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Author	Pål K. Hansen	Date	27. June 2013
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TECDIS Synchronization User Guide

The TECDIS (and/or TELchart ECS) systems on board have been configured with automatic chart database synchronization.

What does the Synchronization feature do?

The synchronization feature will automatically distribute any changes you perform on a chart database on one system to the other systems. All of the following changes to chart databases are synchronized across the systems:

- Installation of new chart database editions
(For example, loading a new DVD from Jeppesen Marine).
- Installation of new charts and chart updates in S-63 format
(For example, loading updates from a Navtor NavStick, or loading of BASE or UPDATE CDs from Primar or UKHO)
- Online chart updates
(For example, using the Jeppesen Update Service)
- Removal of a chart database
- Rejection of single chart cells in the chart library
(Must be performed on the primary unit)
- Manual chart updates
(Removal of manual updates must be performed on the primary unit)



Before any chart updates are automatically applied, you have the opportunity to postpone the update if the system is actively being used. After a given period of time (5 minutes) after you are notified, the update will be performed automatically, so you will not need to attend to all of the systems.

Note that chart licenses are not synchronized, so you will still need to ensure that Jeppesen Marine chart licenses are current on all systems, and that any system where S-63 chart data is loaded is kept up to date with current cell permits.

If you are using Jeppesen Dynamic Licensing, you will still need to use the Jeppesen Update Service on all systems, so that chart use is reported.

Also note that the synchronization is not instantaneous. Changes to the chart databases are copied across the systems behind the scenes, and you are notified when the changes has been copied and verified and are ready to be applied. Especially when a large amount of data needs to be transmitted, there will be a delay of several minutes before the other units are updated.

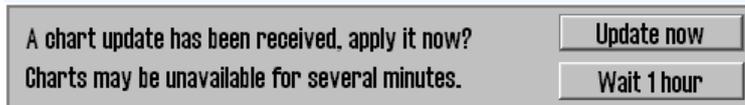


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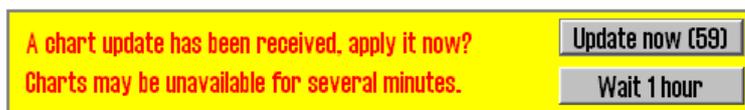
How do I use the synchronization feature?

You can continue to use the systems exactly as before. The only difference in operation of the systems will be in what occurs after charts are updated. On each of the other systems, the following message will be shown 1-10 minutes later.

1. Update ready notification (shown at the lower edge of the chart display)



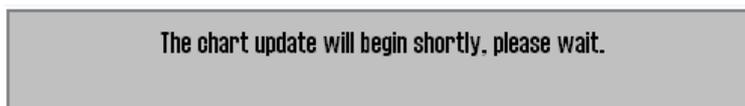
2. If the system is in use for navigation, you can delay applying the update by pressing the button 'Wait 1 hour'. Once an hour has passed, the message will be shown again.
3. After 4 minutes, if no action has been taken, a one minute countdown begins and the message changes color to yellow:



4. During the last 10 seconds, the message changes color to red. Once the countdown reaches 0, the update is applied automatically.



5. Once the 'Update now' button has been pressed, or the countdown has reached 0, the following message is shown while the synchronization feature prepares to apply the update.



6. While the update is being performed, no chart data will be available, and the anti grounding feature will be out of operation. A warning message is shown. Applying a chart update typically takes a few minutes, but may take as little time as 5-10 seconds, depending on the size of the change being applied.



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The system will behave differently while the update is being applied, depending on whether the vessel is on screen at the time the update starts. If the vessel is not on screen, all charts are removed from the display during the update, but it is possible to change scales or chart center position.

