

FEATURE GUIDE: TELCHART ECS 3.8.3.5

With the release of TELchart ECS 3.8.3.5 we are bringing you new features and improvements. For a complete list of changes, see the release history on <https://telko.no>. Here you will also find Feature Guides for previous releases.

Introduction:



Starting June 2020, we are introducing TELCARE for TELchart ECS. TELCARE is a Software as a Service solution (SaaS):

With a TELCARE subscription you get access to all new features for TELchart ECS

With TELCARE you get:

- All new software functions developed for TELchart ECS
- Software Maintenance – we keep your software up to date with all new rules and regulations
- Free email and phone support

One software release is included per year with new functions requested by and developed together with TELchart ECS users. You will see the first of these in this feature guide.

12 months of TELCARE is included when you buy a TELchart ECS.

Go to <https://telko.no> to order TELCARE for your vessels.

Improvement: Warning time at 0.1 seconds for safety zones

We have now added the option of setting the warning time for the anti grounding feature to 0.1 seconds. This way, the navigator can take account of a safety buffer in the design of the safety zones, instead of having the buffer in a fixed warning time.

This improvement allows for free configuration of the safety buffer along the route.

The option of 0.1 seconds is added to the Safety Check warning time. Note that the minimum width of the Safety Check zone is 1 meter.

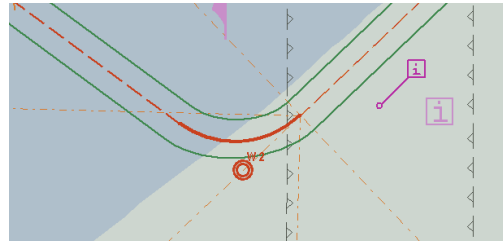
Improvement: Edit route lane and turn radius in the chart

This improvement makes it a lot easier to create highly customized routes in a fast and efficient way, directly in the chart.

When you edit a route, you can now left click on the route lane, and it is attached to the cursor. You can then move in or out from the route centerline to alter the lane width. When you are happy with the lane width, simply left click again.

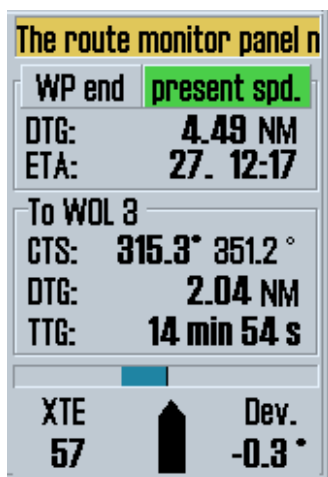
To reset the lane to the route default width you right click on it.

You can also edit the turn radius in your route. Simply left click on the curve of the route centreline, and the curve is now attached to the cursor. The next left click locks the turn radius where the cursor is. Again, to reset the turn radius to route default you just right click on it.

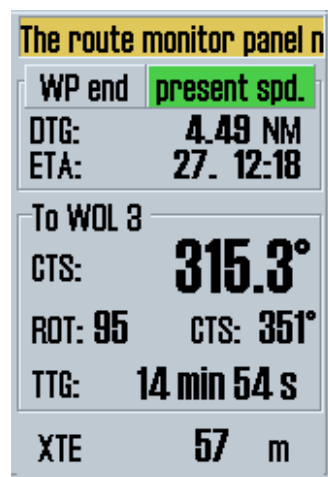


New feature: Alternative view for Route Monitoring

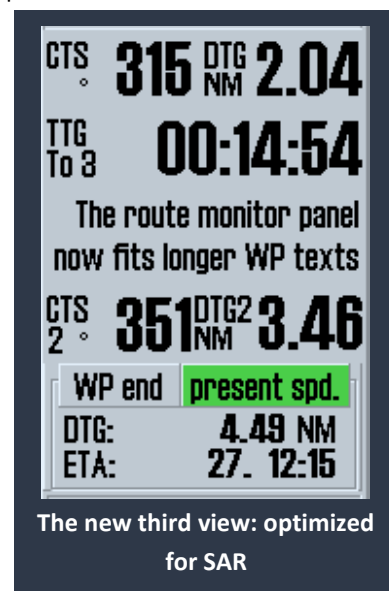
We have now added a third Route Monitoring layout, based on user feedback from SAR vessels. All three layouts are easily available by simply left clicking on the route monitoring panel itself.



