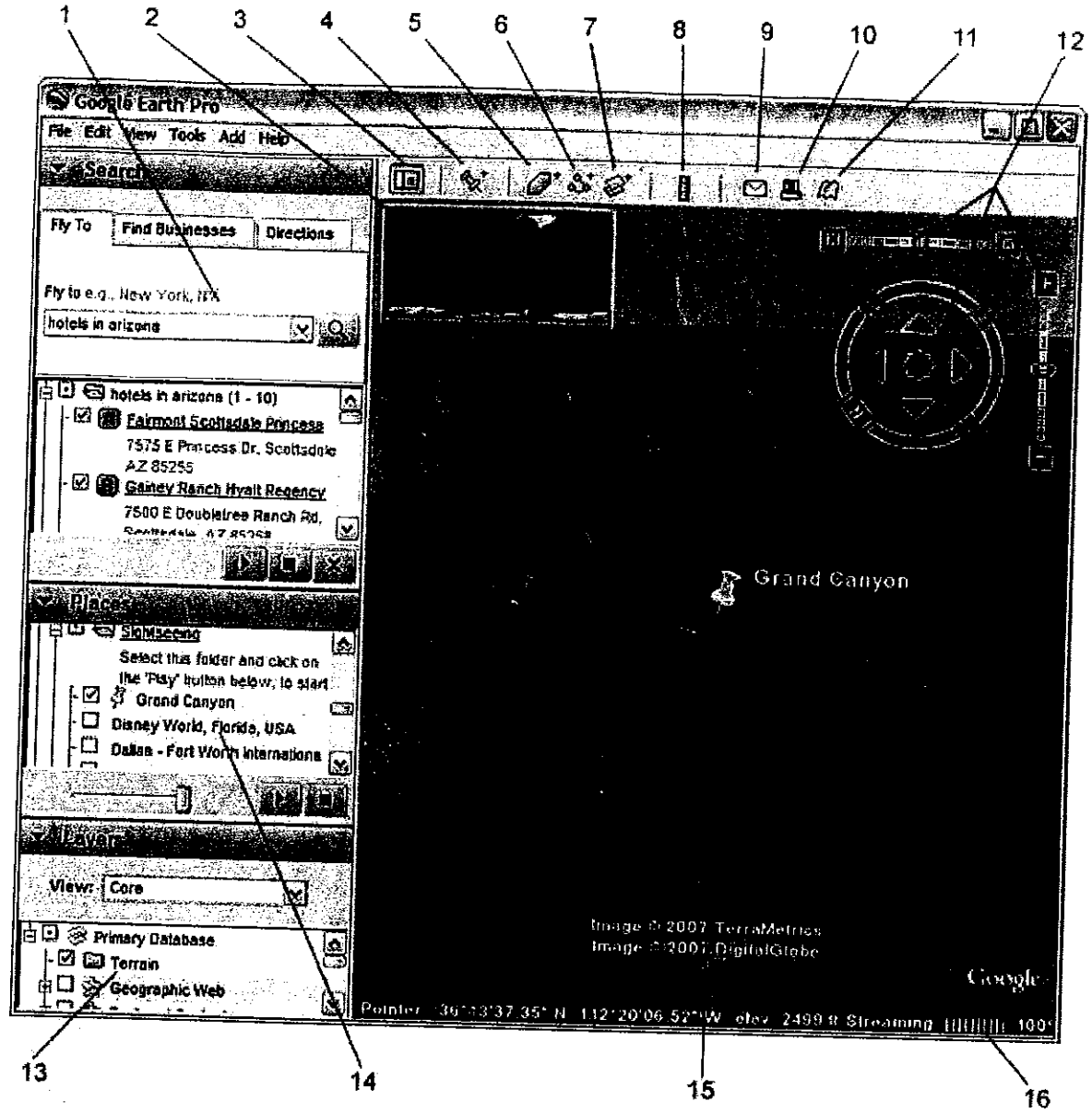


1. **Search panel** - Use this to find places and directions and manage search results. Google Earth EC may display additonal tabs here.
2. **Overview map** - Use this for an additional perspective of the Earth.
3. **Hide/Show sidebar** - Click this to conceal or the display the side bar (Search, Places and Layers panels).
4. **Placemark** - Click this to add a placemark for a location.
5. **Polygon** - Click this to add a polygon.
6. **Path** - Click this to add a path (line or lines).
7. **Image Overlay** - Click this to add an image overlay on the Earth.
8. **Measure** - Click this to measure a distance or area size.
9. **Email** - Click this to email a view or image.
10. **Print** - Click this to print the current view of the Earth.
11. **Show in Google Maps** - Click this to show the current view in Google Maps in your web browser
12. **Navigation controls** - Use these to tilt, zoom and move around your viewpoint (see below).
13. **Layers panel** - Use this to display points of interest.
14. **Places panel** - Use this to locate, save, organize and revisit placemarks.
15. **3D Viewer** - View the globe and its terrain in this window.
16. **Status bar** - View coordinate, elevation and imagery streaming status here.

