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## TECDIS – Update from version 4.6.0 to 4.7.1

Updating a TECDIS software version 4.6.0 system to software version 4.7.1 is a fairly straightforward process that should take no longer than 1-2 hours per TECDIS unit.

The update is available free of charge for any TECDIS units installed after 31.December 2008, and may be provided free of charge for any TECDIS units that have not been in use for a significant period prior to this date, as determined on a case-by-case basis by Furuno Norway and Telko AS. In other cases, the update pricing is 4.000,- NOK.

The update procedure is identical for TECDIS and TECDIS TCS systems.

Documentation for the TECDIS version 4.7.1 software is available from the following web site: <http://www.telko.no/furuno> , filename TECDIS Manual EN rev 2\_0.pdf.  
(Direct link: [http://www.telko.no/furuno/TECDIS%20Manual%20EN%20rev%202\\_0.pdf](http://www.telko.no/furuno/TECDIS%20Manual%20EN%20rev%202_0.pdf) )

### **Reasons for upgrading**

TECDIS software version 4.7.1 provides the following benefits over version 4.6.0:

- **IMO Resolution MSC.232(82) compliance**

The update provides *software* compliance to the revised performance standards for ECDIS that came into effect on 1. January 2009. Provided that the installation complies with the hardware requirements outlined in the revised type approval certificate for TECDIS (MED-B-5153), the update will allow full compliance to this performance standard.

**For installations where the TECDIS processor was placed in its final physical position after 31.December 2008, this compliance is mandatory.**

(MED-B-4555 Direct link: <http://www.telko.no/furuno/MED-B-4555.pdf> )

(MED-B-5153 Direct link: <http://www.telko.no/furuno/MED-B-5153.pdf> )

- **S-52 presentation library version 3.4**

The update includes the current version of the S-52 presentation library and support for the latest changes in the IHO ENC Product specification. The update allows existing TECDIS installations to continue to meet the chart carriage requirements as set out in SOLAS regulation V/19.2.1.4, and thusly complies with the IMO recommendations found in IMO SN.1/Circ.266.

- **Dynamic Licensing**

The update is required to make use of the new Jeppesen Marine pay-per-view ENC licensing option. Use of Dynamic Licensing ensures that ENC chart licensing costs are minimized, and administration of chart licenses is handled automatically by the system, reducing the workload both for bridge personnel and for vessel operators.



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- **Weather Overlay**

The update includes advanced weather overlay functionality, using top quality commercial maritime weather forecast data available as a subscription service from Jeppesen Marine. The weather overlay is fully customizable and includes both atmospheric and detailed wave data. The overlay includes alarm features allowing intuitive and easy visualization of weather window and dangerous weather conditions. The weather overlay is also integrated with the route system, providing manual weather routing and custom voyage meteorograms.

*Note that a three month demonstration subscription to the weather overlay service is available to all systems running TECDIS software version 4.7.1. To activate this subscription, contact Jeppesen Marine and supply them with the system ID for the TECDIS unit(s). A software feature code for weather overlay must also be obtained from Telko AS or Furuno Norway. This code is entered in the same manner as in step 29 of the update procedure.*

- **SeaRoutes automatic route draft generation**

The update includes functionality for automatic generation of route drafts from/to both ports and user selected positions. The generated route drafts follow traffic separation schemes and take all other chart features and vessel draught into account. This feature can speed up route creation significantly, lowering the navigator workload.

- **Future features**

TECDIS is continually being improved with new and improved features that are made available free of charge through software updates on the web site <http://www.telko.no>. New features are mostly made available only for most recent TECDIS generation (4.7.1), and updates for the previous generation (4.6.0) will from now on primarily consist of bug fixes. By updating to version 4.7.1, existing users can continue to benefit from the free system improvements provided.



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## ***Determining the TECDIS Software version number***

The major software version number is displayed in the initial stages of starting the TECDIS software. This will either be '4.6.0' for the previous generation of TECDIS software, or '4.7.1' for the current generation.

If this value is 4.7.1, this update procedure is not required.

