



Aero Charts User Guide



<http://navimatics.com>

Overview

Thank you for choosing Aero Charts. Aero Charts is a versatile aviation navigation product for the iPhone. It features combined VFR+IFR information, continuous and seamless coverage, Direct-to navigation, quick search for features by name and more.

Conventions

Aero Charts utilizes a number of well-accepted conventions and standards relating to aeronautical cartography and navigation.

Symbology

Aero Charts uses symbology derived from the National Aeronautical Charting Office (NACO) VFR charts. The symbols are documented on the NACO website and are taught to pilots throughout the United States. Aero Charts uses the same symbols for IFR charts, however the colors have been softened and otherwise modified to facilitate reading of the chart for the purpose of IFR navigation.

Units

Below are the various units used:

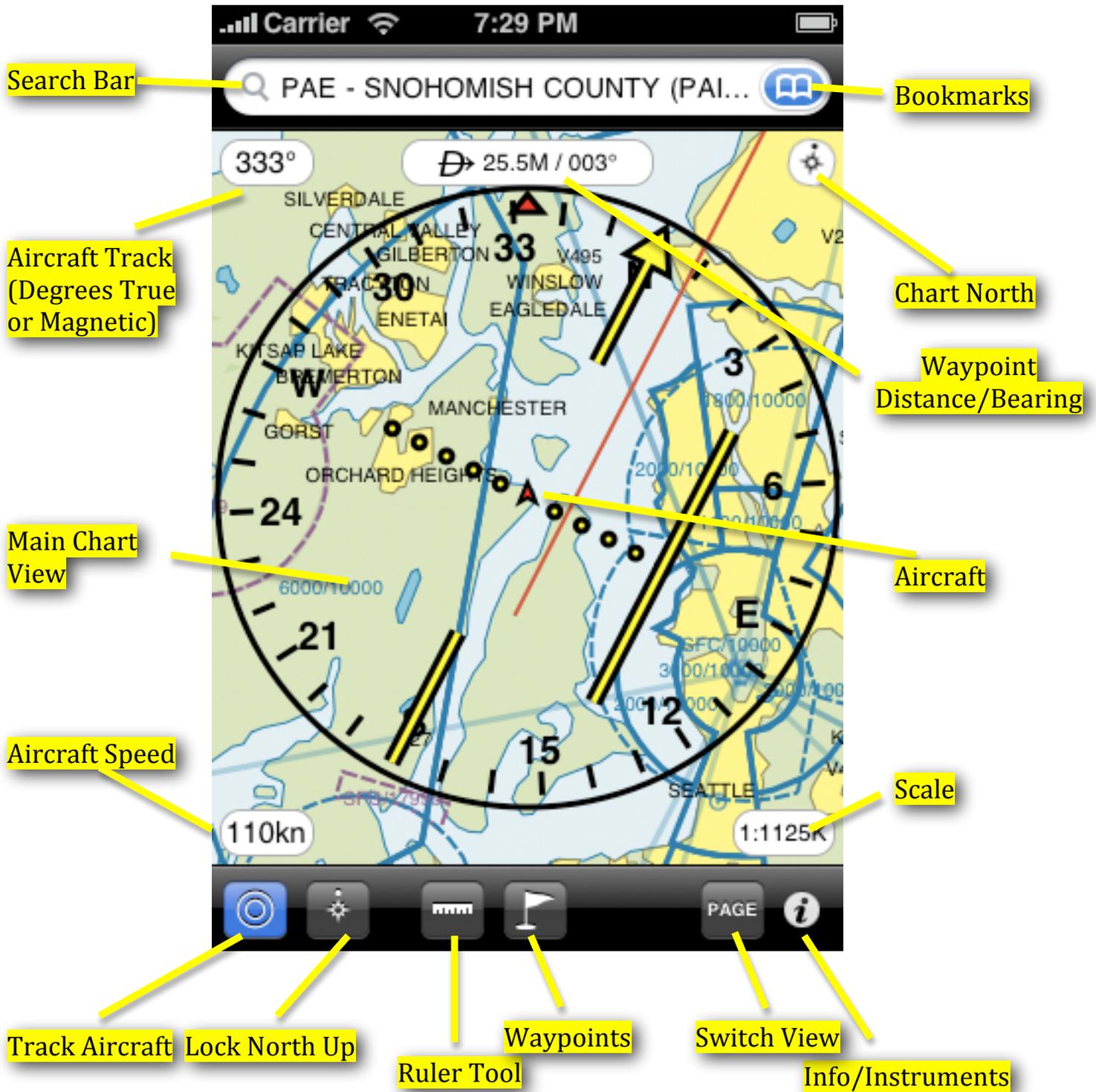
- Altitudes: always in feet (ft)
- Elevations: always in feet (ft).
- Distances: always in nautical miles (M).
- Bearings, tracks, etc: either magnetic or true degrees based on configuration.
- Speeds: always in knots (kn).

