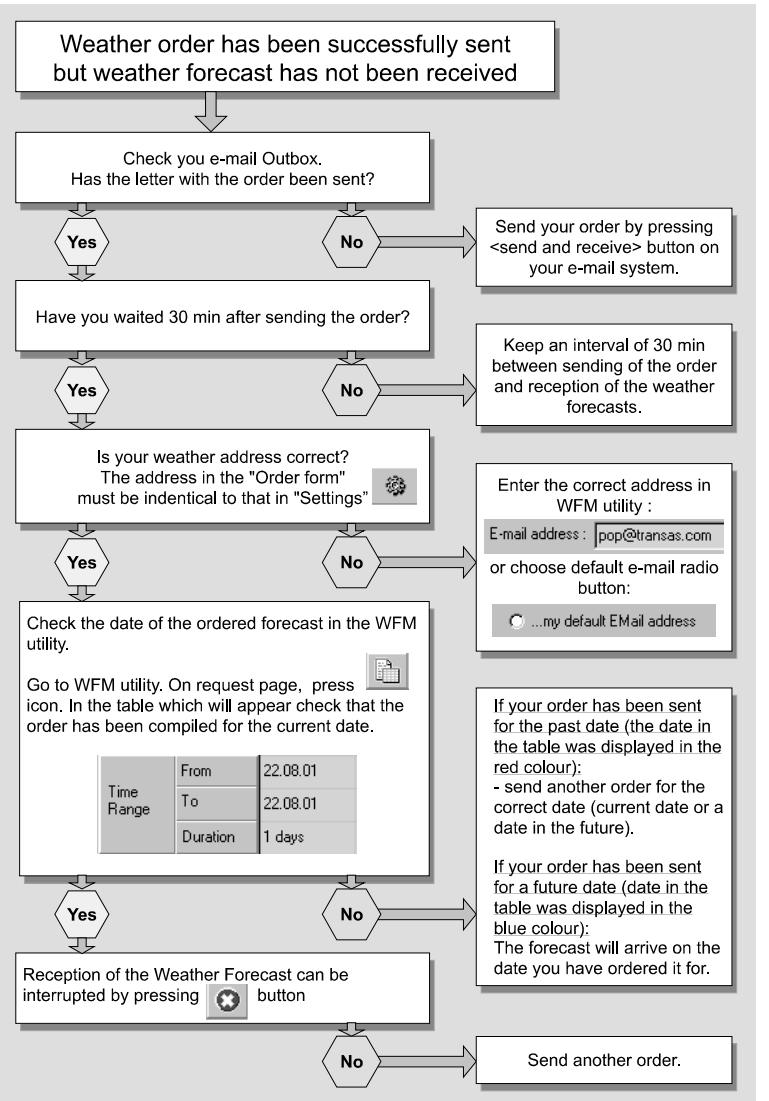
		WW compatibility with E-mail software		
Installed E-mail software		Outlook Express 5.0	MS Outlook 98 / 2000	WW installation warning
IE 5.0	Outlook Express 5.0 only	**Yes**		**Yes**
	Outlook Express 5.0 + MS Outlook 98	**Yes**	**Yes**	**No**
	Outlook Express 5.0+ Outlook 2000	**Yes**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**
Installed E-mail software		Outlook Express 5.5	MS Outlook 98 / 2000	WW installation warning
IE 5.0 SR 1	Outlook Express 5.5 only	**Yes**		**No**
	Outlook Express 5.5 + MS Outlook 98	**Yes**	**Yes**	**No**
	Outlook Express 5.5+ MS Outlook 2000	**Yes**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**
Installed E-mail software		Outlook Express 5.5	MS Outlook 98 / 2000	WW installation warning
IE 5.5	Outlook Express 5.5 only	**Yes**		**No**
	Outlook Express 5.5 + MS Outlook 98	**Yes**	**Yes**	**No**
	Outlook Express 5.5+ MS Outlook 2000	**Yes**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**
Installed E-mail software		Outlook Express 6.	MS Outlook 98 / 2000	WW installation warning
IE 6.0	Outlook Express 6.0 only	**Yes**		**No**
	Outlook Express 6.0 + MS Outlook 98	**Yes**	**Yes**	**No**
	Outlook Express 6.0+ MS Outlook 2000	**Yes**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**

