Simrad TD50

Software Release Note 1.5.0

Introduction

This document describes the changes introduced with the new software version.

- **Product**: TD50
- **Software version**: 1.5.0

This software controls all functionality in the Simrad TD50.

Do I need to upgrade?

We recommend that all users update their software. New functionality is provided and will add value to your installation.

Old software versions are not supported.

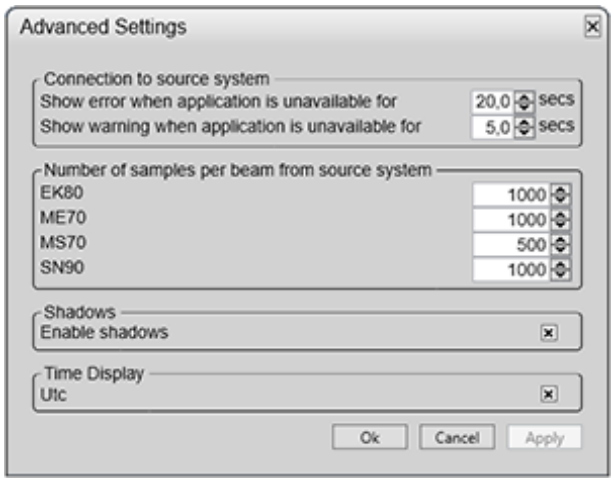
Software changes

This software update solves a number of software bugs that have been reported by our users, or detected during our own product testing. New functionality is also introduced.

The following specific changes have been made.

General changes

1 You can select to use local time zone or UTC time (Coordinated Universal Time).



You select this from the **Time Display** option in the **Advanced Settings** in the **Setup** menu.

2 The time settings have been improved:

- In live surveys TD50 shows local time zone (local time originates from where the data is received, ex. EK80).
- In replays, TD50 shows local time of recording (local time originates from the time set at the time of the survey).

3 Roll, pitch and heave are now displayed in the **Top bar**.

4 Position data displayed in the **Top bar** is now the same as the position of the vessel.

5 The orientation of the vessel displayed in TD50 is now based on roll, pitch and heave.

6 A position marker for the vessel is now shown when you zoom out. The vessel track is displayed as a green line.

7 You can now pan the camera in relevant views such as **Towards stern**.

Changes for all echo sounders

1 New features have been added to the clipping functionality.

- Echo sounder data can now be clipped based on vertical depth range.
- Echo sounder data exceeding a defined decibel limit can now be clipped.
- Two new options for all clip settings have been added, **Apply to source** and **Apply to all**
- The menu **Clip** now comprises all settings for clipping. Any additional clip menus have been removed.

In the TD50, the phrase *clip* is used to describe how you can remove unwanted echo data from the presentation. Such data can for example be acoustic noise, echoes from error prone beams, or information below the seabed.The 3D presentation of any echo requires computer resources. By removing unwanted echoes, you may experience improved performance.

2 The bottom detection range is now set by the echo sounder. It was previously set by TD50 software.

MS70 changes

1 A defined number of lower beams can now be removed.

2 **Top beams to Remove** has been renamed to **Upper beams to remove** for MS70 Matrix.

3 The user interface elements for clipping to detect seabed has been removed as the functionality is not yet supported.

4 The clipping options for the central fan of MS70 are now identical to the clipping options for the matrix.

Terrain editor changes

1 **Export** is a new function.

The export function allows you to download terrain data locally and export these files in a suitable format if you wish to use a different computer.

Using the export function you can download terrain data prior to a survey and avoid the problem of downloading great amounts of data when bandwidth is limited. The export function will copy the `.terrain` file and the relevant data set which have been previously downloaded, and place the copy in a specified folder.

2 Terrain tiles are now stored by default within a TD50 data folder structure.

Important

If you wish to keep using previously downloaded tiles you must copy existing data from:

`%localappdata%\Kongsberg Digital\Cogs\TerrainCache`

Place the files in the new location:

`C:\Users\Public\Documents\Simrad\TD50\Data\TerrainCache`

You do not need to change the references in the `.terrain` definitions.

The export function is only valid for downloaded data, not bathymetric `.TIFF` files.

3 A new acknowledgement question when opening `.terrain` files has been added.

Opening `.terrain` files, will sometimes require downloading additional data to get a suitable resolution at the current position and zoom level. The acknowledgement is added to rise your awareness to the extra bandwidth and time this may imply.