The main route monitoring view



The second view
A zoomed in version of the first view



The new third view: optimized for SAR

Note that when special SAR notation for night navigation using '<' or '>' in the waypoint text is used, the waypoint text display is now optimized specifically for this use.

Improvement: RTZ route export and import format

In TELchart ECS you now have the option to export and import routes in the new standardized format RTZ (and RTZP).

The routes can be imported and exported from the route organizer, just like the native TECDIS and TELchart ECS format; *.lst.

You can also export routes from the route report tool.

With the RTZ route format, you can transfer routes from any RTZ-compatible navigation tool to the TELchart ECS. Note that some manufacturer-specific features may not be transferred.

Improvement: Plotting of observed bearings and distances

This improvement is a result of customer feedback; to help users log observed bearings and distances during a voyage.

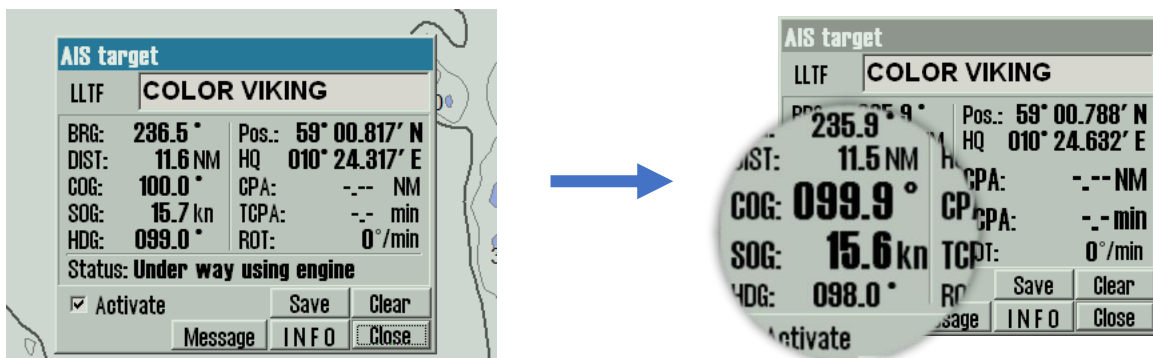
Note	Timestamp	Bearing	Range	LOP
<input checked="" type="checkbox"/>	12.08 10:50	250.8°	1.26 NM	X
<input checked="" type="checkbox"/>	12.08 10:50	241.9°	1.96 NM	X
<input type="checkbox"/>	12.08 10:50	000.0°	0.00 NM	X
<input type="checkbox"/>	12.08 10:50	259.7°		X

The bearing list has been improved with;

- A new column for Range.
- A Range button; when pressed, you can add range to selected observations, or remove range from an observation (depending on what you have selected in the bearing list). The Range button is not available for bearings that are converted to LOP directly from range-only observations.
- Estimated Position (EP) symbols are given a range estimation based on the time of the most recent observation, not when you press the Save EP button.
- When an EP symbol is added through the bearing list, the action is now logged in the DR fix logs, together with the bearings and ranges used.
- The previous way to insert range for bearings, by writing "range" in the text field, is replaced by the Range button.

Improvement: Larger display of COG, SOG, CPA and TCPA for targets

This improvement was highly requested by some of our users. You can now click on the COG, SOG, CPA and TCPA values in the target window, and they will become bigger and much more viewable. To revert to smaller text. Simply click on the values one more time.



Improvement: Reduction of false Crossing Safety Contour Alerts under anchor watch

In this release we have continued to reduce the false Crossing Safety Contour alerts (Antigrinding alerts). While anchor watch is switched on and the vessel is within the anchor watch circle, the filtering of false positives for the Crossing Safety contour alert has been increased (limited to 6 seconds for speeds above 0.5 knots, and movement above 0.03 NM for speeds below 0.5 knots).

