

Hard Facts on Software/Part Ten

TIKI Navigator Pro Reviewed



TIKI Was Written for Boaters and Turns Its Back on Some PC Standards, But It Works Well.

By Mark and Diana Doyle
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The TIKI Navigator software line is the brainchild of Norwegian sailor and programmer Fred Jenssen, who named it after the most famous of Norwegian boats, Kon-Tiki, a raft that crossed the South Pacific. The name is more apt than simple Norwegian patriotism.

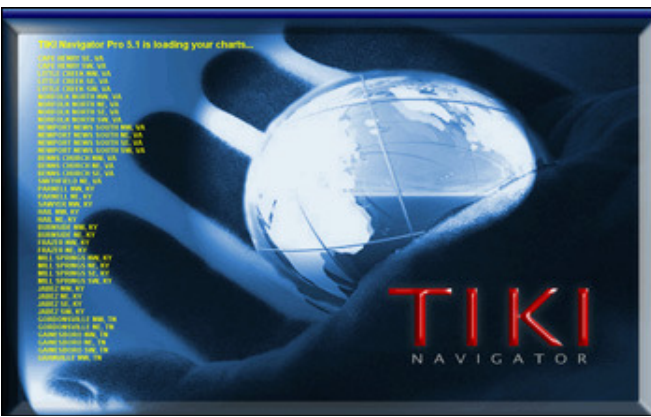


Chart names roll down the left of TIKI's start-up display as they are loaded. Slick, but it takes time.

The Kon-Tiki expedition remains famous decades later because its commander, Thor Heyerdahl, went against conventional boat-building wisdom, re-thinking trans-ocean passages based on his fundamental notions of the sea and boat materials.

Jenssen also admits he is going against the flow with his TIKI Navigator software. He used his 30 years of sea experience to re-think how a computer can and should be used on board. He tossed out established Windows conventions, moved away from traditional menus, limited use of the keyboard and altered the mouse interface. As Jenssen puts it, his goal was a simple scheme that could be used at sea by boaters who don't think like computers.

Challenging a standard PC user interface is fraught with risk. In fact, we have criticized some software companies for deviating from established PC standards.

Jenssen hasn't just tinkered with a Windows layout, he fundamentally redesigned it—and we think he pulled it off. As evidence of his success, only two years after its first release, TIKI became Norway's best-selling navigation software for raster charts. He is now attempting to break into the U.S. market.

We reviewed TIKI Navigator Pro (\$148), Jenssen's full-featured program, and we found it to be a solid option for the price. The software is innovative and easy to use. Though it lacks advanced features like vector capability and weather downloads, boaters looking for software that is both simple and sophisticated should consider looking at Jenssen's creation.

There are several ways to try it out. TIKI Navigator is available in three versions: Planner, Basic, and Pro. TIKI Navigator Planner (\$37) is a planning tool, able to display charts, create waypoints, and run in simulation mode only. It does not show boat position and is not for real time-navigation.

TIKI Navigator Basic (\$74) adds GPS navigation, allowing you to see the boat's position, course and speed on the chart. You can create routes of 10 or fewer waypoints. However, to obtain features like tracks, logbooks, collision avoidance, autopilot control and anchor watch, you will need TIKI Navigator Pro.

For users who want to try out the TIKI line, there is a 30 times free trial. Then one can purchase a license for Planner or Basic and then upgrade to Pro easily through TIKI's website.

SETTING UP

All TIKI versions are available only by downloading the installation software through TIKI's website. In order to run the software you must purchase a license through the site for the version you want (Planner, Basic, or Pro). The license is emailed to you, allowing you to open the application beyond the trial period.

The TIKI download includes a collection of demo charts, including some charts of the Seattle area and an NMEA 0183 data file showing real AIS traffic. You must purchase or download your own raster charts. TIKI reads all raster BSB charts up to Maptech's 4.0 format, as well as NDI charts and SoftCharts (GEO/NOS format). When you download TIKI, you can opt to download free U.S. raster charts or order a DVD of charts for \$39.95. Raster charts for other parts of the world require a purchase from a retailer such as Maptech or NDI.

