Maritime Information Systems AS

MBA

Installation Manual

DOCUMENT STATUS

Release	Date	Paragraph(s)	Prepared by	Description of Change
A	04.12.2012	All	Hugues Vandenbussche	First release
B	15.02.2013	7.4.11	Hugues Vandenbussche	New Dialog : period selection
C	25.06.2013	10.7 18 17	Hugues Vandenbussche	PAYS module Weather MMI Voyage Plan, UKC
D	25.03.2014	10.7	Hugues Vandenbussche	PAYS:activated route synchronized with Maris ECDIS
E	15.05.2014	All	TS PK HV	Review all

Contents

1 Hardware installation

1.1 Hardware requirements

Minimum requirements:	Pentium IV or later
Memory:	1GB(XP) 2GB(W7)
Available disk space:	25GB for 5 years 2, or
Ethernet ports	1 + Router Firewall
Printer	Color Printer
Memory Stick	In case PC not connected to ship's LAN and

	Windows XP SP2/SP3
Operating Systems:	W7 x86/x64

1.2 Router

A router is required on the ECDIS LAN to limit and secure the accesses to ECDIS900 and MBA with firewall functions and connect to the ship LAN.
The router may be in place as part of the ship's LAN architecture.
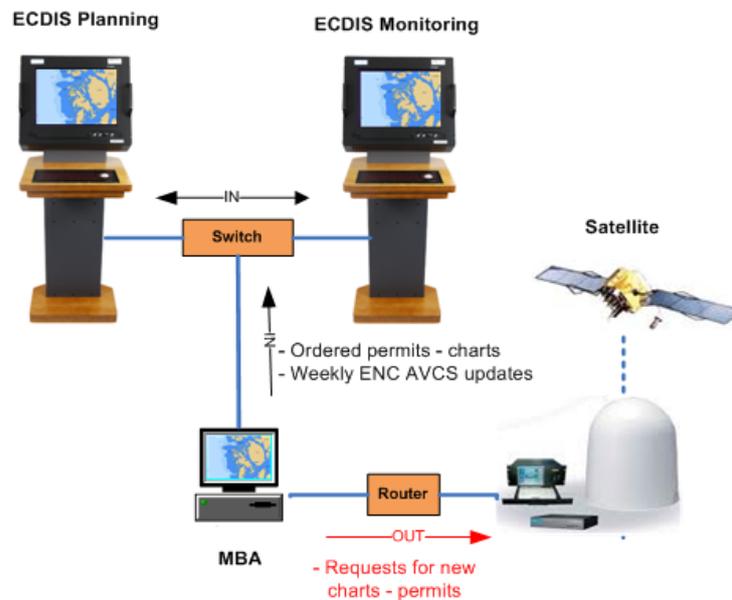
MBA installed on standalone workstation

MBA installed on ECDIS900 Planning workstation

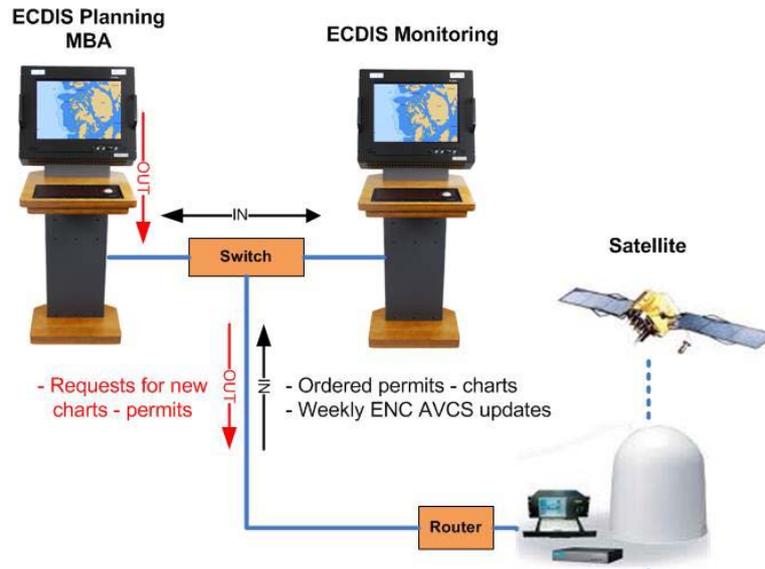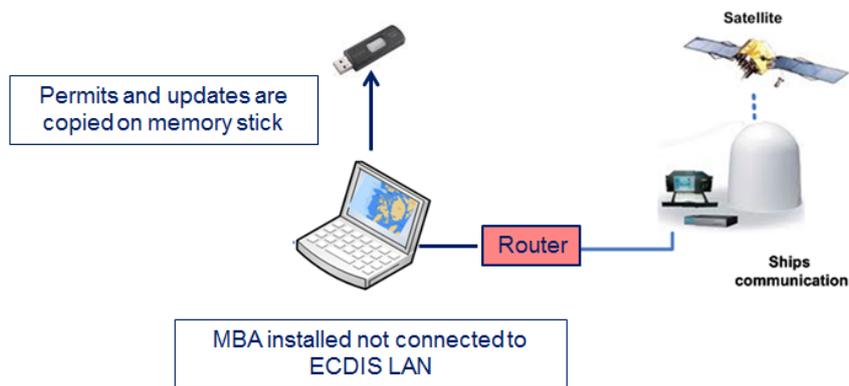If a router is to be installed, two types of router may be delivered:
- Router IEC 61945 approved such as Westermo DSS L3 4 eth 1 RS232
- Non Approved router such as Router DIR-300/600