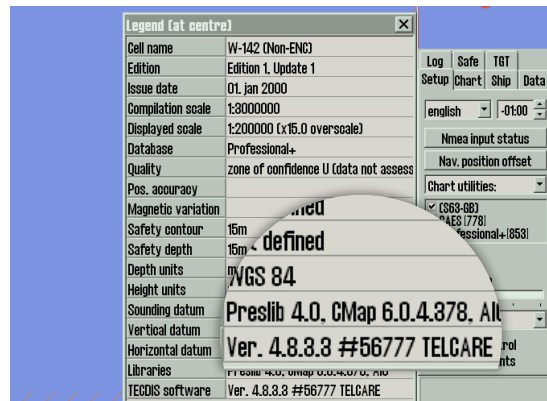
New feature: TELCARE subscription status in TELchart ECS

With the addition of TELCARE you need a way to see if TELCARE is active on your TELchart ECS, and when the current subscription period ends.

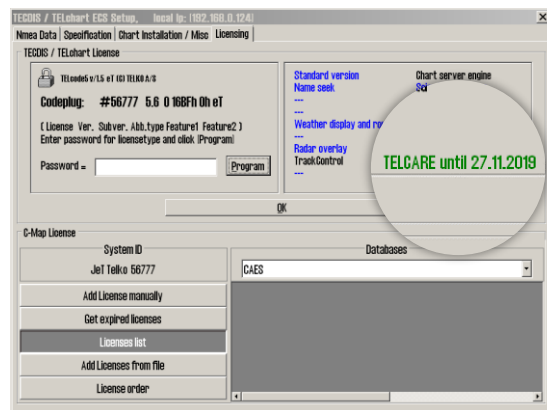
To see if TELCARE is activated, simply open the chart information panel, by

- pressing F4 on the keyboard, or
- clicking on the ?-button in the chart menu.

If a valid TELCARE subscription is active, 'TELCARE' will be shown at the end of the 'TELchart ECS software' information.



To see when the current subscription period ends, place the cursor over the 'TELchart ECS Software' label, and the expiry date is shown in the hint text. You may also review the license information in TELchart ECS Setup (service key required).



TELCARE in TELchart ECS is administrated with license codes – you get a new code for each subscription period, directly from Telko.

New feature: Transit conning

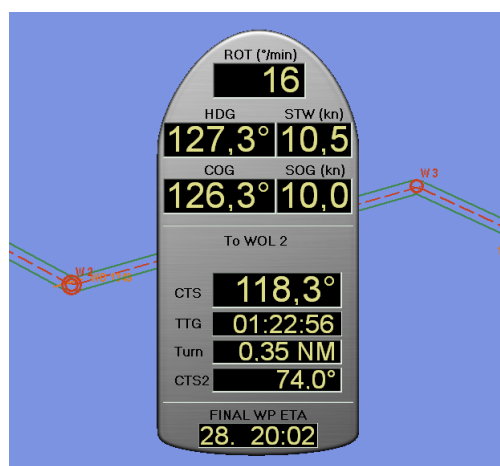
(TELCARE subscription required)

The mini-conning in TELchart ECS has always been very useful for maneuvers and while anchored. Now we have improved on it, with the addition of a transit conning.

So now the most important sensor and voyage information is displayed with bigger text, in a clear and very readable conning window.

You can move the window around by dragging it with your cursor.

To access the Transit conning you simply click anywhere on the docking conning.



New feature: TotalTide integration

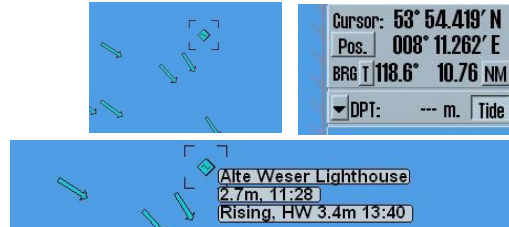
(TELCARE subscription required)

TotalTide requires that Admiralty digital products (ADP) is installed on the TELchart ECS, with a valid subscription to TotalTide.

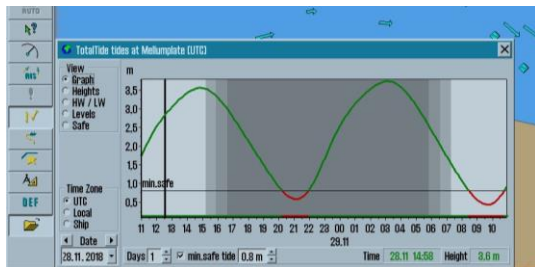
In this release we are adding a feature that is in high demand – TotalTide from Admiralty. You can now see the tidal data from the TotalTide service in TELchart ECS, with a simple and intuitive interface.