Tip: When the Google Earth Pro/EC login and password appear, write these down so you can use them later to activate the software on this or another computer.

Navigating in Google Earth

Tip: Follow a tutorial on this subject: Navigating on the Earth

In Google Earth, you see the Earth and its terrain in the *3D viewer*. You can navigate through this 3D view of the globe in several ways:

- Using a mouse
- Using the navigation controls

You can also manipulate your view of the earth by tilting the terrain for perspectives other than a top-down view. Finally, you can reset the default view for a north-up, top-down view wherever you are.

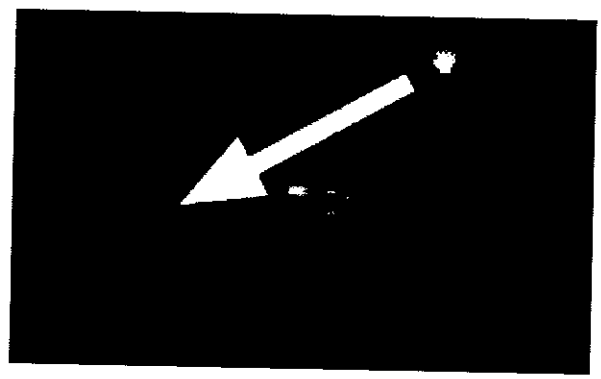
Using a Mouse

To get started navigating with your mouse, simply position the cursor in the middle of the 3D viewer (image of the earth), click one of the buttons (right or left), move the mouse and note what happens in the viewer. Depending upon which mouse button you press, the cursor changes shape to indicate a change in behavior. By moving the mouse while pressing one of the buttons, you can:

- Drag the view in any direction
- Zoom in or out
- Tilt the view (requires middle button or scroll wheel)
- Rotate the view (requires middle button or scroll wheel)

The following list describes all the actions you can accomplish using the mouse.

- **Move the view in any direction (north, south, east, or west)** - To move the view, position the mouse cursor on the viewer and press the LEFT/main mouse button. Notice that the cursor icon changes from an open hand to a closed hand. Pull the viewer as if the hand cursor is like a hand on an actual globe, and you want to drag a new part of the earth into view.



  You can drag in any direction to reveal new parts of the globe, and you can even drag in circular motions.

- **Drift continuously across the earth** - If you want to drift continuously in any direction, hold the left/main mouse button down. Then, briefly move the mouse and release the button, as if you are "throwing" the scene. Click once in the 3D viewer to stop motion.
- **Zoom in** - There are a number of ways to zoom in with the mouse.
  - You can double-click anywhere in the 3D viewer to zoom in to that point. Single-click to stop, or double-click to zoom in more.
  - If your mouse has a scroll wheel, use it to zoom in by scrolling towards you. Use the ALT (alt/option on the Mac) key in combination with the scroll wheel to zoom in by smaller increments. More settings.
  - You can also position the cursor on the screen and press the RIGHT mouse button (CTRL click on

the Mac). Once the cursor changes to a double arrow, move the mouse backward or pull toward you, releasing the button when you reach the desired elevation.

If you want to zoom continuously in, hold the button down and briefly pull the mouse down and release the button, as if you are "throwing" the scene. Click once in the viewer to stop the motion.

- On some Macintosh laptops, you can drag two fingers across the trackpad to zoom in and out.

