



Chart Navigator User Manual



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Brief



Chart Navigator is the iPhone/iPad app for sea charts, intended as a companion for passage planning. The user can scroll/zoom through charts and refer to information that includes tides and photographs. A private collection of waypoints and routes can be created and a number of chart indicators can be used to measure distances and bearings.

- **Charts:** raster charts, providing all the advantages of award winning cartography. Geo-referenced using Mercator projection. The application calculates latitude or longitude for a given screen position. Charts can be selected from the full list or from an overlapping set.
- **Waypoints:** user defined locations which can be moved onscreen and edited. Waypoints can managed independently or within routes.
- **Routes:** user defined collections of points (coordinates or waypoints). Used to define Destinations and to measure distances and bearings.
- **GPS:** the device GPS unit is used to establish the current location. GPS can be turned on/off by the user to save battery drain.
- **Destination and Fixed Position:** defined by the user. Destination is the target for course to steer. The Fixed Position can be used when GPS is turned off or is not available.
- **Cursor:** the reference point onscreen. Used to show lat/long on the chart and to define Destination, Fixed Position and create waypoints.
- **Electronic Bearing Line - distance:** shows distance and bearing between markers A and B.
- **Compass:** shows magnetic north, current heading and course to steer.
- **Instruments Panel:** shows distance/bearing between chart indicators and the cursor or destination. Also shows a thumbnail of the chart displaying the current visible section.
- **Chart information:** geo-referenced. Tides Tides (inherits permissions beyond one day predictions from the Tides Planner application if installed in the same device), aerial photographs.

⚠ NOT FOR NAVIGATION. USER UNDERTAKES ALL RESPONSIBILITY.

Overview



Instrument Panel

Location coordinates
Distances
Speed and bearing

Chart

Scroll
Pinch or button zoom
Chart selection

Geo-referenced data

Tides
Photographs

Routes

Waypoints

Position

Destination

Navigation

Compass
Heading
Course to steer



The application displays a chart and layers of geo-referenced information. The screen can be scrolled or zoomed to display a convenient view of the chart.

Chart tools support waypoints, routes, distance measurement, position and destination, as well as easy setting of display options.

Distance

Toolbar

Display settings
View position/
centring
Chart selection
Navigation -
waypoints, routes,
position,
destination
GPS

Moving around the chart



Scrolling

Touch and drag anywhere to scroll the chart

Zooming

Double tap on the chart to zoom in

Pinch or spread with two fingers to change the zoom

Compass

Touch once to show/minimise

Touch and drag to move in the chart



Chart data

Touch once to show tides, photographs

Indicators

Touch once to show coordinates, bearing and distance

Double tap to show a popup menu

Move to a point

Select a viewing target

The chart scrolls to the selected target (if it lies within the chart)

GPS Location

Position

Destination

Coordinate

Waypoint

Cursor

Distance indicator A

Distance indicator B

Touch and drag to scroll to a different section of the chart.

Pinch-spread or double-tap to zoom.

Double tap any indicator to access features or settings through a popup menu.

Touch data indicators once to see tides, photographs or plans.

Select toolbar buttons for function menus.

Indicators



Positions

-  GPS location (set by GPS if available)
-  Fixed position (set by the user)
-  Destination

Routes

-  Route
-  First point in a route
-  Middle point in a route
-  Last point in a route
-  Add point from this point
-  Add point towards this point

Waypoints

-  Waypoint - independent, can be added to a route
-  Coordinate - always part of a route

Markers

-  Cursor

Electronic Bearing Line (EBL)

-  Distance marker A
-  Distance marker B

Chart information

-  Tide
-  Photograph
-  Multiple information

Data additional to the chart is shown through Indicators, which can be identified by colour coded icons. All the indicators are connected with a lat/long position.