You open the Tides window by either clicking on a tidal/ tidal stream station in the chart, or by clicking on the Tide button in the info panel.

If you hover over the tidal station, you will see information about it in the chart.



Tide graph

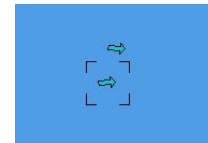


The Graph view shows you a tidal prediction graph, that can display up to 7 days of tidal data. If a minimum tidal height is configured, this will be indicated in the graph with red highlights for unsafe values.

Heights

Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
15:00	1.8m	16:00	2.4m	17:00	3.0m	18:00	3.4m	19:00	3.8m	20:00	4.1m
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02:00	1.0m</										

Tidal Stream stations have similar functionality as the Tidal stations. The main difference is that rates and directions are displayed.



New feature: Rendezvous – Predictive vessel approach

(TELCARE subscription required)

This feature is a user request that we are thrilled to add to TELchart ECS.

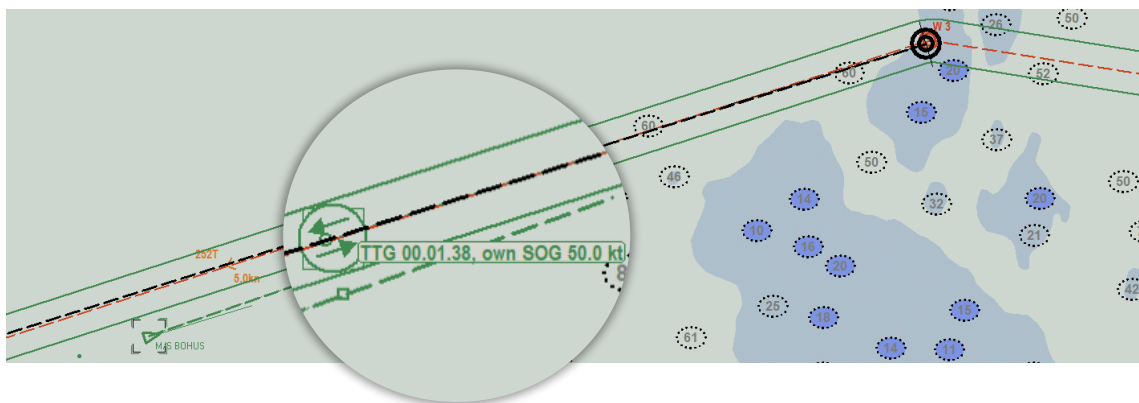
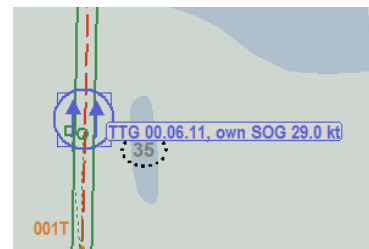
For any target, you can now activate Rendezvous – RDV, and TELchart ECS will predict where on your route you will meet that target. This function works for targets within 1 NM of your route, and predicts where the target will meet your vessel (assuming the target will move along the same path your route shows)..

Rendezvous supports up to 8 targets simultaneously, and the prediction is updated every second.

The tool is simple to use:

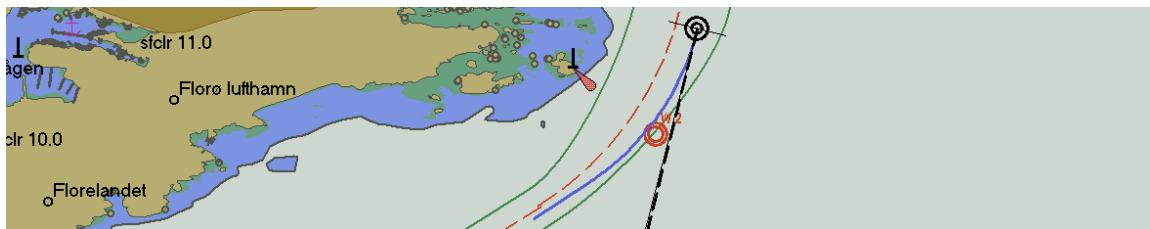
- When TELchart ECS predicts that you will meet a target along your route, a Rendezvous-symbol is shown over the route.
- The symbol indicates if the point is a meeting or an overtaking.
- If you hold the cursor over the symbol, TTG (time to go) for the meeting and target name is shown.
- If you click on the symbol, you can pick it up to slide it along your route to find the Speed To Go to alter the rendezvous point to that position. All other rendezvous symbols will move accordingly. Click again to release the symbol.
- The symbol is shown in a target specific color to help you recognize what target you will meet and where. The symbol color is matched with brackets around the target.