TIKI does not currently display vector charts in S-57, S-63, or proprietary formats such as Navionics or C-Map. However it does display raster topographic maps and aerial and satellite image files if you have them.

All our BSB raster charts, GEO/NOS raster charts, aerial and satellite image files, and raster topographic maps load automatically when we first opened the application. In fact, since our extensive Maptech chart library was already on our hard drive, TIKI immediately located all these assets by looking in the default chart folder location.

TIKI Navigator Pro

Pros: Intuitive, creative, and efficient user interface; excellent use of chart screen area; very responsive; excellent image quality; minimal system requirements.

Cons: Only reads raster (not vector) charts; no tides and currents; no weather download, no integrated print function; no import of GPS data, no integrated data export; no waypoint or chart management.

Price: \$148 Pro: \$74 Basic: \$37 Planner

System Requirements:

PC with 500 MHz processor
(1000 MHz or higher recommended)
128 MB of RAM
(512 MB or higher recommended)
1024 x 768 resolution
DVD-ROM drive (for raster chart install)
Windows 98 SE or higher
2000 or XP recommended

Vista Capable: Yes

Company, URL: TIKI Navigator, www.tiki-navigator.com

Program start-up has a slick user interface: a striking graphic of a hand holding a glass globe with your chart titles scrolling by like movie credits. Unfortunately, our chart folder included over a thousand files so this cool feature lost some of its glamour after several minutes of loading. This installation display occurred every time we started the application—an eternity in our spoiled sense of computer time.

The chart loading display is a great idea, but a wise compromise may be to display only the first 10 or 20 chart titles, beginning with charts closest to last location, then promptly open the application for the user. The remaining charts could be loaded in the background while the user began their navigation tasks.

We had no trouble connecting our GPS sensor. Although TIKI does not include a Port Wizard to locate the appropriate communications port, a series of feedback windows easily guide you through the process.

The first three times TIKI is opened, it prompts you to begin a tutorial. Take the time to do it! The tutorial is excellent and consists of only 20 short windows. Without the tutorial, you won't find all the menus, which are intentionally hidden to keep the screen clear for the chart.

To use all the available features of TIKI Navigator Pro, you should consider a few additional software plug-ins and accessories. If you want to upload waypoints and routes to your GPS, you need a freeware package called EasyGPS. To use TIKI's BuddyTracking feature, you must have a general-purpose GPS utility called GpsGate (\$39.95). If you want to print chart images, you need a screen capture application such as SnagIt (\$39.95).

To use the navigation features, you must connect either a USB GPS sensor, available for less than \$100, or your onboard GPS. If you use a USB GPS sensor, be sure to download the latest driver from the manufacturer's website. Connecting an onboard GPS may also require a 9-pin serial plug.

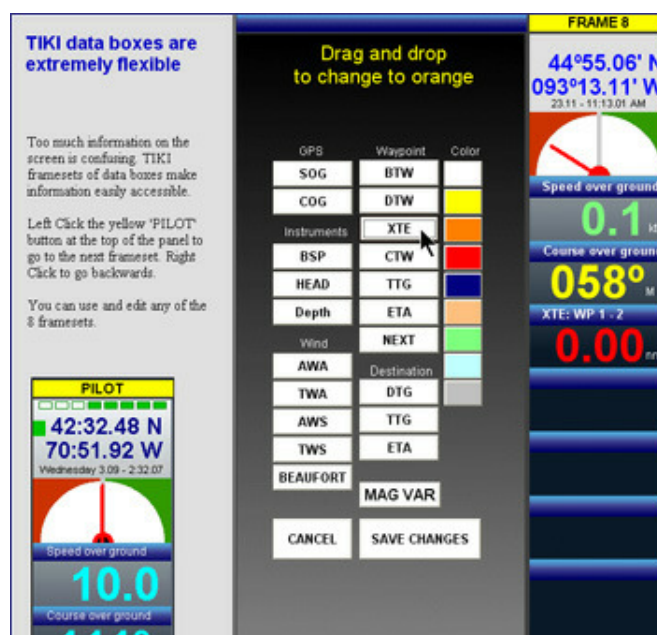
Finally, TIKI Navigator intentionally has a cursor-based, rather than a keyboard-based, user interface. In fact, most operations are accessed through contextual, mouse-based menus that require a mouse with both a right and left-click button.