IMPORTANT: If the router is NOT IEC approved it must be installed outside of the bridge.

1.2.1 Router default Configuration

The router DIR-300/600 is factory configured with proper settings described in Annex A.
Factory configuration file is also available for the router WESTERMO (TYPE L205-S1) , FILE CAN BE DOWNLOADED FROM MCP.
The LAN IP address of the routers is set by default to 192.168.123.1.

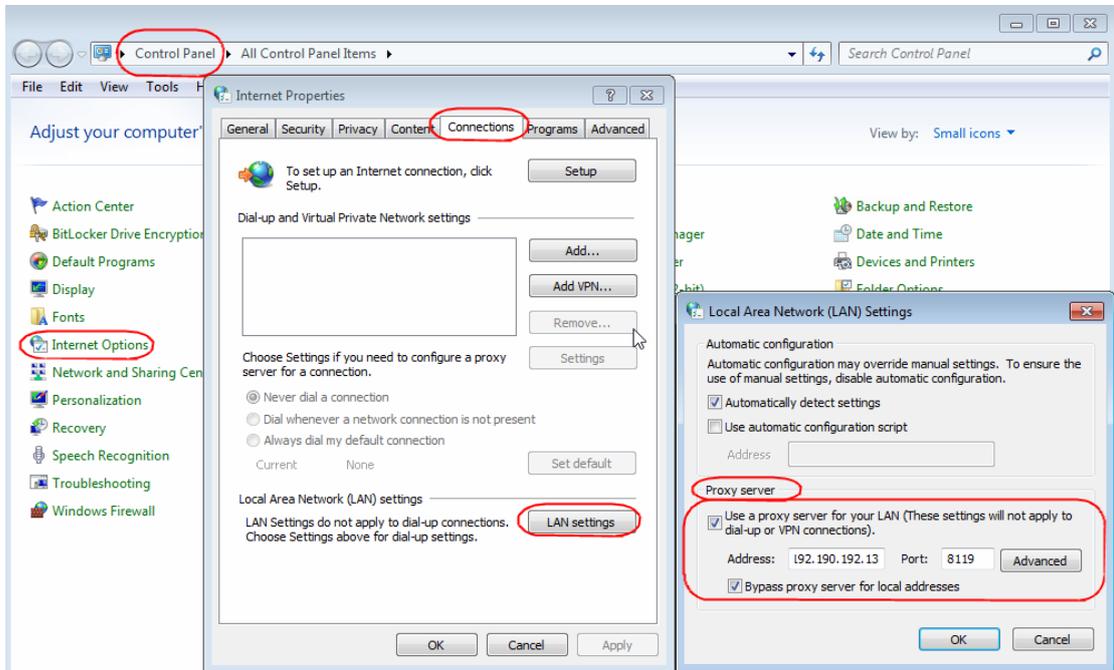### 1.2.2   PC - Internet Options for Proxy server

Access to Proxy Server parameters by Menu:
Control Panel /Internet Options/Connections/LAN Settings, and configure parameters for the Proxy Server: (IP Address, Port Number)

Configuration Windows (XP or W7)
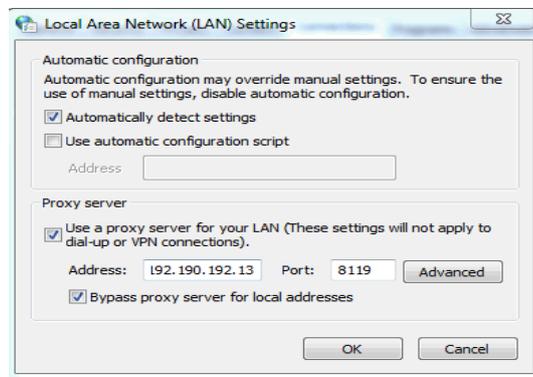
Example of Proxy Server Parameters

