

MAXSEA

Nav software's "best kept secret"



Bring the power of Furuno's NavNet to your computer with MaxSea NavNet-Commander, powerful navigation software that integrates and operates your NavNet electronics, too. Or try MaxSea Navigator+ for basic, stand-alone computer navigation. Visit www.waypoints.com for a full description, configuration options, and a selection of MapMedia cartography.

Electronic Charting Function	MaxSea Navigator+	NavNet Commander
Unlimited Routes, Marks, etc.	✓	✓
Smooth Chart Scrolling	✓	✓
Seamless Chart Display ("quilting")	✓	✓
Chart Rotation (Course, North Up)	✓	✓
Real-Time GPS Navigation	✓	✓
Route, Trip, ETA Planning	✓	✓
Direct Autopilot Control	✓	✓
Upload/Download GPS Waypoints	✓	✓
Tide/Current Information Display	✓	✓
ETA Calculation with Current Adjustment		
Maptech (BSB) Chart Support	✓	✓
NDI/Canadian Chart Support	✓	✓
SoftChart Chart Support	✓	✓
Passport Vector Chart Support		
ENC/S-57 Vector Chart Support	✓	✓
C-Map NT & CM93.3 Chart Support	✓	✓
Bathy contours drawn from sounder data		optional
AIS Target Display	optional	✓
Weather Chart Download/Overlay	GRIB	GRIB
3-D Navigation with Bathy Charts		optional
ARPA Radar Target Display	optional	✓

Minimum System Requirements: Pentium 200 MHz, WIN 2000/XP, 128 Mb RAM, SVGA graphics (16 bit color), 700 Mb Hard Disk space, CD-ROM, USB port, Serial port

Recommended System: Pentium 800 MHz, WIN 2000/XP, 512 Mb RAM, XGA graphics, 16X CD-ROM or faster, USB or Parallel port, Serial port, 15" LCD screen or larger

113548	MaxSea Navigator+	\$ 479.95
113553	Sailing Performance Module for Navigator+	\$ 229.95
113555	Weather Routing Module for Navigator+	\$ 229.95
113549	ARPA Radar/AIS Module for Navigator +	\$ 229.95
113550	MaxSea NavNet Commander	\$1429.95
129839	MapMedia Chart Region	\$ 169.95

Computer charting and navigation programs are exciting innovations for boaters. With detailed color charts and capable software to display and manage them, boaters now can bring the highest quality navigation information on board. And, with more powerful, less expensive computers, boaters now can own a navigation system that costs less than a single-function chart plotter and handles an array of functions from weather forecasting to communications.

All computer charting and navigation programs work similarly.

First, the software is transferred onto the hard disk of a desktop or notebook computer. The computer's serial port then is connected to a GPS receiver that provides position information. Electronic charts that are available on floppy disks or CD-ROM's also can be loaded on the computer's hard disk or accessed directly.

When the navigation program starts, it receives the current position from the GPS, displays the appropriate chart for that position, and marks position on the chart. As the vessel moves, position changes are updated. Typically, information such as the vessel's heading and speed also are displayed. Courses and routes can be entered by pointing and clicking on the chart, rather than by typing in numbers, and stored for future use.

Charting software is a wonderful navigation aid. However, it is designed to supplement navigation information from other sources and should not be used as a sole source of information. As errors and malfunctions are possible with any system, please carry alternate navigation aids, continue utilizing traditional navigation methods, and maintain a proper watch.

Visit www.waypoints.com for additional navigation software products and information.

Computer Health

Keeping computers healthy onboard is easy. Just:

1. Keep computers from direct contact with water. Locate your system away from frequently-splashed areas and consider a watertight storage case. However, while all boats are moist, moisture (even salty, damp air) does not seem to harm computers.

2. Secure computer systems. No computer will perform after it's tossed around in a seaway. All systems should be secured firmly with brackets or high-tension Velcro® to keep them attached to tables or nav stations.