LOOK AND FEEL

When Jenssen began the TIKI project, he sought to create an intuitive user interface that broke away from a traditional PC Windows format. But why re-invent an established interface that much of the world already uses? Jenssen points out there are many reasons, including rough sea conditions that make keyboarding and traditional mousing difficult; chart displays on laptop screens that are too small; type so small it is illegible on a moving vessel; and graphical user interfaces with insufficient contrast for a marine environment.

TIKI's user interface is different—but it works. Gone are the tiny pull-down menus that consume screen real estate and are too small to read underway. Gone are the small icons and graphics that clutter the screen. In fact, TIKI's screen at first appears to be all chart display. Where are the menus and choices?

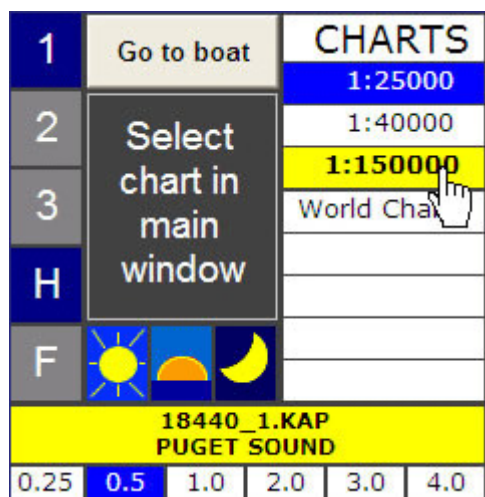
There are a lot of menus—including a Main Menu, a Chart Select pop-up



TIKI Frameset customization: Tutorial overview (left), customizable data and color options (center), and Frameset 8 (right).

window, a Quick Buttons pop-up window and several contextual mouse menus—but you only see them when you need them. Menu objects are large enough to read and to target with your mouse cursor in a seaway. TIKI's menus can be displayed in large format since they automatically disappear when not in use.

The Main Menu opens as a strip window along the right edge of the screen when the cursor is moved to this edge. When the cursor is brought back onto the chart, the Main Menu panel disappears. The Main Menu shows a series of "rolling" displays, accessed by left-clicking on the menu's title bar. For example, you can scroll between customizable strips of data for waypoints, routes, autopilot, sailing or racing. Each of the eight framesets contains a collection of Databoxes, which you customize with your choice of instruments or data (see photo).



The Chart Select pop-up window lists all charts in the displayed area. Additionally, you can choose one, two, or three split window views; horizontal or vertical chart display; day, dusk, or night lighting; and six zoom levels.

A different pop-up appears when the cursor hovers over the top left corner of the screen. The Chart Select pop-up window lets you click to change chart scale, to split the display screen or to flip between daytime, dusk or nighttime screen illumination (see photo). Again, the pop-up window disappears as you move the cursor away, returning the majority of the screen to the chart.

Hover the cursor over the bottom left of the screen and the Quick Buttons pop-up window appears. This strip menu displays twelve QuickButtons with their text descriptions, such as dropping an MOB marker. Buttons are numbered from one to 12 and match the function keys on your keyboard for even faster access.

TIKI includes many useful shortcuts covering many of the functions. Pressing the F2 key brings up the Keyboard Help pop-up window, which shows a list of actions and their corresponding shortcut. Alternatively, typing F3 brings up the Shortkey Strip pop-up window, listing all Shortkeys alphabetically.