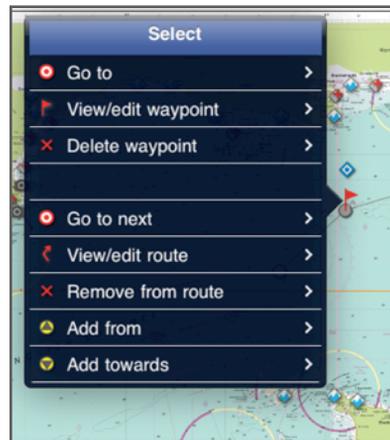
The user can access the data or trigger actions by tapping the indicator:

- Single tap - information
- Double tap - menu
- Touch-drag - move

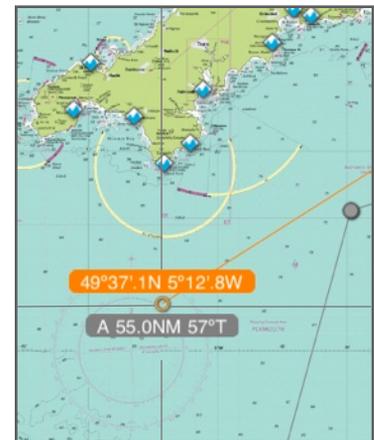
Indicators - actions



Single tap to show coordinates, bearing and distance or chart information



Double tap to present the indicator pop up menu



Touch-hold to move a variable indicator (route point, waypoint, fixed position, destination, EBL distance markers). Black cross-hair lines appear once the indicator is selected for movement.

Instrument Panel



Target
Distance/bearing from origin
Destination 
Cursor 

Speed
Heading

GPS accuracy

Origin
Coordinates for indicator

- GPS location 
- Fixed position 
- Destination 
- Waypoint 
- Cursor 
- Distance A 
- Distance B 



The Instrument Panel shows positions, speed and bearing.

The **Origin** position can be any of the location indicators (cursor, distance markers, waypoint, fixed position, destination, GPS location). Displays coordinates.

The **Target** position is the destination or the cursor. Displays distance and bearing from the origin.

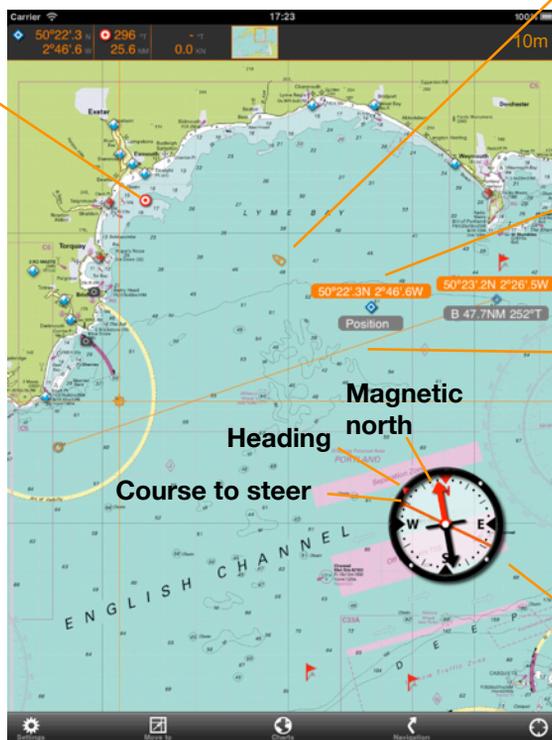
Change origin or target by tapping on the panel.

Speed and bearing are shown when valid values are received from the GPS device sensor.

Positions and measurements



Destination
Set with cursor menu or touch-drag



GPS location

Current position given by the GPS sensor

Fixed position

Set with cursor menu or touch-drag

Electronic Bearing Line

Distance/bearing between markers A and B

Compass

Needle points north (red arrow).

The **Course to Steer** line (orange) shows direction from GPS Location (Fixed Position if GPS not available) to Destination.

The outer rim shows current **Heading** if GPS available and there is sufficient speed (typically > 2.5 knots).

Several indicators can be used for distance and bearing calculations. Show values by tapping on the indicators or the instruments panel.

The Compass shows the magnetic north, current heading and course to steer.

! Magnetic north and GPS readings must not be used for navigation. The device sensors are not tested for navigation usage.

Waypoints and routes



Waypoint

Create from the cursor menu.

Single tap to show lat/long coordinates.

Double tap to access the waypoint menu.