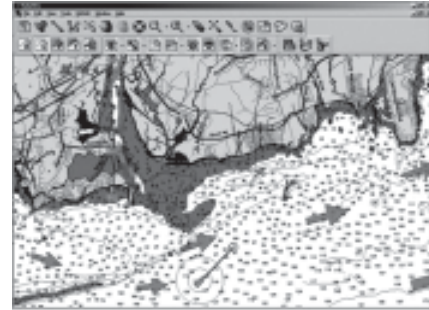
3. Give computers clean, reliable power. While some notebook computers come with 12V direct connections, we do not recommend that you use them. These adapters are designed for automobile charging systems that provide less noisy, more constant power than marine systems. We recommend that you use a small, dedicated inverter to power your computer via its 110V charger. The inverter provides inexpensive protection from any noise on your boat's 12V system, as well as more efficient power conversion than a large house inverter.

4. Keep backup copies of software. Accidents happen; data can be lost. Make sure you can restore your system if you lose or delete files. For convenience, consider a backup device; some newer notebook systems offer optional internal CD-RW capability.

5. Protect external metal connectors with a moisture displacer. Generally, we do not see corrosion on computers, even after years at sea. Taking care to wipe away any visible salt and keeping connectors lightly sprayed with a moisture displacer (Corrosion X, Boeshield, or CRC CO) will assure that no corrosion starts. Do NOT use petroleum jelly or spray lubricants (such as WD-40).

Navigation Software

NOBELTEC Weather, 3D, optional radar support



Nobeltec's *Visual Series* is a customer favorite. All versions feature advanced quilting for seamless chart presentation and the best on-screen resolution. *VNS* features weather overlay, 3-D bathymetric display, and street maps; *Admiral* adds enhanced vessel display, a professional Nav View, and ARPA radar targeting.

Electronic Charting Function	Visual Nav Suite	Admiral
Unlimited Routes, Marks, etc.	✓	✓
Smooth Chart Scrolling	✓	✓
Seamless Chart Display ("quilting")	✓	✓
Chart Rotation (Course, North Up)	✓	✓
Real-Time GPS Navigation	✓	✓
Route, Trip, ETA Planning	✓	✓
Direct Autopilot Control	✓	✓
Upload/Download GPS Waypoints	✓	✓
Tide/Current Information Display	✓	✓
ETA Calculation with Current Adjustment	✓	✓
Maptech (BSB) Chart Support	✓	✓
NDI/Canadian (BSB) Chart Support	✓	✓
SoftChart Chart Support	✓	✓
Passport Vector Chart Support	✓	✓
ENC/S-57 Vector Chart Support	✓	✓
C-Map NT & CM93.3 Chart Support		
Bathy contours drawn from sounder data	optional	optional
AIS Target Display	✓	✓
Weather Chart Download/Overlay	✓	✓
3-D Navigation with Bathy Charts	✓	✓
ARPA Radar Target Display		✓

New Nobeltec *Plus Packs*™ add sophisticated planning capability to *VNS* or *Admiral*. *Sailing Plus* displays on-screen indicators, such as laylines, reverse laylines, and over-the-chart wind indicators with polar targets and actuals for instant performance verification with real-time strip charts. Or, add satellite weather with *Weather Plus* and an optional *XM Satellite Weather Receiver*.

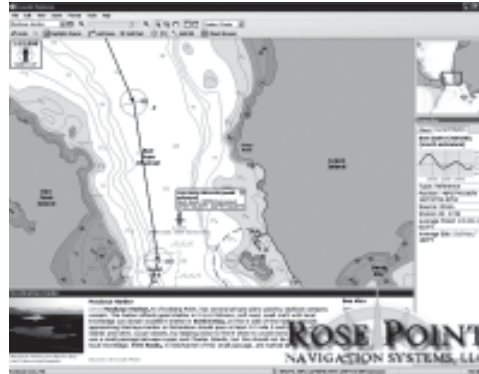
Minimum System Requirements: Pentium 800 MHz, WIN 98/NT/2000/ME/XP, 128 Mb RAM, SVGA graphics, 10 Mb Hard Disk space, CD-ROM, Parallel printer port, Serial port

Recommended System: Pentium 1.2 GHz, WIN 98/NT/2000/ME/XP, 512 Mb RAM, XGA graphics, 16X CD-ROM or faster, Parallel printer port, Serial port, 14" LCD screen or larger

116624	<i>Visual Navigation Suite</i>	\$429.95
116544	<i>Admiral</i>	\$999.95
116623	<i>Nobeltec Plus Pack (Specify Weather or Sailing)</i>	\$279.95
128801	<i>AIS Black Box Receiver</i>	\$189.95

COASTAL EXPLORER Sophisticated functions; great value!