2   Installation

The installation material includes:
- Installation CD
- Login and Password provided by ChartService

The Installer CD contains:
- MBA Installer
- CBT

- MBA User Manual
- MBA Installation Manual
- "Foxit" installer file: FoxitReader545.0124_enu_Setup.exe
- Application Manager installer
- Configuration files for Router

Run MBA installer from the CD and follow instructions

3   MBA and Communication Method

MBA ship application communicates with the server, sending Request to MBA server, and receiving replies containing data updates.

With MBA three communication methods can be used;
- EMAIL : MBA PC is connected to the ship LAN and the ship's email server is available
- HTTPs : MBA PC is connected to ship LAN and internet is available
- Removable Drive : MBA PC is not connected to ship LAN

3.1 Email Mode

MBA manages sending and receiving emails as described below:
- Incoming emails are grabbed from mail server via POP3(s) protocol with standard port numbers 110/tcp for POP3 and 995/tcp for POP3s.
- Outgoing mail is being sent over SMTPs protocol with standard port numbers 25/tcp for SMTP and 465/tcp for SMTPs.

IT Manager must provide all information for email usage:
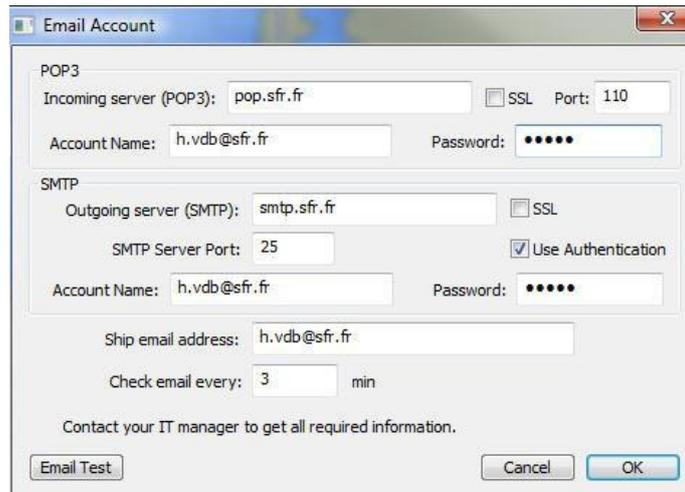- Related to email account (Pop & SMTP servers, login and password).
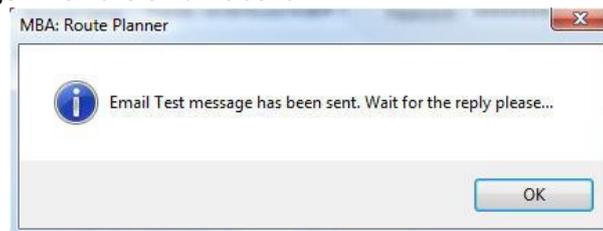- Eventual size limit for received email.
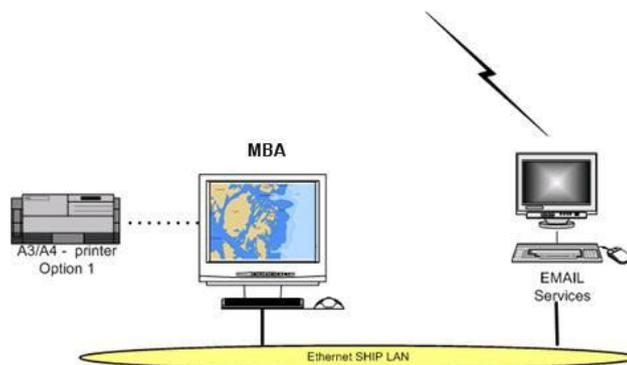
Email must be set up when MBA is installed on a PC connected by LAN to the email Server application.


3.1.1 EMAIL Account set up

- Select Menu "Setting/Email Settings"

- Press "Email test" to check the settings

- MBA displays a message when the email is sent.

- If the email cannot be sent it means that the SMTP server parameters are wrong and the Internet Email dialogue is displayed again. Check carefully with your IT manager the information related to SMTP server, IP address, eventually authentication and port number.