AIS target	
LHD:	M/S BOHUS
BRG:	248.5° Pos.: 59° 01.568' N
DIST:	0.9 NM Hn: 010° 46.226' E
COG:	078.0° 0.05 NM
SOG:	17.4 kt way 0.8 min
HOG:	073.1° 0°/min
Status:	Underway
<input checked="" type="checkbox"/> Activate	<input checked="" type="checkbox"/> Message
<input type="checkbox"/> CPA	<input type="checkbox"/> Message
	INFO
	Close

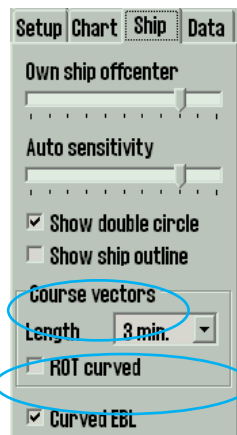


New feature: Curved EBL

(TELCARE subscription required)



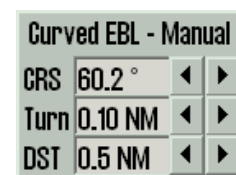
This new feature is a real gem. Curved EBL is a visual indication in the chart display of a potential turn to be executed according to a specific turn radius and new course (taking wheelover distance into account), assuming the turn is initiated at the time of display.



Curved EBL is accessible via a new checkbox in the **Ship** menu. When checked, a new **Curved EBL** panel is shown in the top right corner of the chart display.

The Curved EBL panel consists of a clickable title with 3 possible modes (left click on title changes between modes):

- **Curved EBL - Off:** Not displayed in the chart.
- **Curved EBL - Manual:** Displayed according to parameters set in TELchart ECS.
- **Curved EBL - AP:** Displayed according to turn radius and new course received from autopilot. Length and wheelover is still adjustable in TELchart ECS.



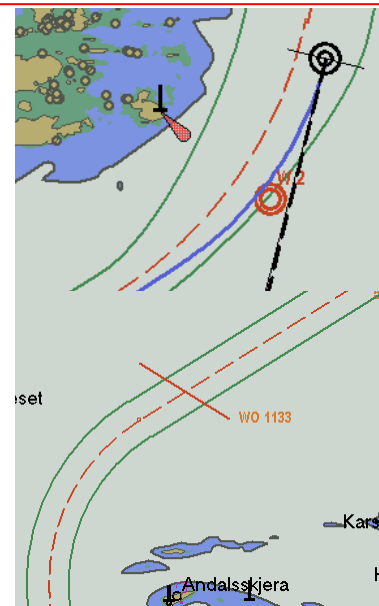
Curved EBL is displayed in the chart as a thick blue line starting at the conning position,

This option is only available when information from the autopilot is received via **track control** or via the **Options 3 sensor** (only selected autopilots (EMRI / Furuno FAP, Raytheon Anschutz NP5500)

extending straight for the wheelover distance, then turning according to the specified turn radius onto the specified new course and extending on this course until the total line length is of the specified distance.

If the specified distance is shorter than needed to complete the projected turn, the length is extended to the exit point of the projected turn.

- When using Curved EBL while in route monitoring the curved EBL will assume that turns are triggered at the wheelover line.
- When the vessel passes the wheelover line, the curved EBL assumes that the turn is triggered at that point and starts counting down the curved ebl presented wheelover distance until it is 0.
- If the vessel starts turning before that point, the curved ebl presented wheelover distance is set to 0 at once.



New feature: Speed To Go (STG) calculator

(TELCARE subscription required)

The new Speed to Go (STG) Calculator is a feature available from the ETA calculator.