4 The vessel position is now displayed in 3D.

This information is used for filtering valid terrain sources in the user interface when adding new elevation or colour source. By default, the position reflects the current location of the vessel.

You can change the position of the marker by clicking in the **Location** page on the right side of the **Terrain editor**.

5 The bathymetric coverage for all UTM zones (Universal Transverse Mercator)has been improved.

6 The noise option has been removed from the source type.

7 The **New elevation source** dialog box has been improved.

The options for where and how you want to get your map data is changed. The list has been updated with new names as follows:

- **Constant numeric value** replaces **50 meter flat terrain**
- **Predefined list of web servers** replaces **Predefined map type**

Bugfixes

The following bugs have been fixed.

1 The value set for re-sampling in TD50 was not applied at startup, causing the echo sounder data to be rendered at a higher resolution than intended. This has been fixed.

2 Dynamic memory allocation is implemented to avoid crash on systems with less memory on the graphics adapter.

3 TD50 no longer needs 20 pings to show echo sounder data when heave information is missing.

4 Issues concerned updating the vessel position is fixed.

This problem occurred during replay of recorded data. When TD50 was running against an echo sounder replaying a survey at speeds significantly higher than real time, the vessel position would not always be updated.

5 Labels on depth axis and beam grid is no longer flickering when zooming far out.

6 Bugfixes in the **Terrain editor**:

- Changing the depth raster source no longer causes a software crash.
- You can now select all available projections when editing WMS (Web Map Service) source.
- You will now receive a new message when no valid projection is found in the WMS wizard.
- The **New elevation source** option **Image file on disk** is now validated when selected.
- There has been a bug regarding **Selected Area** which now has been fixed and the option can now be selected and unselected. The option is found under the **Download** tab.

Validation against other products

This software version is tested with the following applications and software versions:

- MS70 sw version 1.3.0
- ME70 sw version 1.2.7
- EK80 sw version 1.12.4

Using terrain data

For a useful presentation of the seabed, you can add seafloor data from public servers using the built-in **Terrain Editor**. Data will be downloaded on demand, based on current viewing position and zoom level in TD50. In order to avoid using to much bandwidth at sea (this is often a scarce

resource) the terrain data is downloaded and exported (when necessary) in an office environment prior to leaving shore. The terrain data files are saved as a `.terrain` file.

Prerequisites

The computer must be connected to Internet and have a reasonable bandwidth available.

Context

The **Terrain Selection** dialog box is used to select which terrain data sources to use in the TD50 presentation.

The general idea when downloading terrain data is to:

- Select a new elevation source.
- Select one or more colour schemes.
- Select the appropriate data resolution.
- Save or export the downloaded terrain data.

Procedure

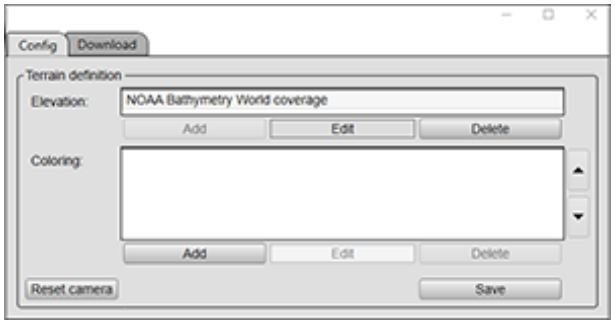
1 Select the **Environment** menu.

2 Observe the **Show Terrain** function.

3 To open the **Terrain Selection** dialog box, select the middle of the **Show Terrain** button, and select **Terrain Selection**.

4 Select **New** to create a new terrain file.

5 Open the **Config** page.



6 Under **Elevation**, select **Add**.

7 Select **Predefined list of web servers**.

Select **Next**.

8 Select the appropriate web server from the list.

Select **Next**.

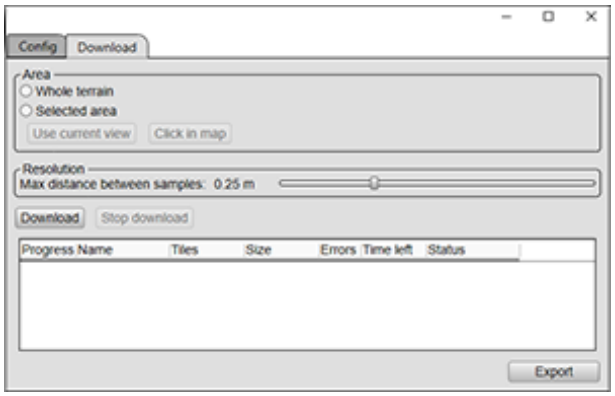
The elevation source provides data for the actual terrain. The selected map data appears on the left side of the **Terrain Editor** dialog box.