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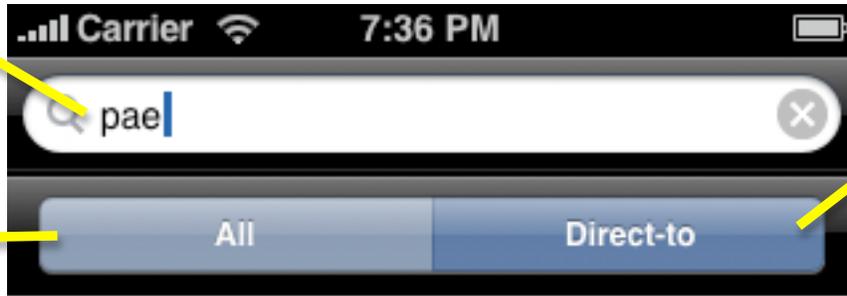
Main Chart View



Search View

Search Bar:
Type at least 2
characters to
get results

Scope Bar:
Use to filter
searches



Current scope
selection:
direct-to

Add bookmark

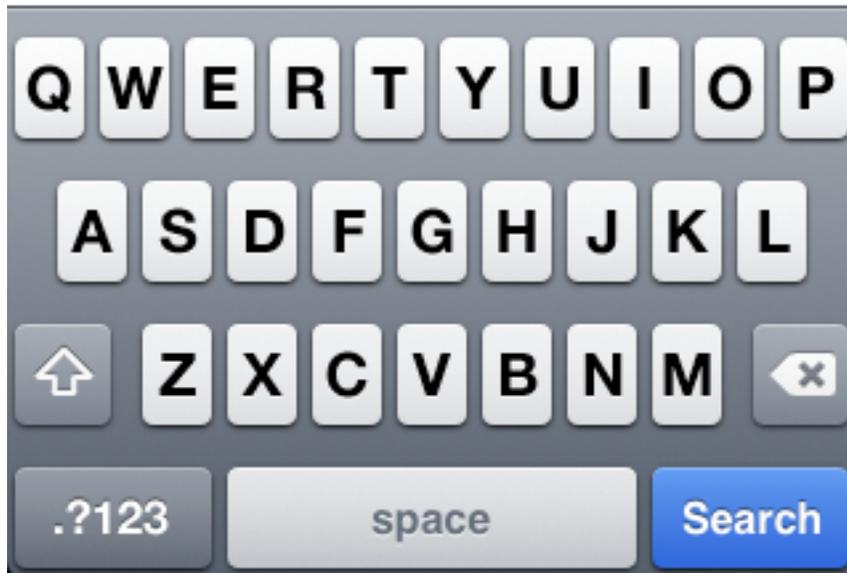
PAE - PAINE



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Search results



Starting Aero Charts

When you start Aero Charts you are presented with the **Main Chart View**. At the same time the software will use the device's GPS hardware (if available) to find your current location. Once a GPS signal is acquired, your aircraft will be displayed on the chart, if the **Main Chart View** is currently positioned over the area of your location. Aero Charts will continuously track the location of your aircraft and update its location on the chart accordingly.

Repositioning The Chart

You can use your fingers to reposition the chart.

Use one finger to move the chart without changing its scale or orientation. Use two fingers to move, scale or rotate the chart in a natural manner. Just put two fingers on the screen, drag them to a new location and see what happens! Note that if the **Track Aircraft** button is currently selected, it will be deselected after you reposition the chart with your fingers.

You can also double tap the screen to zoom the chart in. If the **Track Aircraft** button is currently selected, it will remain selected after a double tap.