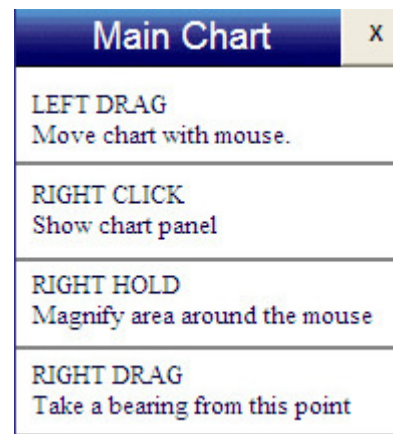
Although TIKI uses menus and pop-up windows, it is fundamentally a mouse and cursor interface. Most features can be accessed easily using the mouse, with keyboarding only for function keys, shortcuts, or naming waypoints or routes.

TIKI relies on contextual menus, where menu choices vary depending on the cursor's location. For example, a mouse-click on a route waypoint brings up the Route Menu pop-up window, with contextually relevant choices to edit, rename, delete or cancel the route. Right-clicking anywhere in the chart window brings up the Chart Panel pop-up window, with buttons to zoom for more detail on the current chart, scale in or out to change the chart scale or center the boat on the best chart.

We were initially concerned about remembering all these right-click and left-click commands, but we found they quickly became second nature. Remember, the price of removing menu clutter from the screen is that you need to memorize common cursor commands. To help you accomplish this, TIKI includes integrated help, called Mousehelp, which can be toggled on or off with the F1 key. We recommend turning Mousehelp on when you start with TIKI, and at the beginning of each boating season.

With Mousehelp on, hovering anywhere in the program—on the chart, a graphic item or any button—displays what left and right button functions are available at that location (see photo).

Although TIKI is a heavy mousing program, there are several "smart mousing" design elements, including large hover



TIKIMousehelp is activated by toggling the F1 key. Hover over any menu or chart item to quickly see what left and right button functions are available.

zones, "lock mouse" and intelligent cursor placement. The large display areas are designed to not only read easier underway, but to be an easier cursor target in rough conditions. If you need even more mouse control, the "lock mouse" option locks the mouse inside the main and chart panels, preventing the cursor from slipping and sliding all over the screen. We also really appreciated TIKI's intelligent cursor placement, a subtle mouse-friendly bit of programming that places the cursor automatically on the default button of a window prompt. This is a fantastic detail that replaces moving the mouse for each window. Once you become familiar with the window choices, rather than playing the familiar game, "click...chase the window...click," you can simply double click without physically moving the cursor.

WORKING WITH CHARTS

TIKI's biggest limitation is that it only reads raster format charts. This means many of the "intelligent" features of vector charts—such as integrated alarms based on reading chart features and navigation feature queries—based on chart features are not available. However, TIKI intends to add Navionics vector chart support, and eventually S-57 vector support, to accommodate the needs of its international customers.

TIKI gets very high points for chart display. We've already mentioned its maximized display area. In our assessment, this feature is very important for all charting and navigation programs. If you can't see the chart on a laptop screen, there is not much point in laptop charting. TIKI's chart images were also exceptionally sharp—in fact, some of the best looking charts we've seen. Remember these are the same BSB charts used by all applications, so Jenssen has achieved this by putting quite a bit of programming work into chart rendering.

More impressive, the screen detail was accomplished without sacrificing display speed. The charts were very sprightly to pan and zoom. We never noticed any lag or blurring. As you pan across a chart edge, TIKI automatically loads the next chart. However, charts are not seamlessly quilted: you see the edge of the chart and then flip to the next chart.