- **Zoom out** - There are a number of ways to zoom out with the mouse.
  - Using the RIGHT mouse button (CTRL click on the Mac), double-click anywhere in the 3D viewer to zoom out from that point. The viewer will zoom out by a certain amount. Single-click to stop, or right double-click (CTRL click on the Mac) to zoom out more.
  - If your mouse has a scroll wheel, you can use the scroll wheel to zoom out by scrolling away from you (forward motion). Use the ALT (alt/option on the Mac) key in combination with the scroll wheel to zoom out by smaller increments. More settings.
  - You can also position the mouse cursor on the screen and press the RIGHT mouse button (CTRL click on the Mac). Once the cursor changes to a double arrow, move the mouse forward or push away from you, releasing the button when you reach the desired elevation. If you want to zoom continuously out, hold the right button (CTRL click on the Mac) down and briefly push the mouse forward and release the button, as if you are "throwing" the scene. Click once in the viewer to stop motion.
- **Tilt the view** - If your mouse has a either middle button or a depressible scroll wheel, you can tilt the view by depressing the button and moving the mouse forward or backward. If your mouse has a scroll wheel, you can tilt the view by pressing the SHIFT key and scrolling DOWN to tilt the earth to "top down" view, or scrolling UP to tilt the earth for horizon view. See Tilting and Viewing Hilly Terrain for more information.
- **Rotate the view** - If your mouse has either a middle button or a depressible scroll wheel, you rotate the view to the left by clicking on the middle button and moving the mouse to the left. To rotate the view right, click on the middle button and move the mouse to the right. You can also use the CTRL (⌘ on the Mac) key in combination with the scroll wheel to rotate the view. Press CTRL (⌘ on the Mac) and scroll UP to rotate clockwise, CTRL (⌘ on the Mac) + scroll DOWN to rotate counter-clockwise. See Tilting and Viewing Hilly Terrain for more information.
- **Mouse Wheel** - See above. To change these settings, click *Tools* > *Options* > *Navigation* > *Navigation Mode* > *Mouse Wheel Settings* (on the Mac: *Google Earth* > *Preferences* > *Navigation* > *Navigation Mode* > *Mouse Wheel Settings*). Move the slider to set how fast or slow your viewpoint of the earth zooms in or out. Check *Invert Mouse Wheel Zoom Direction* to reverse the direction of zooming when you use the mouse wheel.
- **Pan and Zoom navigation** - This mode is on by default when you start Google Earth. You can return to this mode from other modes by doing one of the following:
  - Type Ctrl (⌘ on the Mac) +T. When this mode is activated, the cursor changes to a hand symbol.
  - (Windows and Linux) *Tools* > *Options* > *Navigation* > *Navigation Mode* > *Pan and Zoom* . (Mac) *Google Earth* > *Preferences* > *Navigation* > *Navigation Mode* > *Pan and Zoom*. If you use a joystick or other non-mouse controller, you can also change how perspective moves in the 3D viewer under *Non-mouse controller settings*. Note that these options are not available (greyed out) until you connect a non-mouse controller to your computer and check *Enable Controller*. Choose *User-Based* to move your particular vantage point or *Earth Based* to move the globe. Check *Reverse Controls* to reverse the actions of the joystick.
- **GForce navigation (advanced)** - To change to this navigation mode, do one of the following:
  - Type Ctrl (⌘ on the Mac) + G to change when window focus is in the 3D viewer
  - (Windows and Linux) *Tools* > *Options* > *Navigation* > *Navigation Mode* > *Flight Control*. (Mac) *Google Earth* > *Preferences* > *Navigation* > *Navigation Mode* > *Flight Control*.

    This mode is in effect when the navigation cursor changes to an airplane. In addition, the effects of G-Force mode are most noticeable the closer you are to the terrain, and become less exaggerated the higher your eye elevation. The behavior of this navigation mode simulates that of a joystick, where the direction your mouse moves indicates specific joystick moves. If you are familiar with using a joystick, you'll be able to use this mode easily.

    To pan left or right, or to tilt the horizon left or right, left-click and move the mouse right/left of center. To tilt to top-down view, left-click and move the mouse forward (away from you). To tilt to

horizon view, left click and move the mouse back (toward you). To accelerate, right-click (CTRL click on the Mac) and move the mouse forward. To decelerate, right-click (CTRL click on the Mac) and move the mouse backward.

The response in the 3D viewer to your mouse movements is related to the vigorousness of your mouse movements, so you can test this mode out slowly using movements.

To return to standard trackball navigation mode, type Ctrl (⌘ on the Mac) + T. To stop motion in the viewer at any time, press the spacebar.