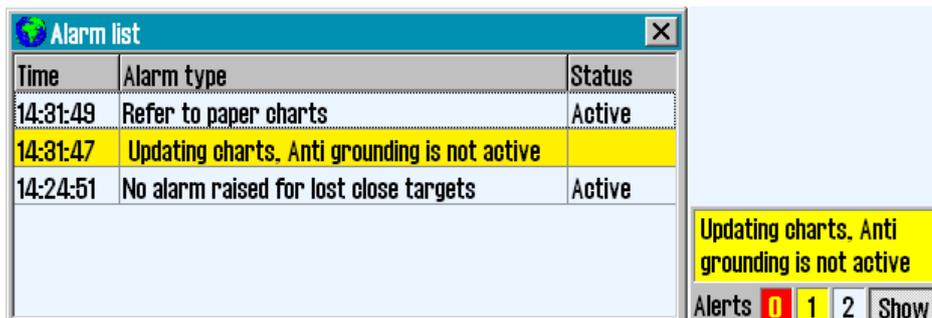


If the vessel is on screen when the update is applied, chart display is retained as long as the vessel remains on the screen, but it will not be possible to change scales or chart center position (or interact with the chart in any way) until either the vessel has moved off screen or the update is completed.



In both cases, all sensor monitoring remains operational. Targets will be displayed and tracked, and CPA alarms remain fully functional.

7. A caution is also triggered by the chart update in the alarm system. If you do not attend the update process, the presence this unacknowledged caution will allow you to confirm that the update has been applied when you return to the system.



8. Once the update has been completed and the caution has been acknowledged, all chart databases that were in use before the update are reloaded (unless they were removed by the update).

Note that any new chart databases are not automatically selected for display. Please select any new chart databases for display in the 'Setup' menu.

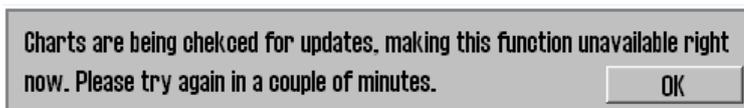


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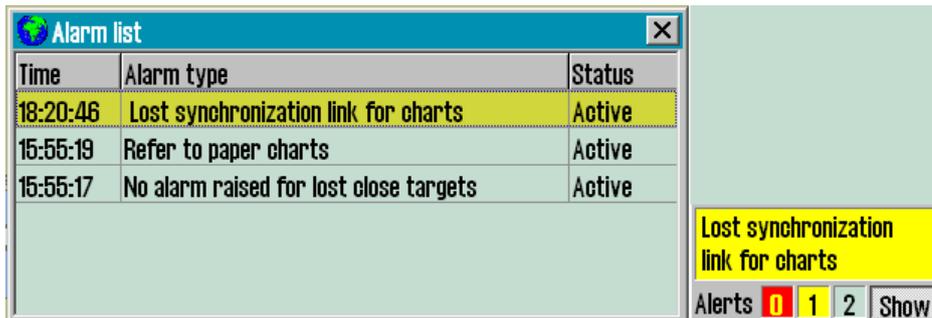
You should also be aware of the following when synchronization is active on the systems:

1. Periodically, the chart databases are checked by the synchronization feature for changes.

These checks take a few minutes and have no effect on the normal use of the chart databases, but access to the C-Map chart update interface, the Chart library and the Manual chart update interface is blocked during these checks. If you attempt to access one of these interfaces while the chart databases are being checked, the following message will be shown:



2. If TECDIS (or TELchart ECS) loses contact with the synchronization feature, the following caution will be displayed until contact with the synchronization feature has been achieved again:



3. SENC updates are shown in the update log of the unit where the updates are loaded. On the other units, all updates will be synchronized, but only shown in the list of updates.
4. Note that when you want to remove a single chart cell, or remove a manual update, this must be performed on the primary TECDIS / TELchart ECS unit. Otherwise, the chart cell or manual update will be restored from the primary unit.