Sail Magazine reports that *Coastal Explorer* is "stable, well-crafted, and loaded with fresh ideas...a humdinger of a new PC charting program". We think you'll agree.



Coastal Explorer includes new S-57 ENC charts for U. S. coastal and inland areas and supports Maptech and SoftChart raster charts, too. It automatically quilts *all* charts together—even photos—for a seamless view and integrates tidal data and sailing directions automatically for complete information on screen. Virtual instrument displays and obstacle alerts make boat handling simpler, too.

Coastal Explorer supports most AIS receivers for advanced targeting and collision avoidance. It's a great value, too—the entire navigation software package *including* a library of charts for U. S. waters costs less than the targeting add-on for other products.

Electronic Charting Function	Coastal Explorer
Unlimited Routes, Marks, etc.	✓
Smooth Chart Scrolling	✓
Seamless Chart Display ("quilting")	✓
Chart Rotation (Course, North Up)	✓
Real-Time GPS Navigation	✓
Route, Trip, ETA Planning	✓
Direct Autopilot Control	✓
Upload/Download GPS Waypoints	✓
Tide/Current Information Display	✓
ETA Calculation with Current Adjustment	✓
Maptech (BSB) Chart Support	✓
NDI/Canadian (BSB) Chart Support	✓
SoftChart Chart Support	✓
Passport Vector Chart Support	
ENC/S-57 Vector Chart Support	✓
C-Map NT & CM93.3 Chart Support	
Bathy contours drawn from sounder data	
AIS Target Display	✓
Weather Chart Download/Overlay	✓
3-D Navigation with Bathy Charts	
ARPA Radar Target Display	✓

Minimum System Requirements: Pentium 350 MHz, WIN 2000/XP, 128 Mb RAM, SVGA graphics, 500 Mb Hard Disk space, CD-ROM, Serial port

Recommended System: Pentium III or later, WIN 2000/XP, 256 Mb RAM, XGA graphics, 8X CD-ROM or faster

121725 *Coastal Explorer*

\$379.95

128801 *AIS Black Box Receiver*

\$189.95

Picture a shipboard display with electronic chart data that includes a mark for every ship within VHF radio range. Then, add information that shows speed and heading. Each mark could reflect the actual size of the ship and report its latitude and longitude. If you selected the mark you could learn the ship's name, course, speed, classification, and other information. Maneuvering information, closest point of approach, time to closest point of approach, and other target information would also be available as well as destination. In other words, you'd have much of the information that's available to the VTS at your fingertips.

This information can be yours NOW with an inexpensive AIS—Automatic Identification System—receiver, navigation software that supports AIS display, and an onboard computer.

AIS is a system used by ships and vessel traffic systems to identify vessels at sea. Radio transponders are integrated with GPS systems and other navigation equipment to report vessel movement automatically. Ships of greater than 300 gross tons are required to install AIS; other smaller commercial vessels are installing systems as well. Because a given area of ocean can get very crowded, vessels that are anchored or are moving slowly transmit less frequently than those moving faster or changing course. Each transponder transmits on two redundant channels and can be "seen" for approximately 20 nautical miles (with direct line of sight).

Recreational boaters are not required to have AIS transponders onboard. However, many are installing inexpensive receivers that integrate with nav software to display AIS information on computer. It's a great aid for collision avoidance in waters crowded with big ships and provides information to supplement radar.

Electronic Charts

No computer charting/navigation system is complete until it can access electronic charts. Charts are available from five primary vendors in four proprietary formats at an array of prices. Individually, they cost about what a paper chart would; CD collections cost much less. Most are raster images—color “pictures” of a paper chart. They include all information that you would find on the charts from which they are scanned, such as depth markings, buoys, and more. Vector charts for computers are just being released and share similar information.

Electronic charts need to be updated just like paper charts. You can update an electronic chart in many ways. The simplest, least expensive—and most labor-intensive—is to hand-enter update information that is referenced in the Coast Guard’s Local Notices to Mariners. This requires that your charting software be annotation-capable. Each manufacturer handles this option differently, so you may want to investigate its method before selecting an application. Local Notices to Mariners are available as a free weekly mailing from the U. S. Coast Guard or may be accessed from the Internet at <http://www.navcen.uscg.mil>. NGA also offers NTM updates on its web site at www.nima.mil (follow links to the Marine Safety section).