- IMPORTANT: WAIT FOR THE EMAIL TO BE RECEIVED ON BOARD (It can take several minutes depending on the internet provider)

- When the email is received MBA, MBA checks if the email and its attachment are consistent and reject inconsistent email (Wrong subject or attachment, corrupted content)

- If the email is not received after a sensible period of time, contact your IT manager for him to check that:
  - o The email with the subject "RE:MDS" and the attached file Request123.MDS has been correctly sent to the ship's email address
    - a. This email has been received by the ship's email server
    - b. This email has not been deleted from the pop3 server.
    - c. After correcting any error, the test must be run again. Start again from 4 above.
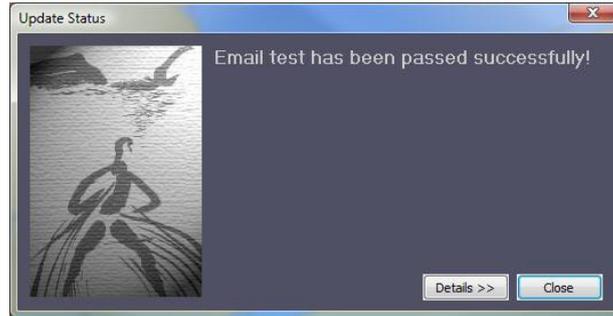
Email Test successful

3.1.2 HTTPS mode

When Internet is available on board, MBA may communicate with the server by HTTP.
The ship IT manager must configure the LAN, Firewall and DNS as described below.

1) White list MBA server in the ship firewall.
    The IT manager must white list the MBA server (**chartservice.maris.no)** in the ship firewall
    MBA uses standard port number **443/tcp** for **HTTPs.**

2) Windows Firewall on MBA PC must be switched Off.

REMARK: MARIS may provide a Router Firewall configuration limiting the access of MBA and ECDIS PCs present on
MARIS LAN, to the strict necessary communication and IP addresses (refer to Appendix A)
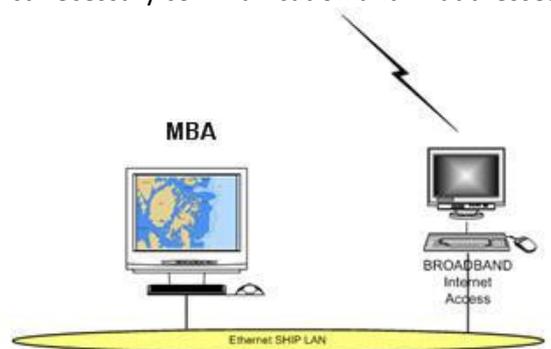
MBA is installed on a PC which can access Internet using broadband access.

3.1.3 Removable Drive mode
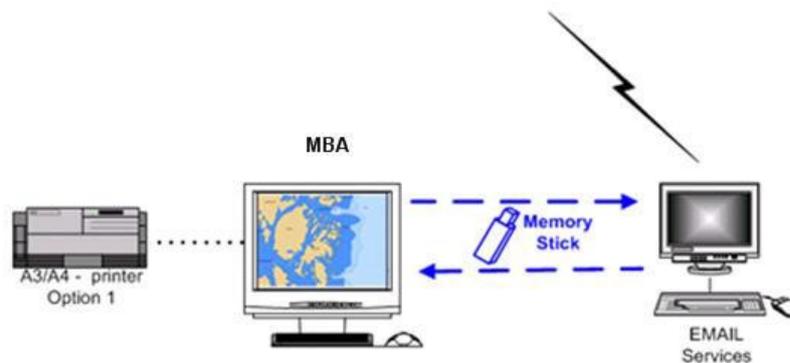
This configuration uses a Memory Stick to transfer data between the MBA PC and the communications PC on board.

This configuration uses a Memory Stick to transfer data between the MBA PC and the communications PC on board. The same files (Request or Replies) are sent or received to or from MBA server, using any email client running on the communication PC (Outlook, Thunderbird…)

4   Activate MBA

- Select the communication method in the menu "Settings" - "communication method".
- Select the menu "Activation" in "Settings"
    - Enter the login and password
    - Press "Finish"
    - Note: If the Removable drive method is used follow the instructions written in the file called MailInfoxxx.txt to apply the update in MBA.

5   Configuration when MBA is working with MARIS ECDIS900

5.1   MBA and ECDIS900 PC

5.1.1   Share folder on the Network

On all MARIS ECDIS PC on the LAN the two folders "C:\Charts" and "C:\ECDIS_UserData" must be shared on the network.
On MBA PC the folder "C:\ECDIS_UserData" must be shared on the network.