The following procedure determines the full TECDIS software version number, and provides a method for determining the version number without restarting the system:

1. On the TECDIS or TECDIS TCS, check if the menu folders on the right side of the screen are visible.
2. If they are not, press the folder icon at the upper right corner of the screen, labeled 'Tool menu folders'.
3. Select the menu folder labeled 'Chart'.
4. Press the button named '?' to the immediate left of the buttons 'S52' and 'INT1'. A chart legend window will be displayed.
5. Note the TECDIS software version number specified in the first entry of the chart legend (TECDIS Software). The version number is the value of this field up to the # character.

## ***Determining the TECDIS System ID number***

The System ID number for each TECDIS unit is required for the on shore preparations for the software update. This number can be determined in one of three ways:

### **A. Physical Inspection**

1. Inspect the label connected to the USB license dongle attached on the rear side of the TECDIS processor. The System ID is noted on this label.

### **B. Using TECDIS Setup**

1. Insert the TECDIS Service Key in the TECDIS processor.
2. In the TECDIS main display, exit the TECDIS software by pressing the icon in the upper left corner of the display. Press 'YES' to confirm.
3. Start TECDIS Setup by clicking the TECDIS Setup shortcut on the desktop.
4. Select the 'Licensing' folder.
5. The System ID is displayed in the lower half of the TECDIS Setup window (C-Map License area).

### **C. Using TECDIS**

1. Follow the procedure for determining the full TECDIS software version number, and note the five digits immediately following the '#' sign in the 'TECDIS Software' entry in the chart legend. Appending this number to the text 'Telko eT' constitutes the full System ID.



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## UPDATE PROCEDURE

### *Preparation on shore*

1. Download the files **TECDIS471Installer.exe** and **TECDISUpdate.exe** from <http://www.telko.no/furuno> and place them on a memory stick.  
(Direct link: <http://www.telko.no/furuno/TECDIS471Installer.exe> )  
(Direct link: <http://www.telko.no/furuno/TECDISUpdate.exe> )
2. Obtain the System ID numbers for all TECDIS units on the vessel by following one of the procedures outlined for this above.
3. Obtain **upgrade license codes** from Telko AS (support@telko.no) or Furuno Norway. Include the System ID numbers for all TECDIS units that are to be upgraded in the request.

### *Preparation on vessel*

4. Backup the system configuration by copying the following files from the directory C:\Program Files\TECDIS to a memory stick, preferably to a separate directory for each TECDIS unit:
  - dta4.res
  - dta4.setup
  - TELchart.ini
  - Tecstart.ini
  - nmea24.res
  - conf.res (if Conning)
  - All other INI files (\*.ini)
  - The entire directory 'Data\_A'
5. Take screenshots of the following configuration windows by pressing Alt + PrtSc with the window selected, opening Paint (Start Menu, All Programs, Accessories, Paint), pressing Ctrl + V and saving to the memory stick directory.
  - TECDIS Setup, NMEA Data
  - TECDIS Setup, Specification
  - TECDIS Setup, Track Control (if TCS)
  - NMEA Server
  - Conning Configuration (including calibration, if VDR)
6. The configuration files and images saved on the memory stick in step 4 and 5 above should be retained by the service technician performing the update. Combined, these files provide complete documentation of the TECDIS unit configuration. (The directory 'Data\_A' may be deleted from the memory stick. This contains all routes, tracks and symbols entered by the system users.)

### *Installation of the update*

7. If the TECDIS software is running, insert the TECDIS Service Key and exit the TECDIS software (by pressing the toolbar button in the upper left corner of the display). Leave the TECDIS Service Key
8. **Insert the memory stick containing the TECDIS471Installer.exe file, and run this file.**
9. Press 'Next' to move past the welcome screen.
10. Press 'Next' to move past the directory selection screen.
11. Deselect 'TECDIS', 'Sentinel Codeplug Drivers' and 'S-63 Chart Loader'.  
**Only 'C-Map System Files' should be selected.**
12. Press 'Next' to move past the component selection screen.