Electronic chart vendors offer update options that make correcting your charts fast and easy—for a fee. Most offer update CD’s to provide users with current chart versions. Update downloads are promised; call us or consult our web site for details and prices.

Call or e-mail for NOAA, NGA, or Canadian Hydrographic chart catalogs, or visit <http://www.waypoints.com>

Electronic Charts

FUGAWI New! Navigate with Navionics



Turn your GPS and laptop or pocket computer into a complete land and sea navigation system with Fugawi *Marine ENC*, the first commercial navigation system to use new free ENC S-57 vector charts that are available from NOAA or the Army Corps of Engineers. It has all the functions you’d expect in a nav software package plus Pocket PC®/Palm® compatibility and support for most major raster charts, GPS topos, and street maps, too.

Got Navionics cards on board? Choose Fugawi *Marine ENC* with an optional Navionics *NavPlanner* card reader to bring the power of Navionics to your PC. See p. 18 for *NavPlanner* details.

116639 Fugawi *Marine ENC* **\$199.95**
128624 Fugawi *Marine ENC* w/ *NavPlanner* **\$289.95**

MAPMEDIA CHARTS The best cartography for MaxSea

Want the best charts for MaxSea navigation for Mexico and the South Pacific? Looking for the finest French and Italian charts for the Med? Try *MapMedia Charts*. They’re designed for MaxSea, and our customers tell us that they’re superior for many favored cruising grounds.

MapMedia Charts are available encrypted on regional CD’s and may be unlocked to your MaxSea dongle via e-mail for the ultimate in cruising convenience. Dozens of regions are available; visit www.waypoints.com for a complete selection.

129839 *MapMedia Chart Region* **\$169.95**

MM2-MEX-010 Bay of Campeche-Honduras
MM2-MEX-020 Mexico Pacific Coast

Native Mexican cartography with unparalleled detail!

MM2-NZL-010 New Zealand and Adjacent Islands
MM2-OCE-020 Vanuatu, Tuvalu, Wallis, and Futuna Islands
MM2-OCE-030 Tonga, Samoa, Tokelau, and Cook Islands
MM2-OCE-100 Nouvelle Calédonie
MM2-SPO-100 Iles de la Societe
MM2-SPO-110 Iles Gambier
MM2-SPO-120 Iles Marquises-Tuamotu
MM2-MED-012 Gibraltar to Algiers
MM2-MED-013 Algiers to Bizerte
MM2-MED-014 Tunisia to Libya
MM2-MED-010 Eastern Spain to the Balearics
MM2-MED-020 Italy to Western Sardinia
MM2-MED-040 Adriatic Sea
MM2-MED-050 Aegean Sea



MAPTECH Chart around the world

Chart around the world with Maptech's collections of charts from NDI/Canadian Hydro, British Admiralty, French Hydro, Imray, CYC, and the Royal New Zealand Navy. BSB4 format (except where noted). Check <http://www.waypoints.com> for collections for the British Isles, Atlantic France and Spain, and Scandinavia.