ETA calculator

<input type="radio"/> WP1	<input type="radio"/> WP5
---	1 hr 48 min 13.35
5.0 kn	9.0 NM

Click to switch to STG mode

STG calculator

<input type="radio"/> WP1	<input type="radio"/> WP5
8.7.19	STG 8.7.19
11.31	5.1 kn 13.16
<input type="button" value="Set"/>	<input type="button" value="Set"/>

ETD and ETA from current speed

<input type="radio"/> WP1	<input type="radio"/> WP5
8.7.19	STG 8.7.19
11.31	3.6 kn 14.00
<input type="button" value="Set"/>	<input type="button" value="Set"/>

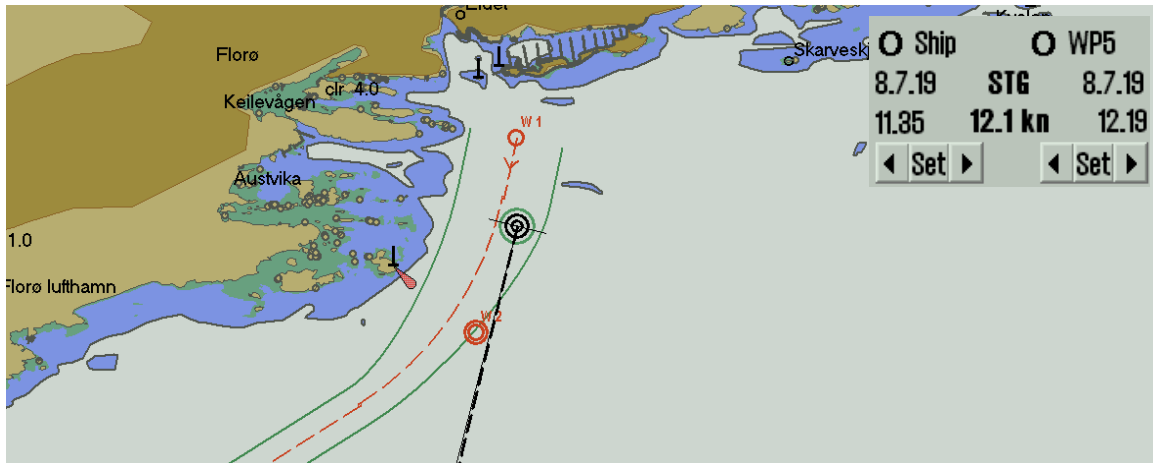
Customized ETA

<input type="radio"/> WP1	<input type="radio"/> WP5
8.7.19	STG 8.7.19
13.30	18.1 kn 14.00
<input type="button" value="Set"/>	<input type="button" value="Set"/>

Customized ETD and ETA

By clicking in the ETA calculator panel, the panel switches to an STG calculator mode. In this mode, you can set date and time for each waypoint (or own ship position) you have selected. When times are set for both waypoints, the required STG can be calculated and displayed.

When the STG calculator is shown, the ETA times are initialized with the current ETAs for the waypoints according to the current ETA mode (current / planned speed). If own ship position or waypoints behind the vessel are selected, the ETA time should be initialized to the current time.



If one of the selected endpoints is own ship, and the time specified is within 1 minute of the current time, that time should be updated according to current time on a continual basis while the calculator is displayed.

New feature: TTG calculation in the STG calculator

(TELCARE subscription required)

This is a special feature in the STG calculator, that allows you to calculate how long the current SOG can be maintained before speed must change to STG set in calculator to reach the set ETA.

The function is accessible by left clicking in the STG calculator (when own ship is selected as starting point).

TTG until STG	<input type="radio"/> WP5
45 min 10 s	8.7.19
Min STG	12.19
5.0 kn	<input type="button" value="Set"/>

Improvement: Calculate default speed from ETD and ETA

(TELCARE subscription required)

Until now, it has been possible to specify a single date/time for a waypoint in the waypoint list, and all other times were updated according to route speed settings. However, ships typically have a fixed departure time and a fixed arrival time.

Adjusting your default speed to comply with those fixed departure and arrival times has worked, but it has also required multiple steps. We have simplified this functionality, and the following improvement is added to TELchart ECS in this release:

When setting a fixed ETA, it appears in orange in the waypoint list.

Lat.	Lon.	Dist.	Course	Speed	Lane	Turn	ROT	Time	Text / Options
35.389° N	005° 08.482' E	0.1 NM	191.8°	5.0 kn	0.09 NM	---	---	09. 13:12	---
34.967° N	005° 08.318' E	1.5 NM	237.9°	5.0 kn	0.04 NM	0.62 NM	min	09. 13:13	---
33.976° N	005° 00.000' E	0.8 NM	121.9°	5.0 kn	0.04 NM	0.37 NM	min	09. 13:31	---
33.633° N	005° 01.156' E	6.6 NM	125.0°	5.0 kn	0.12 NM	0.10 NM	min	09. 13:41	---
29.882° N	005° 12.379' E	---	---	---	---	---	---	09. 15:00	---

If you add a fixed ETD as well, the default speed of the route will update accordingly.