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13. Wait while files are being copied, and press 'OK' to close a message with title "Installing C-Map system files" and start installation of the C-Map system files.
- 14. Wait while the eToken runtime is being configured, and press 'YES' to allow the installer to reboot the system.**
15. Wait while the system restarts.
- 16. Run TECDIS471Installer.exe again**
17. Press 'Next' to move past the welcome screen.
18. Press 'Next' to move past the directory selection screen.
- 19. Deselect 'Sentinel Codeplug Drivers'. Leave all other components selected.**
20. Press 'Next' to move past the component selection screen.
21. Wait while files are being copied. When asked if the existing TECDIS configuration files should be replaced, press 'NO'.
22. When asked if the existing TECDIS data files should be replaced, press 'NO'.
23. When a message with title "Installing C-Map system files" is shown, press 'OK' to start installation of the C-Map system files. If a window titled "Calibrate the screen" is shown, press 'OK' to continue.
- 24. When notified of an existing C-Map user and asked if 'you want to reinitialize', press 'NO'.**
25. Press 'Finish' to move past the installation complete screen.
26. If a notification that a restart is required to complete the installation, press 'OK' and wait while the system restarts.
27. Start TECDIS Setup. Ignore any error message that appears.
28. Select the 'Licensing' folder and press the button 'Show / edit license'.
- 29. In the Password field, enter the password for the system obtained in step 3 and press 'Program'.**
30. The text following 'Codeplug:' should now have changed from #xxxxx 5.4 ... to #xxxxx 5.6 ... (where xxxxx is the System ID number).
31. Press 'OK' and select the 'Chart Installation / Misc' folder.
32. If the field 'Monitor Calibration Status' is red and shows 'No serial line to monitor', ensure that the monitor is connected to the TECDIS unit with a serial cable, and that the 'Monitor ctrl' field is configured correctly in the 'NMEA Data' folder.
33. Press 'Identify Monitor and Load Automatic Calibration'.
34. If the field 'Monitor Calibration Status' is red, press 'Manual Calibration: Load Calibration File...'
35. Select the calibration file matching the monitor connected. Calibration files can be found on **D:\Drivers\TECDIS**. Calibration files can also be downloaded from <http://www.telko.no/furuno/Calibration>.
36. Press 'Open'. The field 'Monitor Calibration Status' should now turn green.
37. Exit 'TECDIS Setup' and start 'TECDIS'.
38. Open the menu folders, select the 'Setup' folder, select 'Auxiliary' and select 'Recalibrate Screen'.
39. Exit TECDIS.
40. Run the file **TECDISUpdate.exe** and follow the on screen instructions until the update has been completed.
- 41. Install TECDIS IP filtering as outlined in Appendix 1.**



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### ***Verification of successful update***

42. Start TECDIS Setup and verify that no error message is displayed on start up of TECDIS Setup.
43. Compare the settings in the 'NMEA Data' and 'Specification' (and 'Track Control', if TCS) folders to the screenshots from step 5 to verify that settings have been retained.
44. Verify that the field 'Monitor Calibration Status' in the TECDIS Setup folder 'Chart Installation / Misc' is green.
45. Remove the TECDIS Service Key and restart the system.
46. Verify that NMEA Server (if used), TECDIS and Conning (if used) are started normally.
47. Determine the TECDIS Software version number and verify that this number begins with 4.7.1.
48. Verify that configured sensor inputs are received and displayed in both TECDIS and Conning.
49. Verify that user data (routes, symbols, tracks) present on the system before the upgrade has been retained.
50. Allow the users of the TECDIS unit to perform tests of their choosing to verify that the system is working as expected.



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## Document Revision History

Revision	Date	Changes
01	29. May 2009	Initial release.
02	3. Jun 2009	Monitor calibration added to update procedure
03	27. Jan 2012	Instruction to download, and to run TECDISUpdate.exe added