19P01	<i>Juan de Fuca to Queen Charlotte Strait</i>	\$279.95
19P02	<i>Queen Charlotte Strait to Dixon Entrance</i>	\$279.95
19P03	<i>West Coast Vancouver Island</i>	\$279.95
19N06	<i>Montreal to Quebec</i>	\$ 89.95
19N07	<i>Kingston to Montreal</i>	\$129.95
19N08	<i>Quebec to Anticosti Island West</i>	\$129.95
19A01	<i>North Gulf of St. Lawrence, West Newfoundland</i>	\$199.95
19A02	<i>Gulf of St. Lawrence, South Portion</i>	\$279.95
19A03	<i>Nova Scotia, South Portion; Bay of Fundy</i>	\$279.95
19A04	<i>Newfoundland East and South</i>	\$279.95
19A81	<i>Lake Superior (Canada)</i>	\$ 89.95
19A82	<i>Lake Huron /N. Channel/Georgian Bay (Canada)</i>	\$139.95
19A83	<i>Lake Erie (Canada)</i>	\$ 89.95
19A84	<i>Lake Ontario/Trent Severn Waterway (Canada)</i>	\$139.95
200R9	<i>Bahamas</i>	\$229.95
20R91	<i>Near Bahamas, Berrys, Bimini, Abaco, Grand Bahama</i>	\$139.95
20031	<i>Hispaniola, Haiti, and the Dominican Republic</i>	\$229.95
20036	<i>Texas/Mexico Border to Campeche Bank</i>	\$ 99.95
20041	<i>Yucatan Peninsula to Nicaragua, Jamaica, Caymans</i>	\$229.95
20042	<i>Panama Canal to Nicaragua, Jamaica, Caymans</i>	\$229.95
20034	<i>Panama Canal to Colombia/Venezuela Border</i>	\$229.95
20038	<i>Yucatan Peninsula to Panama, Jamaica, Caymans</i>	\$229.95
20163	<i>Panama Canal to Acapulco, Mexico</i>	\$229.95
20164	<i>Acapulco, Mexico to San Diego, CA*</i>	\$229.95
2CUBS	<i>North and South Coasts of Cuba, Set</i>	\$279.95
20R11	<i>U.S. Virgin Islands to Grenada</i>	\$229.95
2R111	<i>U.S. and British Virgin Islands</i>	\$139.95
20044	<i>Newport to Bermuda</i>	\$139.95
2MED01	<i>Straits of Gibraltar to Nice*</i>	\$139.95
2MED02	<i>West Coast of Italy including Corsica and Sardinia*</i>	\$144.95
2MED03	<i>Balearic Islands*</i>	\$144.95
2MED04	<i>Algeria and Tunisia*</i>	\$144.95
2MED05	<i>Adriatic Sea*</i>	\$144.95
2MED06	<i>Ionian Sea and Malta*</i>	\$144.95
2MED07	<i>Aegean Sea and Crete*</i>	\$144.95
2MED08	<i>Coast of Turkey and Eastern Greek Islands*</i>	\$144.95
2MED09	<i>Libya to Antalya including Cyprus and Suez Canal</i>	\$144.95
2MED10	<i>South Biscay and Finisterre</i>	\$144.95
20370	<i>France West Coast</i>	\$144.95
20371	<i>Atlantic Islands to Strait of Gibraltar</i>	\$144.95
20372	<i>Atlantic Coasts of Spain or Portugal</i>	\$144.95
2FR01	<i>S. Coast of France, Port de Sete to Monaco</i>	\$179.95
2FR02	<i>France: Corsica</i>	\$179.95
2NZ700	<i>New Zealand, North and South Island Set*</i>	\$279.95
2NZ78	<i>New Zealand, North Island*</i>	\$144.95
2NZ79	<i>New Zealand, South Island*</i>	\$144.95
2FR07	<i>New Caledonia</i>	\$379.95
2FR08	<i>French Polynesia</i>	\$379.95
2NZ77	<i>Cook Islands and Tonga*</i>	\$144.95

*BSB3 or earlier

Vector vs. Raster

Are vector charts better than rasters? Each has advantages.

A raster chart is an exact replica—of a picture—of a paper chart. To create it, a chart litho master or the paper chart itself is scanned to create a computer image. Then, geographical information is linked to the image to create a latitude/longitude grid that allows GPS position information to be plotted. File sizes range from 0.5-5 Mb, depending on the amount of detail.

A vector chart, however, is a representation of paper chart information produced by drawing and classifying “objects”—numerical constructs of visual information. Objects can be simple or complex, visual or informational, and can be arranged in relationships to one another. Because the chart data is numeric rather than graphic, file sizes are at least tenfold smaller. Vector charts often are called “intelligent” because information can be displayed at will. However, they may look very different than their paper counterparts, while the raster chart is an exact copy.

Historically, vector charts have been available only as “chips”—cartridges that fit into plotters, which have not had the processing power to read and manipulate graphic data. Computer-readable vectors now are available. The newest are ENC’s—Electronic Navigational Charts—that are free from NOAA and compatible navigation software vendors. ENC’s feature excellent detail and a wealth of hidden information. They’re still experimental, though, may not be up to date, and do not cover all U. S. waters.

Not all navigation software is vector-capable, so if vector functions are important, choose a vector-capable program.