Locking North Up

Tap the **Lock North Up** toolbar button to disallow rotation of the chart. The chart will be displayed with North always up. Tap the button again to allow rotation of the chart.

This is what the **Lock North Up** button looks like:



Tracking Your Aircraft

Tap the **Track Aircraft** toolbar button to center the **Main Chart View** on your aircraft. This will also change the orientation of the chart to keep the aircraft pointing upwards (towards the top of the screen). This can help the aviator's orientation when in an unfamiliar area. Tap the button again to stop tracking the aircraft. Note that if the **Lock North Up** button is selected, the chart will remain displayed with North up even when tracking the aircraft.

This is what the **Track Aircraft** button looks like:

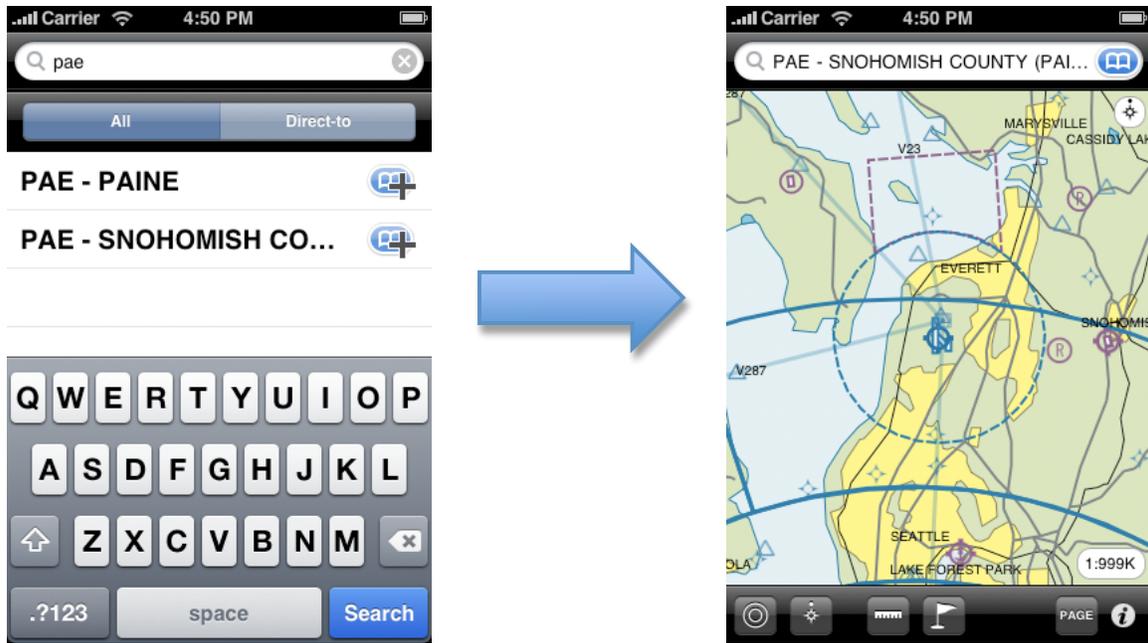


Searching For Features

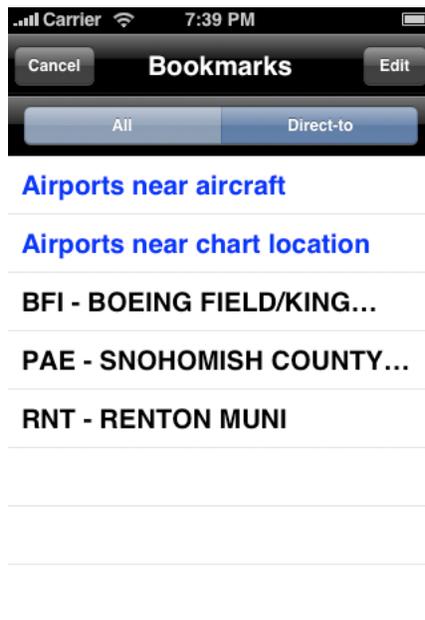
Aero Charts includes powerful search functionality accessible through the **Search Bar**. Using the **Search Bar** you can search for features by name, bookmark features, find nearest airports, and start direct-to navigation.