5.1.2   LAN adaptors IP Addresses

IP Addresses are defined according to ECDIS Scheme defined for ECDIS.
If 2 separate adaptors are used :
      ECDIS Lan adaptor : 192.168.3.15x
      Ship Lan adaptor : 192.168.123.15x /Gateway 192.168.123.1/ Primary DNS 192.168.123.1

If 1 adaptor used (ECDIS Lan), 2 IP addresses to be defined on the adaptor:
      IP Address1 : 192.168.3.15x
      IP Address2: 192.168.123.15x (must be in second position)
      Gateway 192.168.123.1
      Primary DNS 192.168.123.1

(in this case, the router can be connected directly with ECDIS Switch using a LAN port)

5.1.3 LAN adaptors configuration

When several LAN adaptors (including Ethernet, Wireless or other adaptors) are available on ECDIS900 or MBA PC proceed as follow:
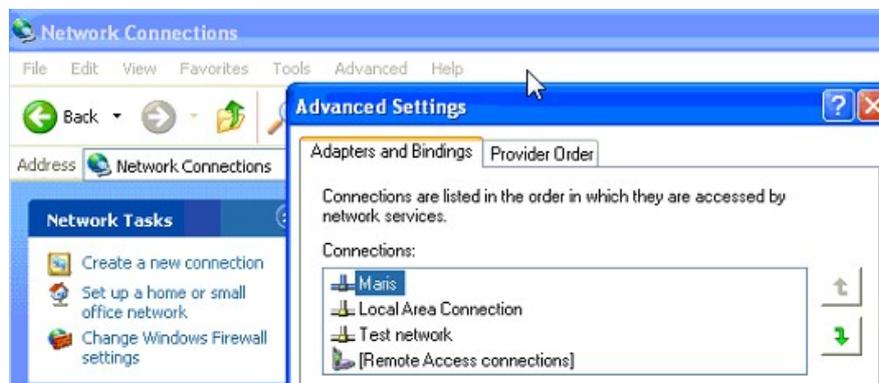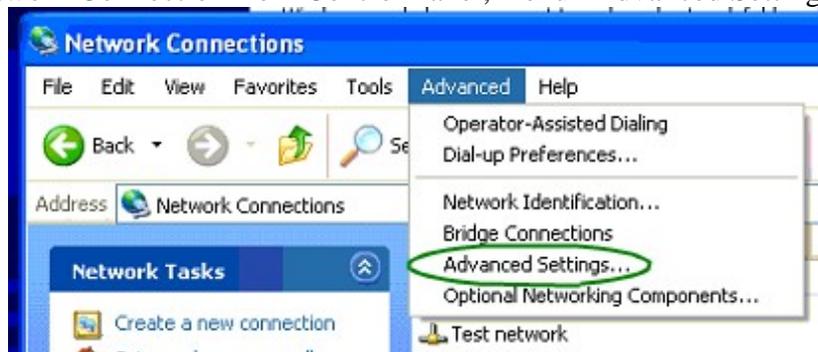
a) All Unused LAN Ports **must** be disabled
- Open Network Connection from Control Panel:

- Right click and disable all UNUSED/UNPLUGGED LAN ports.

b) Binding configuration
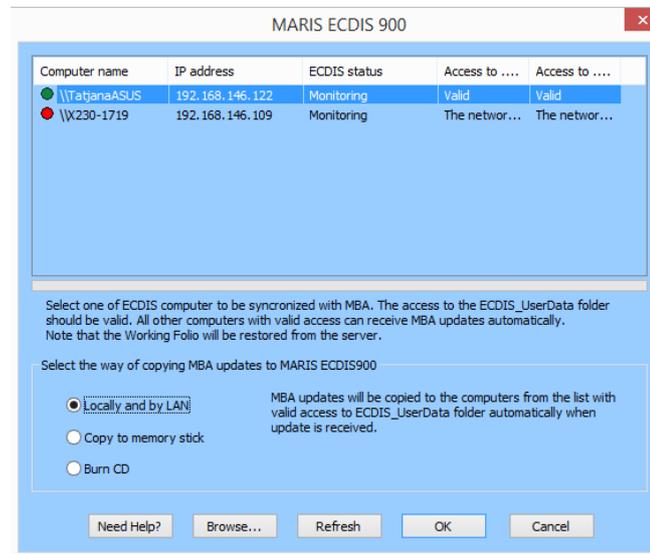MARIS **LAN** port must be on the top of the list. Proceed as follow:

- Open Network Connection from Control Panel, menu "Advanced Settings":

- MARIS LAN port must be on the top of the list of adaptors as above, use the arrow to bring MARIS to the top

5.2 Link MBA with ECDIS900

Activate the menu "Settings" and select "ECDIS Link" and "MARIS ECDIS900"

Select the ECDIS you want MBA application to be synchronized with and push "OK".