TIKI is designed to navigate chart displays primarily through the Chart Panel pop-up window. You can right-click at any position on the chart and zoom or scale in or out, centering the chart at this position. After the first click on zoom or scale, the chart center position does not change. With the window's arrow buttons you can pan the chart east, west, north or south. You can click once or continue to depress the button to continue panning. The pop-up window's red center button instantly centers the chart on the boat position. (You can also display the boat

with maximum view ahead, which shifts the boat position to show more chart area ahead of the predicted course.) If you left-click the red center button for about one second, TIKI selects the best chart for the boat position.

Charts can be opened in up to three chart windows, using a split-screen display. This has now become a common feature of many charting and navigation applications, allowing the display of a chart overview, a zoom and a satellite or aerial view (see photo). TIKI also allows you to link an image file to a chart, such as a photo of an anchorage.



TIKI can simultaneously display one, two, or three chart windows. In this example a chart overview (left) and zoom (top right) are complemented by a satellite photo (bottom right).

TIKI Navigator Pro includes a Digital Magnifier feature, similar to the

Spyglass Tool included on NavimaQ navigation software for Apple Macs. Clicking and holding the right mouse button invokes the Magnifier tool, which zooms in to the chart scale showing the most detail. Although the feature usually worked great, we found a little bug if you have satellite navigation photo files in your

chart folder, such as those available from Maptech. In this case, zooming flipped the display from a chart to a satellite view of wave tops. This glitch, resulting from the fact that aerial and satellite photos are not common in Europe, will be fixed in the next point release, Jenssen said.

We had no trouble creating waypoints and routes with TIKI Navigator Pro. The Pro version accommodates an unlimited number of routes, each with 500 waypoints. Each route shows the cumulative distance at each waypoint, which is a nice detail. The Pro version of TIKI also includes features such as logbook, tracking and creating routes from tracks.

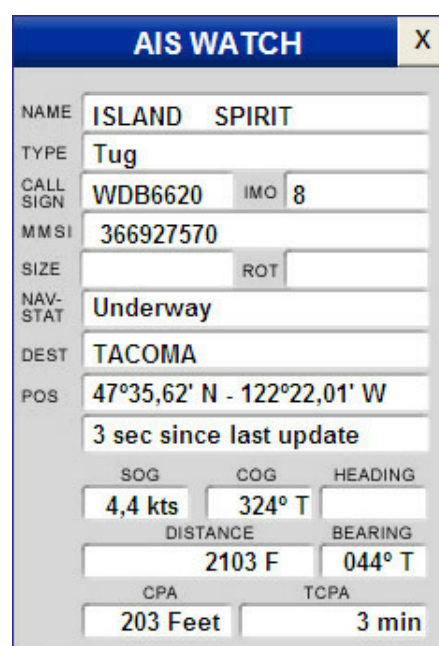
If you already have a large collection of waypoints and routes, TIKI's data exchange is not as fully developed as its user interface. You can export waypoints and routes to your GPS using the freeware EasyGPS we mentioned above. However, you currently cannot import waypoints and routes created in another application or from your GPS. TIKI also does not include a chart manager. All charts are contained in one big "bucket," which as we have mentioned in previous reviews, slows down the start-up time. Similarly, there is no waypoint manager to group waypoints into subset folders to keep them organized.

ADDITIONAL FEATURES

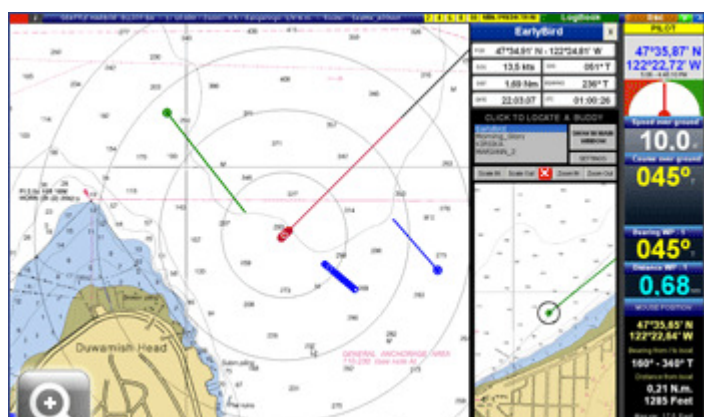
TIKI Navigator Pro integrates with several vessel instruments, including wind speed and direction indicators, knot/log, compass, depth sounder, autopilot and AIS receiver. However, it does not have the capability to display tide and current predictions or weather downloads. A feature allowing GRIB weather downloads is scheduled for a future version, Jenssen said.