To search for features simply tap the **Search Bar** then start typing the name or FAA code of a particular feature (e.g. place, airport, navaid, etc). Aero Charts will start looking for likely names once you type in two (2) characters. You can choose to filter your search results if you wish by using the **Scope Bar** underneath the **Search Bar**. For example, if you select "Direct-to" you will only be searching for features that you can navigate towards.

Tap on the desired feature in the search results and Aero Charts will either center the **Main Chart View** on the feature with that name or it will begin navigating towards that feature, depending on your current scope selection in the **Scope Bar**. If you wish you can also bookmark a particular feature for later by tapping on the blue "add bookmark" button at the right side of the feature name.



You can access your bookmarks at any time by tapping on the blue bookmark icon at the right side of your **Search Bar**. Aero Charts will present you with the **Bookmark View**, which allows you to select any of your bookmarked features. Additionally there may be a number of “smart” bookmarks (in blue color), with additional functionality (e.g. find airports near your aircraft).



Direct-to Navigation

Aero Charts supports Direct-to navigation. The Direct-to functionality is accessible through the **Search Bar** as explained earlier. Tap on the **Search Bar** and then tap on “Direct-to” on the **Scope Bar** to search for navigable features only. These include, user-defined waypoints, nav aids, airports and radio fixes. Type the FAA code of the feature of your interest and Aero Charts will start looking for likely features once you type in two (2) characters.

Tap on the desired feature and Aero Charts will begin navigating towards that feature. It will continuously show the planned route line from your current aircraft location to that feature and it will also track the distance from your aircraft to your planned route (Cross Track Error or XTE) as well as the distance and bearing from your aircraft directly to the chosen feature.



HSI instrument

Aero Charts includes a Horizontal Situation Indicator (HSI) instrument. This instrument works like the instrument of the same name found in aircraft and it can graphically display the vessel's current track, desired track and cross-track error information. To show the HSI instrument press the **PAGE** button. Press the **PAGE** button again to hide the HSI instrument.

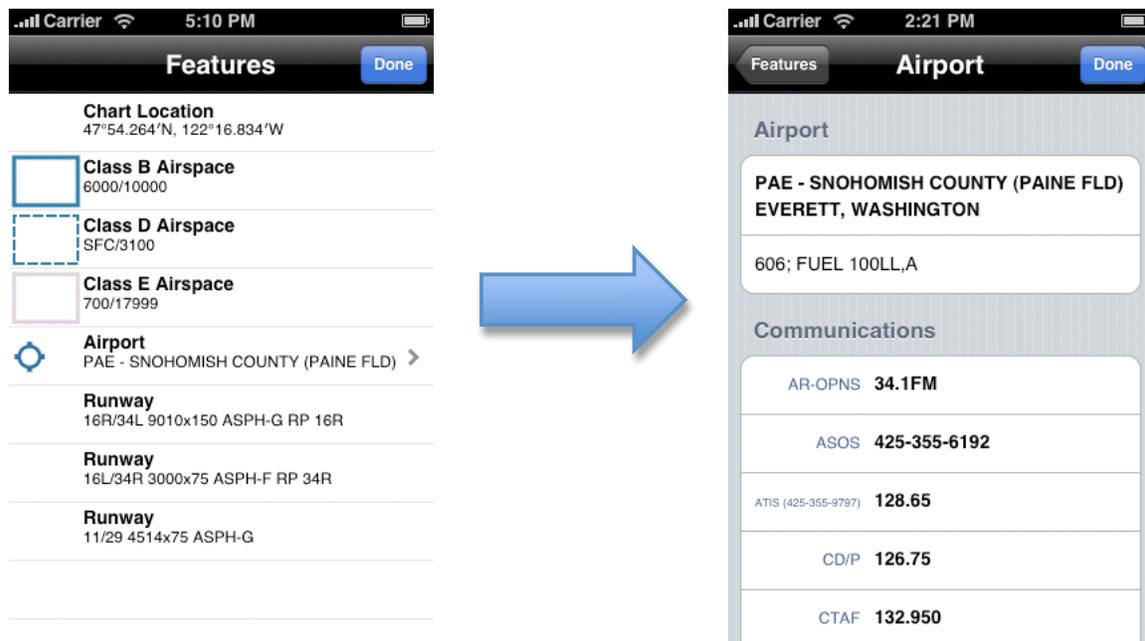
The HSI instrument works as follows: The red arrow points to the current vessel track. The yellow arrow points to the current desired track. The body of the yellow arrow can deviate to the left or to the right. This graphically shows the current cross track error. Each yellow dot represents 1/5th of the Maximum HSI Deflection; the default Maximum HSI Deflection is 1.0M, but this can be changed in the Settings View.