6 "PAYS" mode

6.1 Activation of MARIS PAYS

To use MBA in PAYS mode several steps are required:

- Set up the License in MCP (Done by ChartService)
- Install ENC / AVCS on both ECDIS workstations
- Set up SMonitor on MBA PC
- "Application Manager" configuration

6.2 MBA PC configuration

MBA Application must run 24 hours per day.

When PAYS mode is activated, in order to guaranty the consistency of the track, MBA Program should never be stopped. Therefore Application Manager should be installed and PC run in "Approval mode", with MBA added in "Auto" tasks list.

Communication setting is the same as a standard MBA, with HTTPS or email. Removable drive mode is not recommended as Track report should be reported regularly.
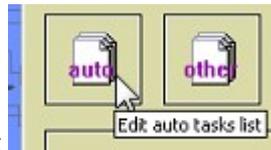
6.2.1   Application Manager Installation

Install "Application Manager" on the MBA PC from installer CD.

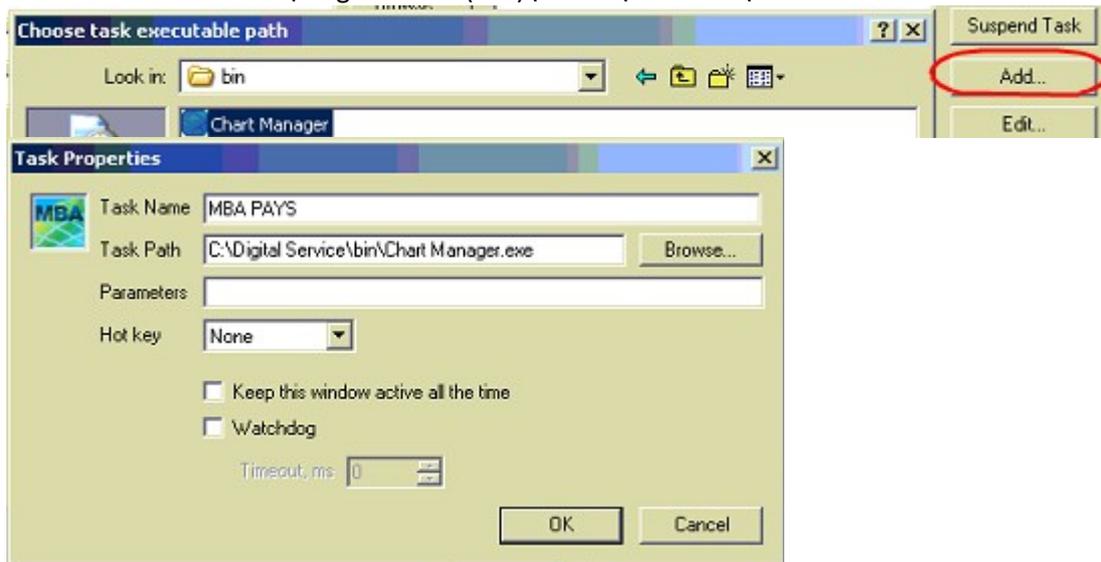### 6.2.2   MBA setup as "Auto" task in Application Manager (AM)

- Run Application Manager in "Administrator" by Right click in AM window. Press "Administrative settings"

button

- And then Edit "Auto" tasks list

- Press "Add" and select "C:\Program Files (x86)\MARIS\Digital Service\bin\Chart Manager.exe".

- Press "Add" and select "C:\Program Files (x86)\MARIS\SMonitor\SMonitor.exe".

MBA Application will be restarted automatically in case it is shut down accidentally.

6.3 Sensor Monitor

Sensor Monitor must run on MBA PC. Sensor Monitor must be configured to acquire GPS position either by serial line or by LAN.
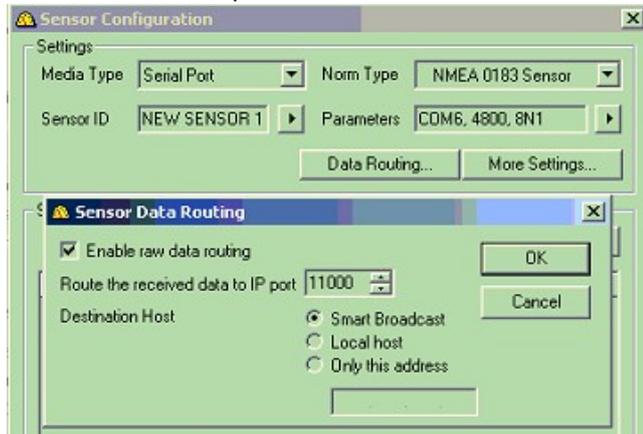
There are three types of installation:

1) MBA is running on ECDIS900 Station
   See Sensor Monitor Manuals

2) MBA is installed on standalone PC connected to ECDIS900 by LAN

It is required to configure Sensor Monitor on ECDIS900 workstation as follow:
- Select the GPS Sensor
- Activate the "Raw data routing"
- Enter the network port 11000

Configure Sensor Monitor on MBA workstation as follow:
- Create a GPS Sensor type Network
- Enter 11000 in the parameter field

3) MBA is installed on standalone PC and another ECDIS brand is used
Connect the GPS to the PC and configure Sensor Monitor as described in the user manual

7   Load Historical NTM

IMPORTANT: This has to be done ONLY when the paper chart update manager is used on board.
Insert the historical CDs provided by ChartService in the CD drive of MBA PC.

8   Commissioning Check list
When the installation and configuration are done activate the menu "Help" and select "Commissioning Check List".
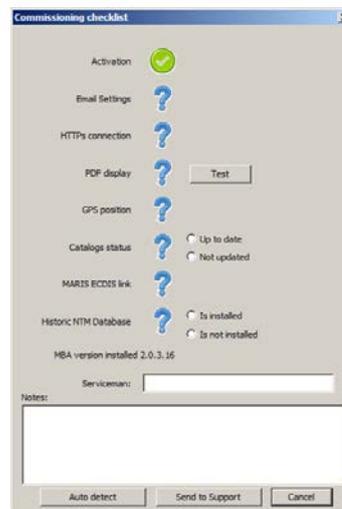
1) Press button "test" next to PDF display
   Expected result: MBA Disclaimer is displayed.
   - Select "YES"
   - Press "OK"
   If MBA disclaimer is not displayed:
   - Select "NO"
   - Press "OK"
   - Press the button "Fix" and follow instructions
2) Historical NTM database
   Select "Is installed" if the historical NTMs have been installed (Paper chart update manager only)

3) Press "Auto detect" and follow instructions. If auto test fails for any relevant test a "Fix" button is displayed next to the failure. Press "Fix" to change the settings
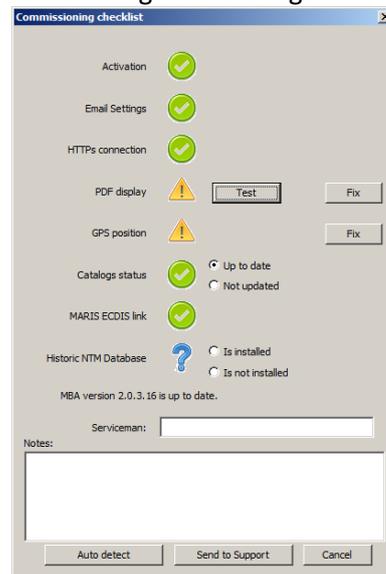
4) Enter your name in the box "Serviceman"
5) Enter eventual comments
6) Press "Send to Support"

Appendix A

**Router DLink DIR 300/600 Configuration**

DIR-300/600 series has 2 roles:
- Switch : with the limitation of 4 Devices or PC connected to the 4 LAN adaptors,
- Internet : Router Firewall, using WAN adaptor connected to Ship Lan providing Internet protocols (email, http, Internet access)

Router IP address is setup by default to 192.168.0.1 , the Login is admin with no password.

The router is configured by importing a configuration file as described below.

Once logged in administration page of the router, select the option "Save and restore" in Router Maintenance page (connection with Web Browser, using default Router IP address 192.168.0.1)
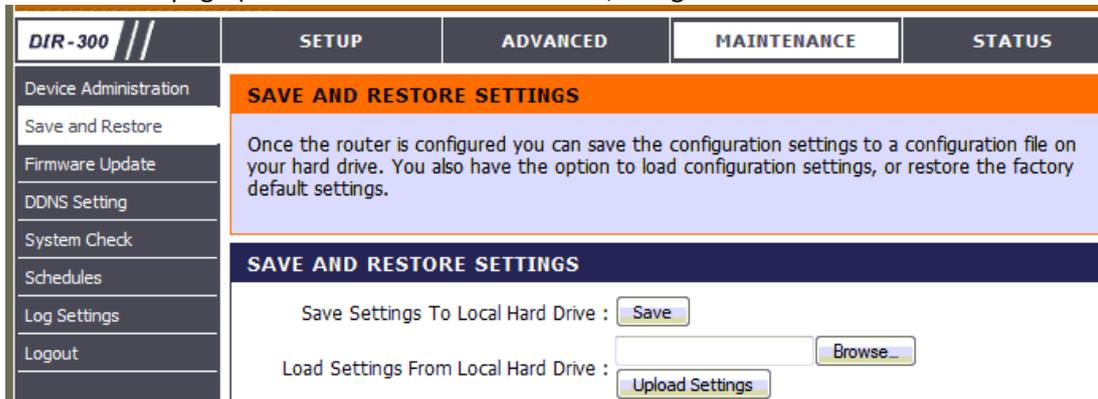
Use "Upload Settings" function, and load relevant configuration file delivered with the router.