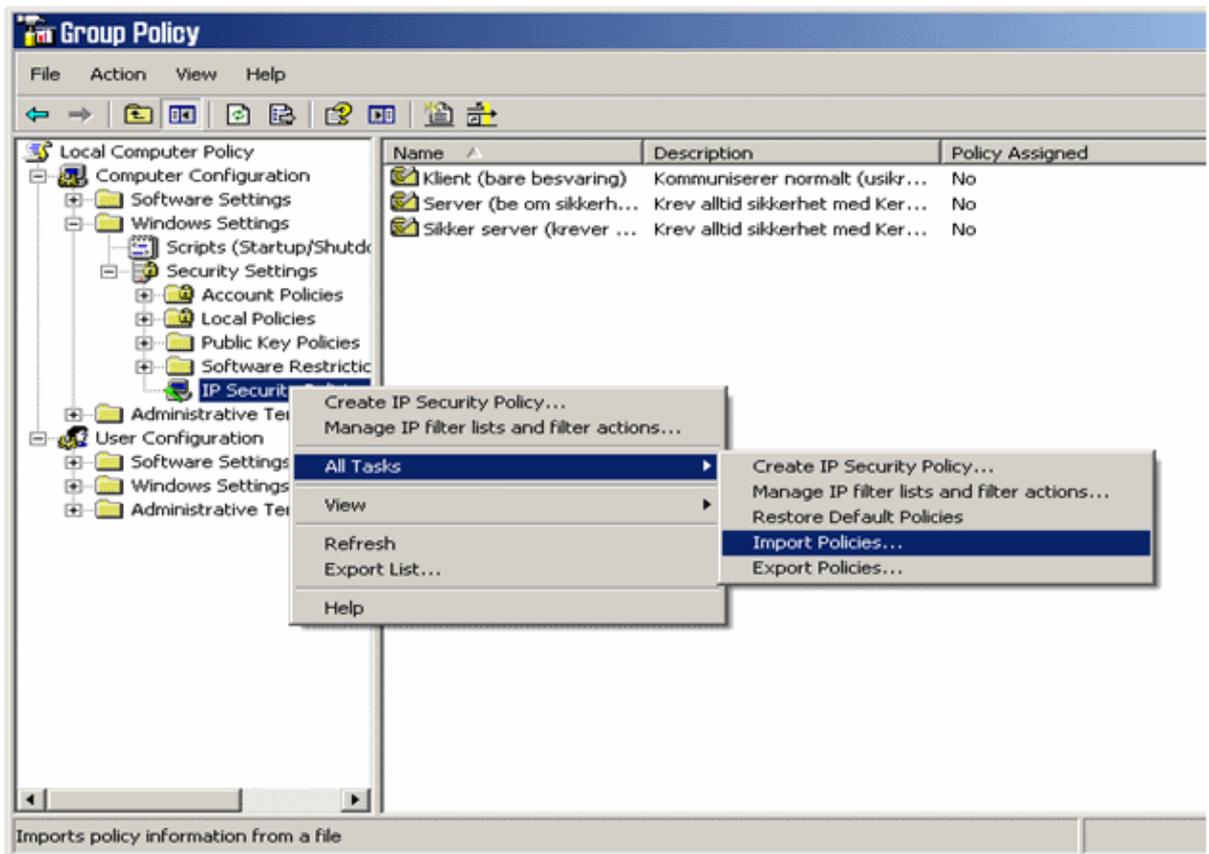


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## Appendix 1 – Installation of TECDIS IP Filter

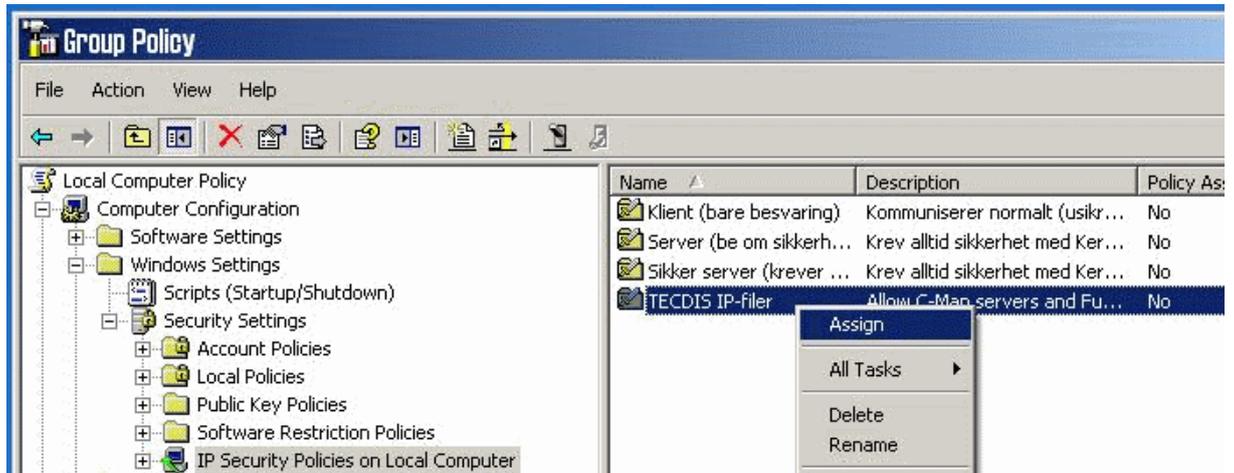
**IMPORTANT:** The information contained in this appendix is intended for TECDIS installation and support personnel only, and should not be divulged to end users of the system. Possession of this information by end users may allow them to bypass internet security features in TECDIS required for type compliance if the system is connected to the internet.