When connected to a wind instrument, true and apparent wind direction can be displayed as graphic arrows on the chart. TIKI has several alarm features, including depth alarms when connected to a depth sounder. The Anchor Watch pop-up window shows your anchoring data, options to set an alarm radius and a zoom of the chart showing your boat location. TIKI Navigator Pro can also send steering data to your autopilot. Again, implementation is streamlined: create a route, press the autopilot menu button and TIKI steers the boat via your autopilot, giving a warning as the vessel reaches a waypoint on the route and when the autopilot changes course.

TIKI Navigator Pro's latest version adds AIS support and a feature called BuddyTracking. Although most charting and navigation applications now include AIS—seemingly the latest trend in e-charting—Jenssen has clearly put quite a bit of thought into TIKI's AIS interface.



Once an AIS target is selected, TIKI opens a panel allowing you to continually assess any threat of collision



AIS targets (blue), buddy boats (green), and your vessel (red) are visible in the main chart display. BuddyTracking even allows you to keep track of buddy boats off your chart in a separate window (bottom center).

AIS targets change color if they are predicted to become a hazard according to time and distance parameters set by the user. Each target shows a line representing the vessel's course and speed. An additional line to the left or right indicates if the vessel is turning. You can roll the display forward between two and 10 minutes to simulate courses and proximity, assuming no changes to course or speed. Selecting a target displays detailed information on that vessel through an AIS Watch pop-up window (see photo).

BuddyTracking, which requires an additional piece of software called GpsGate, lets you exchange position data with your friends and see them on the chart with course line and speed indicators. If your buddy boat's location is off your main chart display, TIKI's split screen capability automatically displays a small separate chart window with their location (see photo). This feature is great for yacht club cruises or long-distance cruisers who travel in company.

ASSESSMENT

TIKI Navigator Pro is an innovative charting and navigation program that is intuitive, easy to learn, and includes many great features for the price.

TIKI gets very high points for a creative and efficient graphical user interface. It is easy to use—but not because it is de-featured or stripped-down. Although it does not include some very important features, such as vector chart support, weather downloads, tide and current predictions, or integrated data import/export, it does the basics and does them well.

Its clean simple interface focuses on features that a real boater needs, like creating routes from tracks, anchor watch, and autopilot control. It also continues to add extras such as AIS and BuddyTracking.

We had no trouble either installing or using TIKI. If you do need technical support, and the FAQ page doesn't answer your question, TIKI asks that you send email through its website, leaving your telephone number for a return call. At this time, TIKI does not have a printed or online English manual, relying instead on its integrated pop-up help windows. The English manual has not been updated for the newest edition and was therefore removed from the site.

TIKI Navigator Pro doesn't do everything. But don't let the list of "cons" deter you from considering what we think is an innovative and truly seaworthy package. Its creator, Fred Jenssen, is refreshingly in touch with his product and market demands. He has a realistic assessment of upcoming features to add to TIKI, with plans to integrate Navionics chart support, GRIB weather downloads and S-57 vector capability in future editions. To his list we'd add GPX waypoint and route portability and waypoint and chart folder management. When Jenssen completes these additional features, TIKI Navigator Pro will be a world-class product. But like its namesake, TIKI is already a program that can weather the storms and go to sea.

Capt. Mark Doyle and Capt. Diana Doyle are authors of the Managing the Waterway cruising guide series, and their work has appeared in numerous publications. They also produce CDs and DVDs of NOAA and USACE charts.