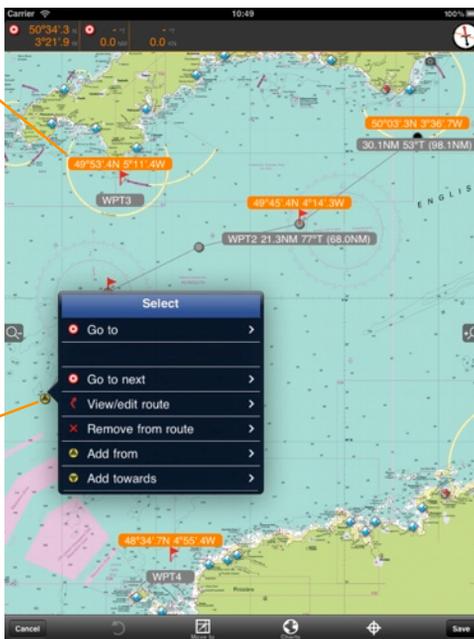
Touch-hold then drag to move waypoint.

Route point

New route: single tap to add new point.

Edit route: double tap point to access point menu.

Touch-hold then drag to move point.



Undo

Clears previous points added (until last saved point).

Point type

Tap to change between coordinate and waypoint when adding route points.

Route

Points in a route can be coordinates or waypoints.

Points show distance/bearing from previous point. Last point shows total distance.

Navigation menu from toolbar to create, select or edit routes.

Routes can span several charts.

Edit route

Toolbar changes when a route is being edited.

Edit name and notes for the route when Save is selected.

Press cancel once route editing is complete.

Waypoints can be placed on the chart using the cursor menu.

Routes group points used for destinations or to measure passage distances.

Edit routes or waypoints by tapping directly on the indicators or through toolbar menus.

Selecting a chart



Chart set

Overlapping current chart (visible area) or all charts



Chart information

Title, region, scale, date of update

Select a chart from a graphical or list view. The chart can be selected from those that overlap the cursor position or from the full set.

Tap on the chart to see charts at that location.

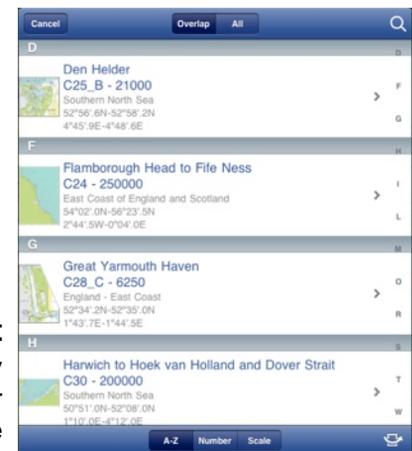
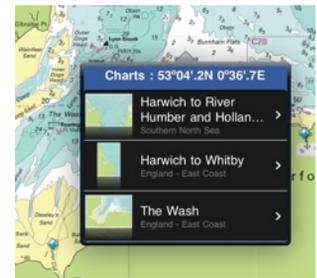
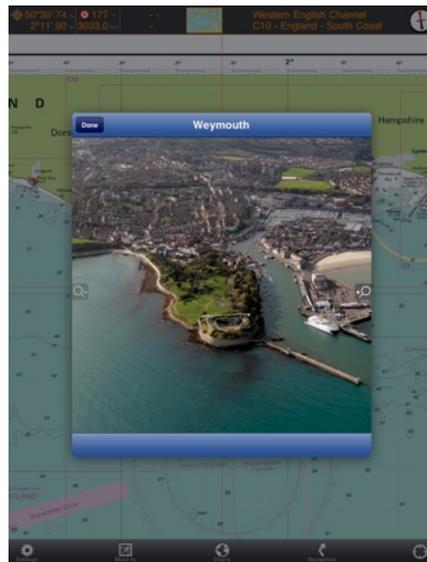


Chart list
Order by name, number or scale

Chart information



Geo-referenced information is accessed by tapping on the chart indicator.

Use the tide tools for depth calculations.

Zoom to view details on photographs.

Settings



- Select Settings from the toolbar to launch the Settings menu
 - Turn on/off display of chart indicators (chart information, position, destination, waypoints, route, EBL distance, cursor)
 - Re-center EBL distance on screen
 - Set defaults for length, distance, speed
 - Set defaults for depth and time in tides panel