OS Windows ME

		WW compatibility with E-mail software		
Installed E-mail software		Outlook Express 5.5	MS Outlook 98 / 2000	WW installation warning
IE 5.5	Outlook Express 5.5 only	**Yes**		**No**
	Outlook Express 5.5 + MS Outlook 98	**Yes**	**Yes**	**No**
	Outlook Express 5.5+ MS Outlook 2000	**Yes**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**
Installed E-mail software		Outlook Express 6.	MS Outlook 98 / 2000	WW installation warning
IE 6.0	Outlook Express 6.0 only	**Yes**		**No**
	Outlook Express 6.0 + MS Outlook 98	**Yes**	**Yes**	**No**
	Outlook Express 6.0+ MS Outlook 2000	**Yes**	**Yes**	**No**
	MS Outlook 2000 only		**Yes**	**No**
	MS Outlook 98 only		**Yes**	**No**

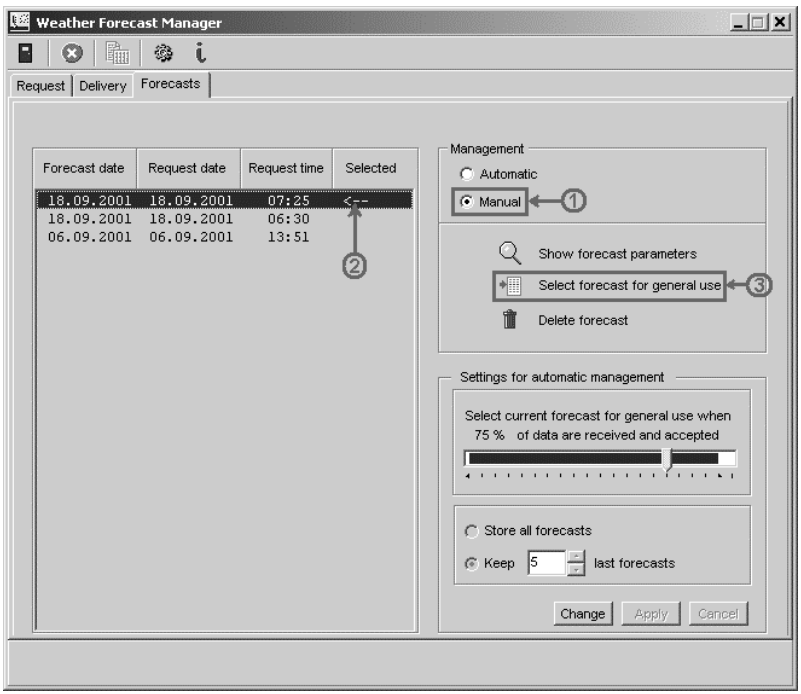
ANNEX C

Troubleshooting in the Despatch/Reception of Weather Forecasts

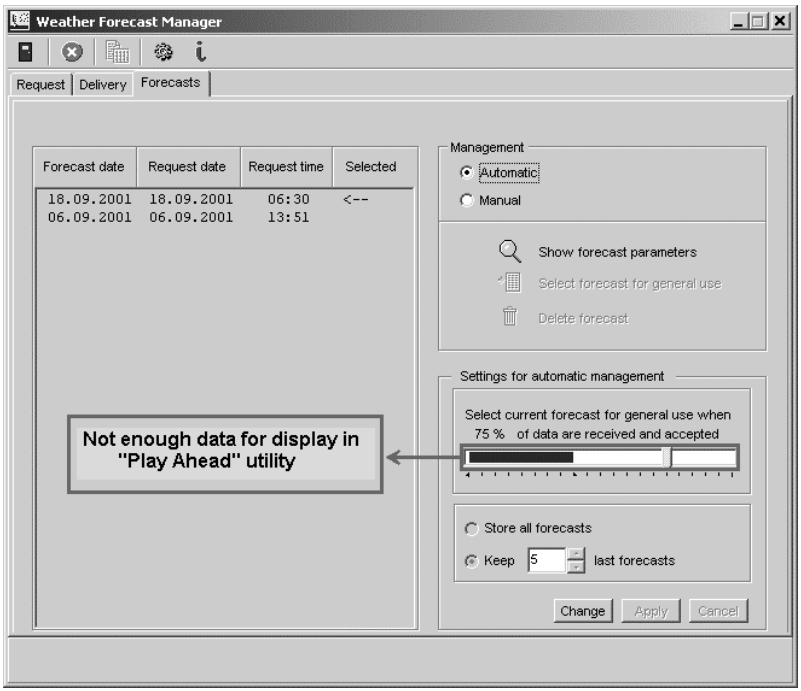


Troubleshooting in the Weather Forecast Display

1. The WFM utility is exited from between the order despatch and weather forecast reception.
   – Start the WFM utility, switch to “Forecasts” page and perform the following procedure after the reception of a weather forecast:



2. Check that the WFM utility has received sufficient data for the display of a forecast in Play Ahead utility. If it is not sufficient, reduce the percentage of the received data to the suitable level.



In this case, the last received forecast will be displayed by Play Ahead utility.

3. Check the geographic area where the weather data is displayed in Play Ahead utility.