During direct-to navigation the objective is to keep the body of the yellow arrow centered. If the arrow body is moving to the left of its head you are deviating from your course to the right; to correct change your heading to move your vessel to the left. If the arrow body is moving to the right of its head you are deviating from your course to the left; to correct change your heading to move your vessel to the right.

Getting Feature Information

You can get more information about features at a particular location. Make sure that the **Ruler** button is not selected and simply tap the **Main Chart View** and a list of features will be displayed.

Some features will have additional information attached to them, such as FAA notes. Such features will be marked with a chevron symbol. Tap on these features to access the additional information. Airports in particular have a dedicated view that lists airport elevation, fuel availability, airport communications, etc.



Ruler Tool

The **Ruler Tool** allows you to measure distance and bearing on your chart. The distance is measured in nautical miles (denoted by M) and the bearing is measured in degrees.

To start measuring distances tap the **Ruler Tool** button. To measure distance and bearing tap on one location on the chart, then tap on another location. The distance and bearing between the two points will

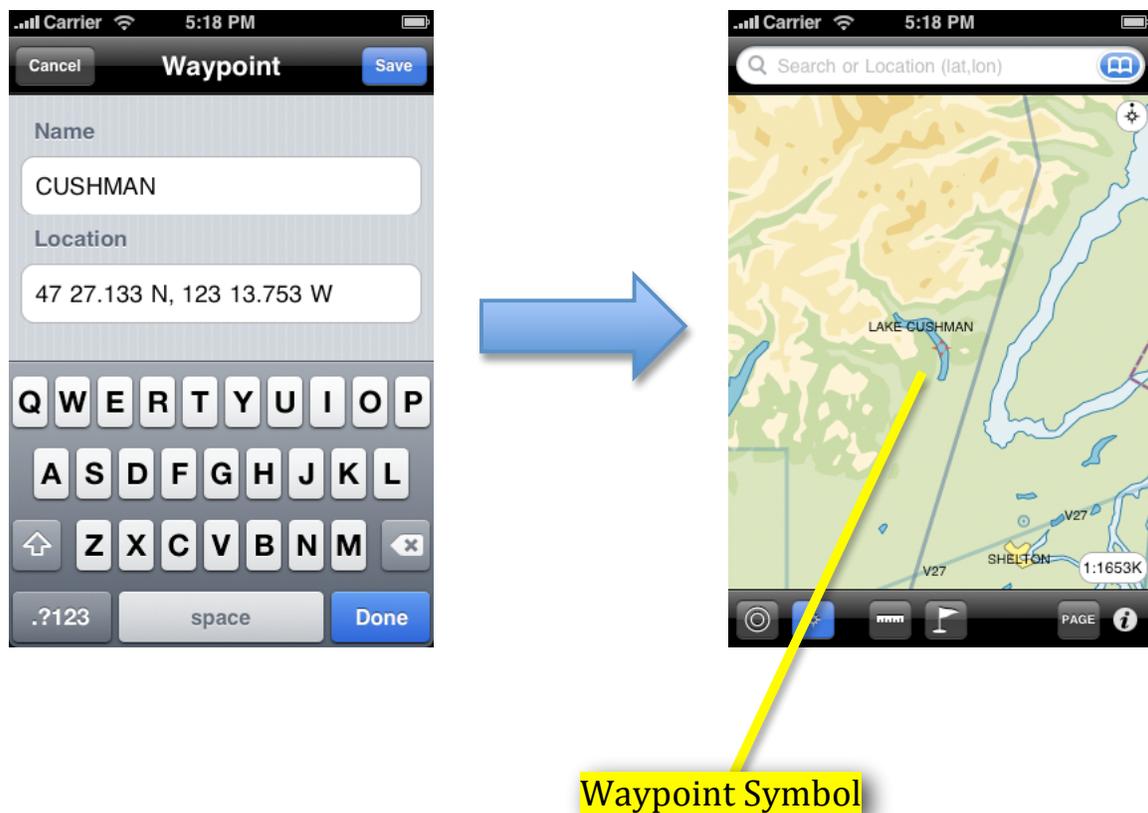
be displayed on the top of the **Main Chart View**. To stop measuring distances tap the **Ruler Tool** button again.



