Location Setup

First thing you must do is tell GoSkyWatch where you are. Location setup is found by tapping the settings icon to the right in the toolbar and selecting [Location]. There are several options available to you:

1. The easiest is to use the locations services available on the iPhone / iPod touch. Tap the [Use Current Location] button and GoSkyWatch will attempt to locate your position. Tap the [Stop] button when a location for the desired accuracy has been obtained. Note that although the iPod touch does not have the ability to locate position with GPS or cell location, it may still be able to through WiFi if available. Personalize the location name by touching the name field to edit.

2. Pick from a list of cities built into GoSkyWatch. Tap the [Pick Location from List] to open a list of cities. Scroll to or search for your city or city close to your location.

3. Manually enter or adjust your location by entering your location coordinates and time zone. You can find your latitude and longitude from services like Google Earth. Note interaction with Maps on the iPhone is not supported at this time.
Display

**Finder Tool** - Opens the finder screen to locate planets, stars and constellations. Tap the [GoTo] button to return to the selected object in the sky view.

**Magnitude Adjust** - Opens the magnitude brightness slider control. Adjust for the desired level of star brightness to be displayed.

**Settings** - Opens the settings screen. From there you can change the view location, date, time, preferences and enable night mode. Night mode changes the display to shades of red for easier night time viewing.

**Location Status** - Displays the currently selected location, time and date. The status bar will highlight (shown) when a fixed date is selected in the settings. It will be shown in plain text when the current time is selected.
**View Target** - The reference point for the information displayed in the screen.

**View Direction/Zoom** - The current view azimuth (Az), elevation (El) and zoom (Zm) of the display. North corresponds to a azimuth of zero degrees, east 90 degrees, south 180 degrees and west 270 degrees. An elevation of zero degrees corresponds to looking directly at the horizon and 90 degrees is directly above. The maximum zoom of 180 degrees is the full sky view. Turning on the celestial grid changes the viewing direction display to equatorial coordinates by Right Ascension (RA) and Declination (De).

**Object Information** - Displays the name, brightness magnitude and distance to the object closest to the center of the target area. Distances to stars are shown in light years and distance to the planets in AU. 1 AU is the distance from the Earth to the Sun.

**Constellation Name** - Displays the constellation name and common name for the point in the center of the target area.

**Time Lapse control**

Touching the animation arrow slides in the animation controls. Touching it again exits the animation controls.

Touching the forward or reverse buttons changes between the following 5 time lapse speeds.
- 1 minute
- 10 minutes
- 1 sidereal day
- 1 day
- 3 days

A sidereal day is the time it takes for the earth to complete one revolution in relation to the universe. It is slightly less than the 24 hour solar day. When time lapse is set to sidereal days the sky appears stationary while the sun and planets move.

Note that running time lapse animation changes the display time. The status bar will highlight if the time is not set to the current time. Goto [Date & Time] under the settings to switch back to use the current time.
Using the accelerometer based finder to identify objects

Although the iPhone does not have an electronic compass, GoSkyWatch uses the position that the device is held to aid in the identification of objects. GoSkyWatch enters tracking mode by holding the device above you so that the back points towards the direction of interest. Start by facing north and holding the device in the standard portrait orientation. The view to the north will then be displayed. Tilting the device towards you will adjust the view's elevation. The accelerometer will accurately determine your viewing elevation.

Rotate the device like a steering wheel to pan left or right. Rotating the device clockwise pans the viewing direction to the right. Rotating anti-clockwise pans the viewing direction to the left. For locations in the northern hemisphere you will be looking east once you have rotated the device 90 degrees clockwise to the landscape orientation. Similarly you will be looking west once you have rotated the device 90 degrees anti-clockwise to the landscape orientation. When the device is upside down after rotating 180 degrees you will be looking to the south. With a bit of practice you will be navigating the sky with ease.

For locations in the southern hemisphere the default viewing direction is to the south.

Tips to finding north without a compass:
- In the northern hemisphere you can use use the Big Dipper in the Ursa Major constellation which points to Polaris (the north star). Polaris is always directly above the north (shown below)
- In the southern hemisphere there is no easily identifiable south star. The Southern Cross and pointer stars can be used to find the south pole as shown below.
- Rotate the device and orient yourself so that the moon is aligned with the view displayed. GoSkyWatch will show the direction you are facing. You can use this as your starting point.
- Use the sun when you arrive at a location in daylight using the same approach as using the moon to note the direction of north before night falls.
Tip:
- Adjust the magnitude of the stars displayed so the display reflects your viewing conditions. This will make it easier for you to align the view displayed with what you see in the sky.

Navigating the Sky

Commonly use touch gestures can also be used with GoSkyWatch.

- Touch and drag
  Drag your finger around the screen to change the viewing direction. Dragging up and down adjusts the viewing elevation. Dragging from side to side adjusts the viewing azimuth (compass viewing direction).

- Pinch
  Use the pinch gesture to zoom in and out.

- Double Tap
  This will return the display to the full sky display in the default viewing direction. Double tapping again will show the below the horizon sky view.