1. On the Windows Start menu, select run, enter ‘GPEDIT.MSC’ and press ‘OK’.
2. Expand Computer Configuration, Windows Settings, and then Security Settings and select ‘IP Security Policies on Local Computer’.
3. Right click on ‘IP Security Policies on Local Computer’
4. Select ‘All Tasks’, ‘Import Policies...’.  
Select the file **C:\Program Files\TECDIS\TECDIS\_filter.ipsec** and press ‘Open’.

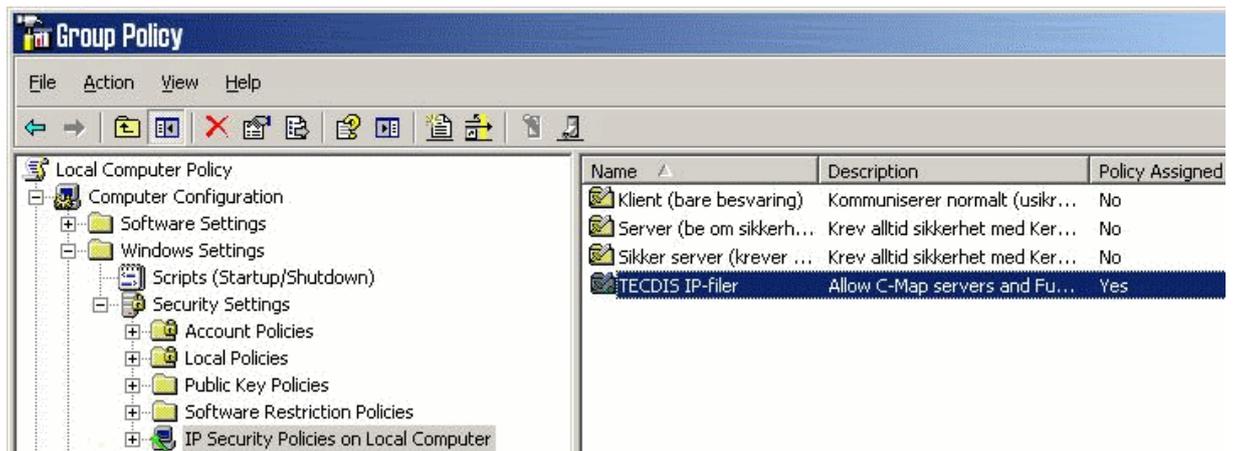


5. ‘TECDIS IP-filter’ should now be visible in the right part of the window.

- Right click 'TECDIS IP-filter' and select 'Assign'.



- The 'TECDIS IP-filter' entry should now show 'Yes' in the 'Policy Assigned' column.



- Run the program **C:\Program Files\TECDIS\AddCmapHosts.exe**. The program will provide no user interface or messages and will complete its work immediately.

## Verification of successful TECDIS IP-filter installation

Successful installation of TECDIS IP-filter can only be fully verified if the system is connected to the internet. Partial verification may be performed with the following two steps:

- After completion of all update steps, verify that the alarm 'Lost backup link to other TECDIS' is not generated after creation and activation of a route in TECDIS.
- Step 38 of the update procedure verifies that the IP filter is not interfering with any configured sensor data routed over the network.

If the system is connected to the internet, the following steps allow full verification:

- Perform an online chart update using the 'Auto' section of the update interface.
- In Windows, open Internet Explorer and attempt to access <http://www.telko.no>. This website should not be available.