Lat.	Lon.	Dist.	Course	Speed	Lane	Turn	ROT	Time	Text / Options
35.389° N	005° 08.482' E	0.1 NM	191.8°	2.3 kn	0.09 NM	---	---	09. 11:05	---
34.967° N	005° 08.318' E	1.5 NM	237.9°	2.3 kn	0.04 NM	0.62 NM	min	09. 11:08	---
33.976° N	005° 00.000' E	0.8 NM	121.9°	2.3 kn	0.04 NM	0.37 NM	min	09. 11:47	---
33.633° N	005° 01.156' E	6.6 NM	125.0°	2.3 kn	0.12 NM	0.10 NM	min	09. 12:08	---
29.882° N	005° 12.379' E	---	---	---	---	---	---	09. 15:00	---

If you postpone the ETD, the default speed will update accordingly.

Lat.	Lon.	Dist.	Course	Speed	Lane	Turn	ROT	Time	Text / Options
35.389° N	005° 08.482' E	0.1 NM	191.8°	4.5 kn	0.09 NM	---	---	09. 13:00	---
34.967° N	005° 08.318' E	1.5 NM	237.9°	4.5 kn	0.04 NM	0.62 NM	min	09. 13:01	---
33.976° N	005° 00.000' E	0.8 NM	121.9°	4.5 kn	0.04 NM	0.37 NM	min	09. 13:21	---
33.633° N	005° 01.156' E	6.6 NM	125.0°	4.5 kn	0.12 NM	0.10 NM	min	09. 13:32	---
29.882° N	005° 12.379' E	---	---	---	---	---	---	09. 15:00	---

So now, when you specify an ETD and ETA for any two waypoints along the route, a default speed for the route is calculated automatically. Of course it accounts for stop times and fixed speeds on specific route legs, providing you with a ready to use default speed.

And note that you are not limited to the end points of the route; you can calculate the default speed between any of the waypoints in the route.

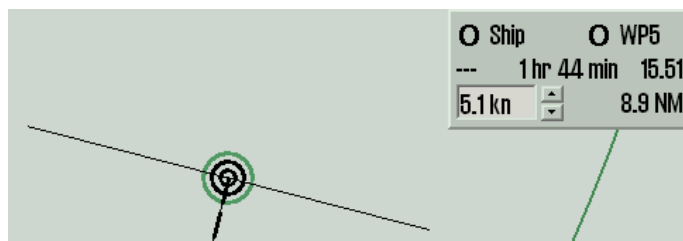
In order to set a new fixed time (shown in orange), remove an existing fixed time.

Improvement: Use own ship as start or end point for ETA calculation

(TELCARE subscription required)

This is a simple and useful addition to the ETA calculator in TELchart ECS. You can now use *own ship* as a start or end point for the ETA calculations.

By right clicking on your own ship and the waypoint you want to calculate to/from, the ETA calculator is shown. Right clicking your own ship again when already selected removes the ETA calculator.

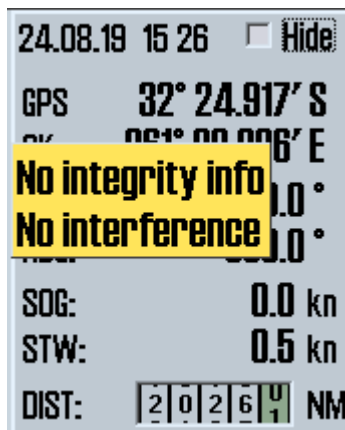


New feature: GNSS jamming and spoofing detection with

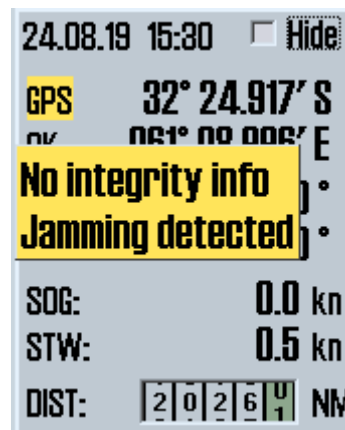
Orolia M-SecureSync (TELCARE subscription required)

When Orolia M-SecureSync hardware is present on board, it can now be integrated with TELchart ECS to provide GNSS jamming and spoofing information to the navigator.