9 Observe the map displayed on the left side of the **Terrain Editor** dialog box.

10 Under **Coloring**, select **Add**.

The colour source provides different colour schemes which are added to the terrain data. You can select one or more colour schemes to highlight different characteristics in the terrain. The map on the left side of the **Terrain Editor** dialog box changes colours accordingly.

11 Open the **Download** page.



12 Select the appropriate area of the map to download in the **Area** page.

Selecting a smaller area of the map will reduce the amount of data which needs to be downloaded. Select **Click on the map** and mark the area of interest on the map.

Important

Terrain data being downloaded is added to the already obtained TerrainCache data. Remove previously downloaded data by deleting the folders manually in the terrain cache folder.

`C:\Users\Public\Documents\Simrad\TD50\Data\TerrainCache`

13 Select the appropriate resolution by moving the slider along the resolution bar.

The resolution you select on the terrain data will affect how coarse the terrain data will be, but also the amount of data being downloaded.

14 Select **Download** to download the terrain map data.

The map data is downloaded from the chosen web server.

Note

This requires certain amounts of bandwidth and takes time. It may be advantageous to do this before starting a mission/survey.

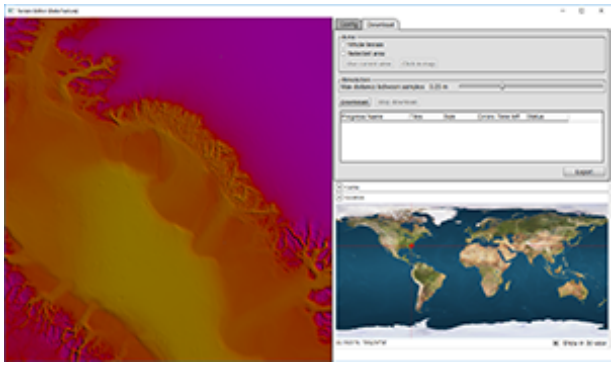
Data displayed regarding the download process:

- Progress
- Estimated remaining time
- Number of tiles and files downloaded
- Number of tiles and files remaining

The download process may be stopped using the **Stop download** button. **Stop download** will make a pause in the process. When resuming to download the process will start where it left off, and the previously downloaded files are intact. A text underneath the progress information will also indicate the progress and when the process is complete.

15 Select the **Save** or **Export** to store the terrain data appropriately.

Use **Export** if you wish to continue working on a different computer. Select **Save** if you want to continue working on the current computer. **Save** can be found under the **Config** tab.



Exporting a terrain for use on another computer

The export procedure stores the downloaded terrain files in a new folder. The files can be copied to the TD50 computer aboard a vessel and used during surveys. This enables you to download terrain data without concern of bandwidth limitations, prior to surveys.

Prerequisites

The bathymetric files must be downloaded from an appropriate web server by the TD50.

Context

The **Terrain Selection** dialog box is used to select which terrain data sources to use in the TD50 presentation. You can define which projection to use, and provide a vertical offset to compensate for different vertical datums.

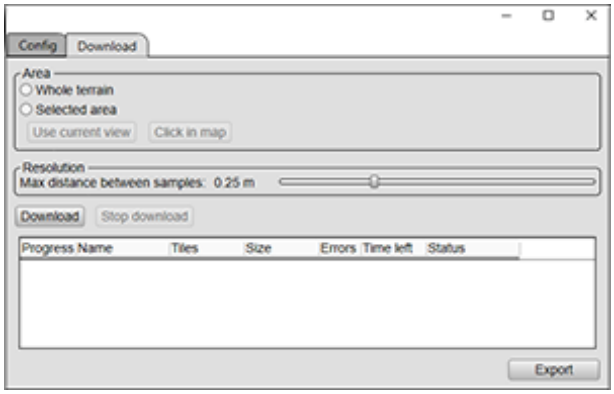
Procedure

1 Select the **Environment** menu.

2 Observe the **Show Terrain** function.

3 To open the **Terrain Selection** dialog box, select the middle of the **Show Terrain** button, and select **Terrain Selection**.