New Waypoint

It is possible to create user-defined waypoints. You create a new waypoint by holding your finger on the screen without moving it. The **New Waypoint View** pops up asking you to save a new waypoint. At this time you can accept the default name and location for your new waypoint or you can tap on them to edit them.

Once you are satisfied with your new waypoint you can tap on the **Save** button. You can also navigate to your new waypoint; for this purpose use Direct-to navigation and select your new waypoint.



View/Edit Waypoints

To access previously saved waypoints tap the **Waypoints** toolbar button. This is what the **Waypoints** button looks like:



You will be presented with a list of waypoints. You can simply tap on a waypoint to center the **Main Chart View** on it or you can tap on the blue chevron button to edit the waypoint. On the **Edit Waypoint View** you can edit the waypoint name and location and tap **Save** or you can delete the waypoint by tapping the **Delete** button and confirming a second time.



Information And Instruments

To access the **Information/Instruments View** tap on the **Information** toolbar button. This button looks like this:



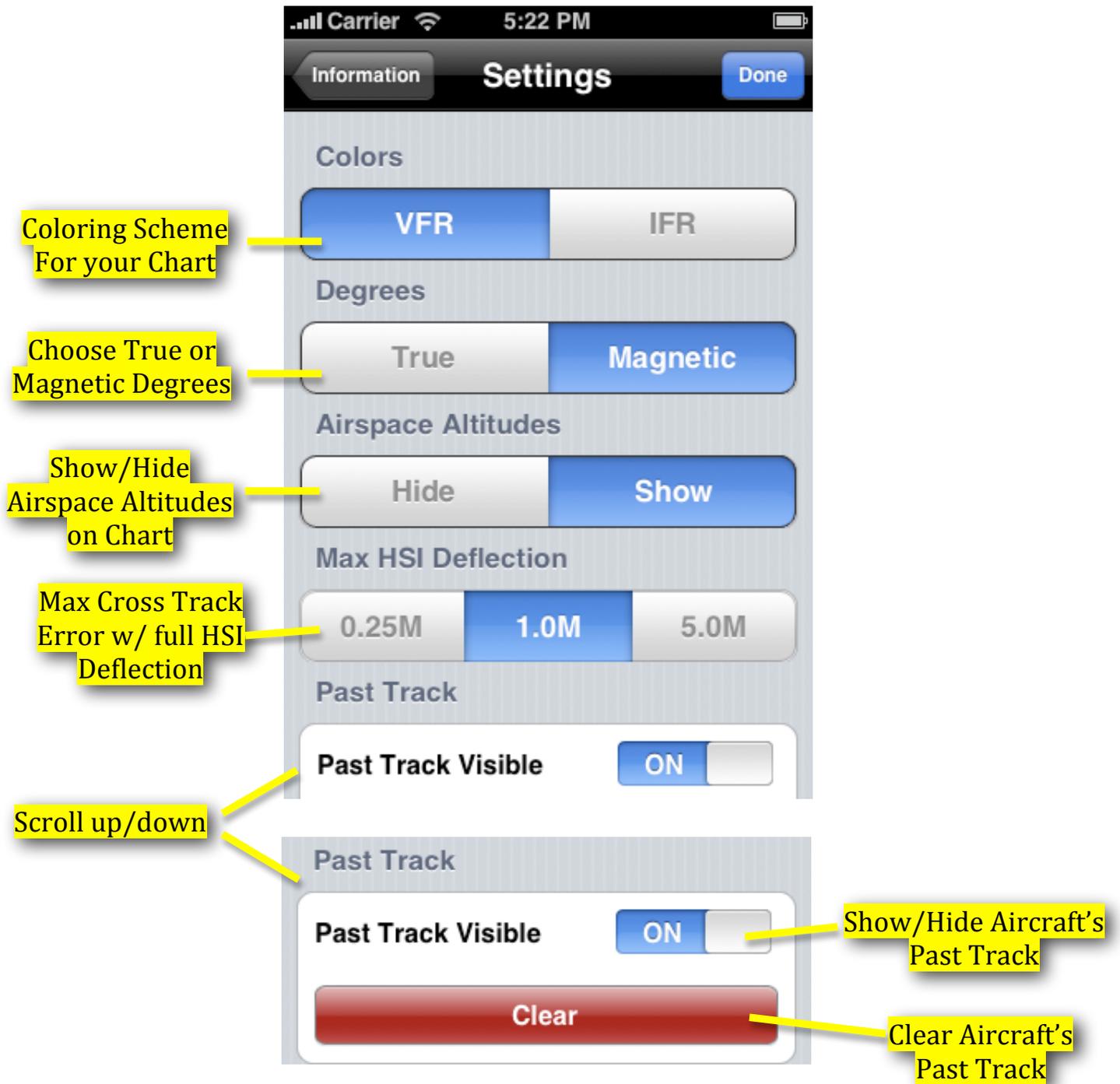
You will be presented with the following view:

The screenshot shows the 'Information' view on a mobile device. The status bar at the top displays 'Carrier', signal strength, Wi-Fi, and the time '4:45 PM'. The title bar contains 'Information' and a 'Done' button. The main content is divided into two sections: 'Aircraft' and 'Waypoint'. The 'Aircraft' section shows location (LOC 47°51.600'N, 122°12.600'W ±100m), speed (SPD 110kn), and track (TRK 313°). The 'Waypoint' section shows the waypoint name (WPT PAE), distance to waypoint (DIS 4.5M), bearing to waypoint (BRG 306°), velocity made good (VMG 109kn), desired track (DTK 319°), estimated time enroute (ETE 0:02:27), and cross track error (XTE 1.02M RIGHT). At the bottom, there is a 'Stop Navigation' button and a 'Settings' button with a right-pointing arrow.

Labels pointing to the screenshot include:

- Aircraft Location
- Aircraft Speed
- Aircraft Track
- Current Waypoint
- Distance To Wpt
- Bearing To Wpt
- Velocity Made Good
- Desired Track
- Estimated Time Enroute
- Cross Track Error
- Tap to access Settings
- Press To Stop Wpt Navigation

You can tap on the **Settings** button to access the **Settings View**, which allows you to modify how Aero Charts presents you with information.

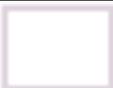
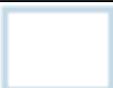
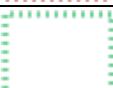
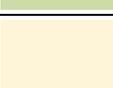
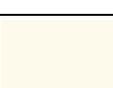
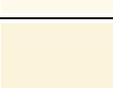


Legend

The following table presents the symbols and colors used in Aero Charts.

Feature	VFR	IFR
Civilian airport with control tower		
Civilian airport with fuel		
Civilian airport		
Military airport with control tower and fuel		
Military airport with control tower		
Military airport with fuel		
Military airport		
Seaplane base with control tower		
Seaplane base with fuel		
Seaplane base		
Heliport		
Private airport		
Unverified/Other airport		
Closed airport		

Feature	VFR	IFR
VORTAC		
VOR/DME		
VOR		
TACAN		
NDB		
Other navaid		
Fix (Compulsory Position Report)		
Fix		
RNAV Waypoint (Compulsory Position Report)		
RNAV Waypoint		
User-defined Waypoint		
Holding Pattern		
Holding Pattern (Left Turns)		
Airway (V,T)		
Airway (A,B,G,R)		
Class B Airspace		

Feature	VFR	IFR
Class C Airspace		
Class D Airspace		
Class E Airspace (Surface)		
Class E Airspace (700AGL)		
Class E Airspace (Other than Surface or 700 AGL)		
Special Use Airspace (P,R,W,A)		
Special Use Airspace (MOA)		
Inland Water		
Iso-height Area 0ft		
Iso-height Area 1000ft		
Iso-height Area 2000ft		
Iso-height Area 3000ft		
Iso-height Area 5000ft		
Iso-height Area 7000ft		
Iso-height Area 9000ft		
Iso-height Area 12000ft		

Feature	VFR	IFR
Built-up Area		
Road		
Railroad		