The user interface is unobtrusive, providing information to the navigator when needed. Information regarding jamming and spoofing is available in the same place as other information related to the integrity of the position sensor information. The tooltip for the position sensor label provides this information, and the sensor label is highlighted yellow when issues are detected.

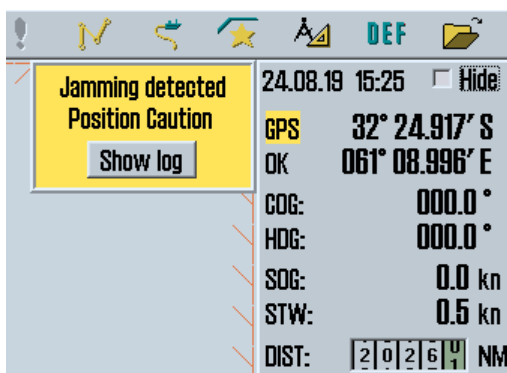


Normal situation, no GNSS jamming or spoofing is detected. Position sensor label tooltip shows 'No interference'.

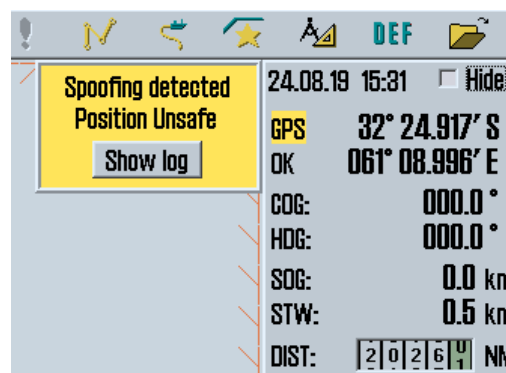


GNSS jamming detected, position sensor label is highlighted yellow and tooltip shows 'Jamming detected'.

Additionally, a notification panel is shown next to the sensor data alerting the navigator when jamming or spoofing is detected. This panel may also be displayed by the navigator by clicking the position sensor label.

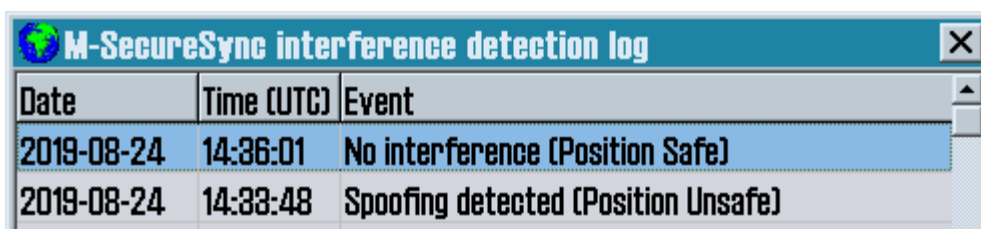


Notification showing that GNSS jamming is detected.



Notification showing that GNSS spoofing is detected.

The 'Show log' button brings up a log of recorded instances of GNSS jamming and spoofing.



Log of previous instances of detected GNSS jamming and spoofing.

Other fixes and improvements

TELchart ECS 3.8.3.5 also contains several other fixes and improvements.

- **Performance and stability when operating continuously for very long periods**
Several improvements have been made to TELchart ECS that improves performance and stability when TELchart ECS is left in continuous operation for very long time periods (longer than 1-2 months) without any restarts. These improvements especially benefit users making use of 'Head up' chart display and users operating continuously in inshore waters.
- **Improvements to S63 single click chart loading**
Simplified chart loading from S63 ENC suppliers such as Navtor, GNS, ChartCo and ChartWorld has been improved, simplifying the chart loading process.
- **Fix for selecting individual past tracks for display**
An issue has been fixed where individual past tracks selected for display were not displayed when track filtering was set to a period of less than 1 day.
- **Fix for AIS updating when destination contains illegal characters**
An issue has been fixed where AIS destination texts containing illegal characters (such as comma) were not properly handled.