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Troubleshooting

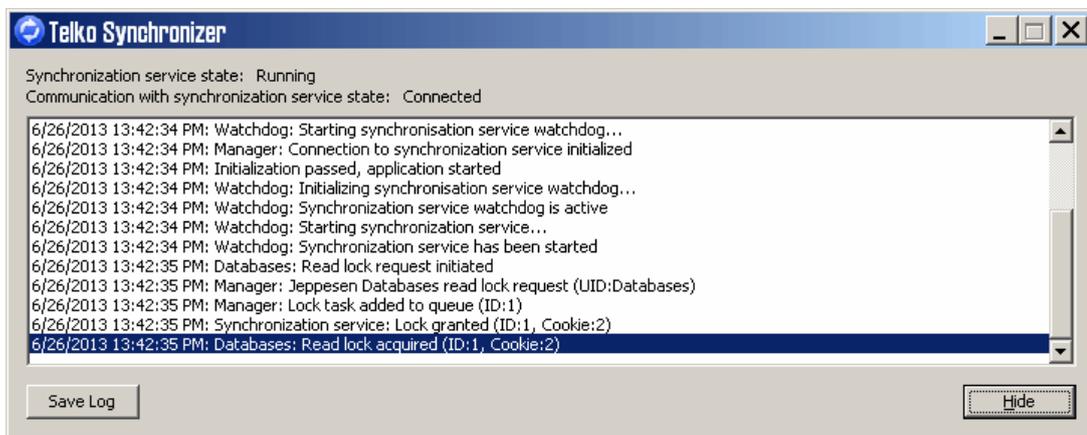
If a change in the chart databases fail to be synchronized, or you experience any other issues related to the synchronization feature before contacting support.

- **Verify that ‘Telko Synchronizer’ is running**
Enter service mode and exit the TECDIS / TELchart ECS application. Look for the following icon in the system tray:



If Telko Synchronizer is not running, please remove the service key and restart the system. This application will be started automatically when restarting outside of service mode.

- **Verify that you are not starting the system in Service Mode**
Please avoid having the service key permanently inserted. If the system is restarted with the service key inserted, important supporting applications such as ‘Telko Synchronizer’ and ‘NMEA Server’ will not be started automatically.
- **Check the Telko Synchronizer log and states**
Right click the icon shown above and select ‘Show’. This will display the following window:



The contents of this log is intended for support personnel, but it is possible to get an idea of the state of the synchronization service in this window. Verify that the Synchronization service state is ‘Running’, and that Communication with synchronization service state is ‘Connected’. The log can also be saved and sent to your support contact.

- **Verify the network connection**
If there is an issue with the network connection to the other TECDIS unit, the caution ‘Missing netw. connection (TECDIS Setup Export IP)’ will be shown. No synchronization can take place while the network connection between the units is not operational.



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Resetting the Synchronization state

If the steps described in the ‘Troubleshooting’ section above do not resolve an issue you are experiencing with the synchronization feature, the following procedure will allow you to perform a full synchronization reset.

Performing a synchronization reset will cause all systems involved to go through all chart databases to re-determine the current state. This may cause the C-Map chart update interface, the Chart library and the Manual chart update interface to become temporarily unavailable, as described above.

On each unit using the synchronization service, perform the following steps:

1. (TECDIS only) Insert the TECDIS Service Key.
2. Exit the TECDIS / TELchart ECS application.
3. Right click the Telko Synchronizer Icon in the system tray and select ‘Exit’. Press ‘Yes’ to confirm the operation.



4. Ensure that you have performed steps 1-3 for all units before proceeding.
5. Open ‘My Computer’, and navigate to the directory ‘C:\Program Files\TECDIS’ on a TECDIS unit, or ‘C:\Program Files\TELchart ECS’ on a TELchart ECS unit.
6. Locate and run the program ‘**TelkoSyncReset**’.
7. Press ‘Start’.
8. If the reset is successful, a message will be shown. Press ‘Ok’ to confirm. If you receive a message that synchronization is still running, confirm this message, check again that step 3 has been performed and wait 2 minutes. Then try step 6 again.
9. Ensure that you have performed steps 5-8 for all units before proceeding.
10. Remove the TECDIS Service Key (TECDIS only) and restart the system.

Document Revision History

Revision	Date	Changes
01	26.06.2013	Initial release.