4 Open the **Download** page.



5 Select the **Export** button.

6 Create and select a dedicated folder where the exported terrain data will be stored.

Known issues

Certain software issues related to the Simrad TD50 are known. Issues in the TD50 software will be corrected in future upgrades.

- End user documentation for Simrad TD50 is not updated with the latest software release.

End-user documentation

The end user documentation for the Simrad TD50 3D Visualisation software has not been updated with this release. Documents describing the new features are included with the software installation files.

The current *Reference Manual* is included on the TD50 software media (USB flash drive). End user documentation can also be downloaded from the product website

- https://www.simrad.com/td50

The TD50 *Reference Manual* is included with the TD50 software as on-line help.

Software licenses

The Simrad TD50 is not a licensed product.

Software installation

When a new TD50 software version is released, it must be installed on your Processor Unit.

A dedicated wizard is used to install the TD50 software. You need administrative privileges on your Processor Unit to do the software installation. Installation of additional operating system components may be required. These are installed automatically. Observe the information offered in the wizard.

If you have a preliminary ("Beta") software version installed, it must be removed before you can update. Use the operating system functionality to remove the old software version.

Registered dealers and distributors can download the new software version from the "Simrad Dealer Club". To access the "Simrad Dealer Club", visit our website.

- https://www.simrad.com/sdc

Note

All user settings and preferences are lost when the TD50 is upgraded.

You may need to change the settings in the Windows® firewall on the TD50 Processor Unit. For more information, refer to the TD50 Reference Manual and/or the TD50 On-line help.

Reporting issues

Any issues related to the user interface or the performance of the Simrad TD50 can be reported to us.

Please use e-mail address.

- simrad.support@simrad.com

Include the phrase "TD50 issue" in the title of the e-mail.

Minimum computer requirements

Unless specifically ordered from Kongsberg Maritime, the TD50 is not provided with a computer. This item must be purchased locally.

If you purchase a computer locally, make sure that the chosen model meets the functional and technical requirements.

It is important to make sure that the chosen computer model is relatively new with sufficient processing power, a high performance graphic adapter, and a high speed network adapter.

Note

The computer design and construction must allow for maritime use, easy access to connectors, parts and cables, and a safe installation.

A laptop computer may be used as long as it meets the functional and technical requirements.

The minimum technical requirements are:

- **Processor**: Intel I7 (or better)

  An equivalent type from another manufacturer can also be used.
- **Memory**: minimum capacity 16 GB
- **Hard disk**: 1 TB
- **Graphic adapter**
  - Minimum: NVIDIA GTX 1060

    An equivalent type from another manufacturer can also be used.
  - Recommended: NVIDIA GTX 1080

  A large number of commercial graphic adapters are available, and we have not tested all of them. Even adapters that meet the minimum specifications may fail with the TD50 software. We welcome any feedback with comments or experiences with graphic adapters.
- **Ethernet adapter**
  - Minimum bandwidth: 1 Gb/s
- **Serial interfaces**: Not applicable
- **Operating system**

  The TD50 software has been designed for Windows 10 (64-bit). Windows 7 is also supported. Operating systems older than Windows 7 are not supported.

Tip

Kongsberg Maritime may provide a suitable computer. It is set up with all necessary software. The computer is based on a commercial design, but the software and hardware have been specified by Kongsberg Maritime to suit the TD50 requirements.

Minimum display requirements

Unless specifically ordered, the TD50 is not provided with a display. The display must then be purchased locally.

You can use one or two displays on your TD50 Processor Unit depending on personal and/or operational preferences.

Note

Make sure that the chosen display meets the TD50 requirements. The design and construction must allow for marine use, and the display must be able to withstand the movements and vibrations normally experienced on a vessel. Verify that you have easy access to cables and connectors, and that the display can be installed in a safe and secure way.

The minimum technical requirements for the display are:

- **Resolution**:
  - We recommend that you use a large display with resolution 1920 x 1080 or better.
- **Video interface**: The video interface must match the output format(s) provided by the Processor Unit.

  The Processor Unit may offer video output on several formats. Investigate your options before you purchase a display.
- **Physical screen size**: The screen size depends on personal and/or operational preferences.

  The TD50 software supports 16:9 displays.