Configuration of the IP address of the router WAN side
- o On one PC connected to the router run Internet explorer
- o Enter the address 192.168.123.1 in the address field
- o The configuration software is run. Enter login "admin" and password "mdsadmin".
- o Internet (WAN side) Setup. There are two possibilities:
  - ▪ If DHCP on the ship LAN is activated: The required parameters are configured automatically in the router: IP Address, Gateway and DNS Server.
  - ▪ If DHCP is not activated the parameters (IP Address, Gateway and DNS Server) provided by the ship IP manager must be entered manually as follow:
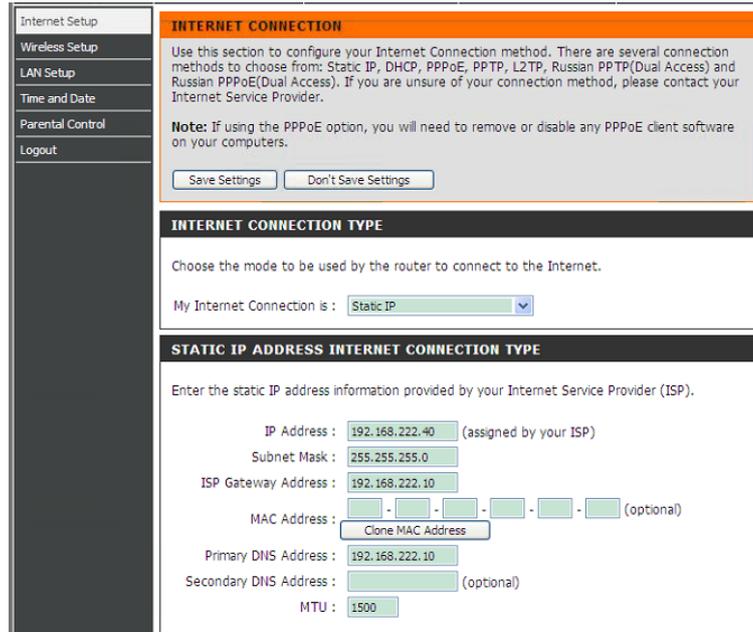
Example: Configuration screen of the router DIR-300/600
Type is defined as "Static IP"
IPAddress, Gateway and Primary DNS Address entered manually
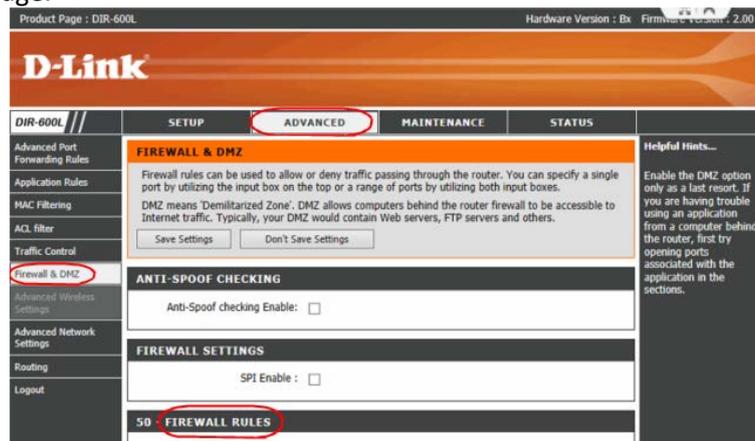*(Primary DNS same as Gateway in most of the case)*

Proxy Server (If Proxy is used on board)
Internet access on board can be done through Proxy server.
In this case, the Router and the PC has to be configured as following:

Router configuration for Proxy server:
- IP address of the proxy, Port number, and Protocol TCP has to be added in the list of authorized rule:
- Open the page:

At the end of the list, before "DenyAll" rule, there is a spare "Proxy" rule, not Active, to be adjusted and activated according to Proxy Parameters:

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Example: Proxy (IP: 192.190.192.13, Port number 8119, TCP) is now open.