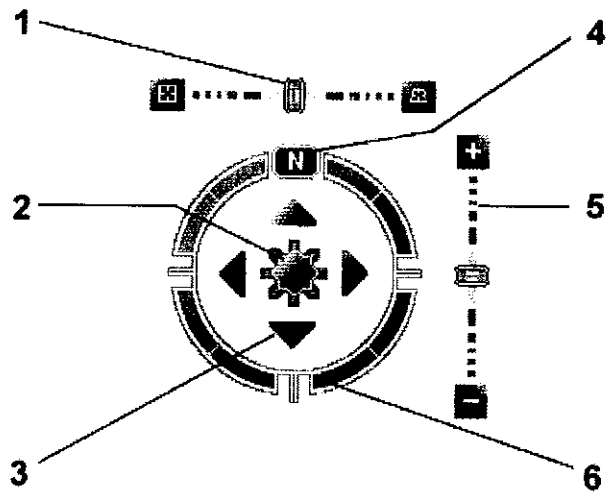
- **Click-and-Zoom navigation** - To change to this navigation mode, choose:
  - (Windows and Linux) *Tools* > *Options* > *Navigation* > *Navigation Mode* > *Click-and-Zoom*
  - (Mac) *Google Earth* > *Preferences* > *Navigation* > *Navigation Mode* > *Click-and-Zoom*

  When the 3D viewer enters this navigation mode, the cursor changes to a cross-hair mark. Here, navigation with the mouse is limited: left-click to zoom in a set distance, and right-click (CTRL click on the Mac) to zoom out a set distance. Use the navigation controls to pan and rotate. Return to the standard trackball mode by typing Ctrl (⌘ on the Mac) +T.

Using the Navigation Controls

To view and use the navigation controls, move the cursor over right corner of the 3D viewer. After you start Google Earth and move the cursor over this area, the navigation controls fade from sight when you move the cursor elsewhere. To view these controls again, simply move the cursor over the right corner of the 3D viewer. To hide or show the compass icon in the 3D viewer, click *View* > *Compass*. See also Showing or Hiding Items in the 3D Viewer.

The Google Earth navigation controls offer the same type of navigation action that you can achieve with mouse navigation. In addition, you can use the controls to tilt the view (perhaps for a perspective on terrain) or to rotate the viewer around the center. The following diagram shows the controls and explains their functions.



1. Use the tilt slider to tilt the terrain toward a horizon view. Move the slider to the left for a top-down view or to the right for a horizon view. Double click the icons at the end of the slider to reset the tilt all the way to a top-down view or to a horizon view.
2. Use the joystick to move the center point of the view down, up, right or left. Click the center, hold the mouse button, and move in any direction.
3. Click the direction arrows to move the view in the direction you wish.
4. Click the north up button to reset the view so that north is at the top of the screen.
5. Use the zoom slider to zoom in or out (+ to zoom in, - to zoom out). Double click the icons at the end of the slider to reset the zoom all the in or out.
6. Click and drag the navigation ring to rotate the view.

You can also use the keyboard to control navigation, see 3D Viewer Navigation in Keyboard Controls for more information.

Tilting and Viewing Hilly Terrain

When you first start Google Earth, the default view of the earth is a "top-down" view, which looks like the view straight down out of an airplane window when you are sufficiently zoomed in.

- **Tilt the terrain from 0 - 90 degrees** - You can use the mouse or the navigation controls to tilt the view in order to see a different perspective of the area you're exploring. You can tilt to a maximum of 90 degrees, which provides a view of the object as well as the horizon, in some cases.
- **Turn on terrain** - Using the tilt feature is particularly interesting when you are looking at a part of the earth where the terrain is hilly, so be sure to also have the terrain check box selected in the Layers panel when tilting the view.
- **Rotate the view for a new perspective** - Once you have tilted the view so that you are looking at a particular object, such as a hill, you can also rotate around that object. When you do this, the object remains in the center of the view, but you look at it from different perspectives (i.e., north, south, east, west) as you rotate around it.
- **Use the middle mouse button (if available) for seamless movement** - If your mouse has a middle button or a depressible scroll wheel, you can depress the button to both tilt and rotate the view. Movements up or down tilt the view, and movements left or right rotate the view. See Using a Mouse for more information.

The following figures show a comparison view of Mount Shasta in California with and without tilt enabled.

Top down view

Tilted view

You can adjust the appearance of the terrain if you would like the elevation to appear more pronounced. To do this, click *Tools* > *Options* > *3D View* from the *Tools* menu (for the Mac, choose *Google Earth* > *Preferences* > *3D View*) and change the *Elevation Exaggeration* figure. You can set it to any value from 1 to 3, including decimal points. A common setting is 1.5, which achieves an obvious yet natural elevation appearance. See Viewing Preferences for more information.

Resetting the Default View

After tilting and rotating the 3D view in Google Earth, you can always quickly reset to the default north-up and top-down view by clicking on the appropriate buttons in the navigation controls.

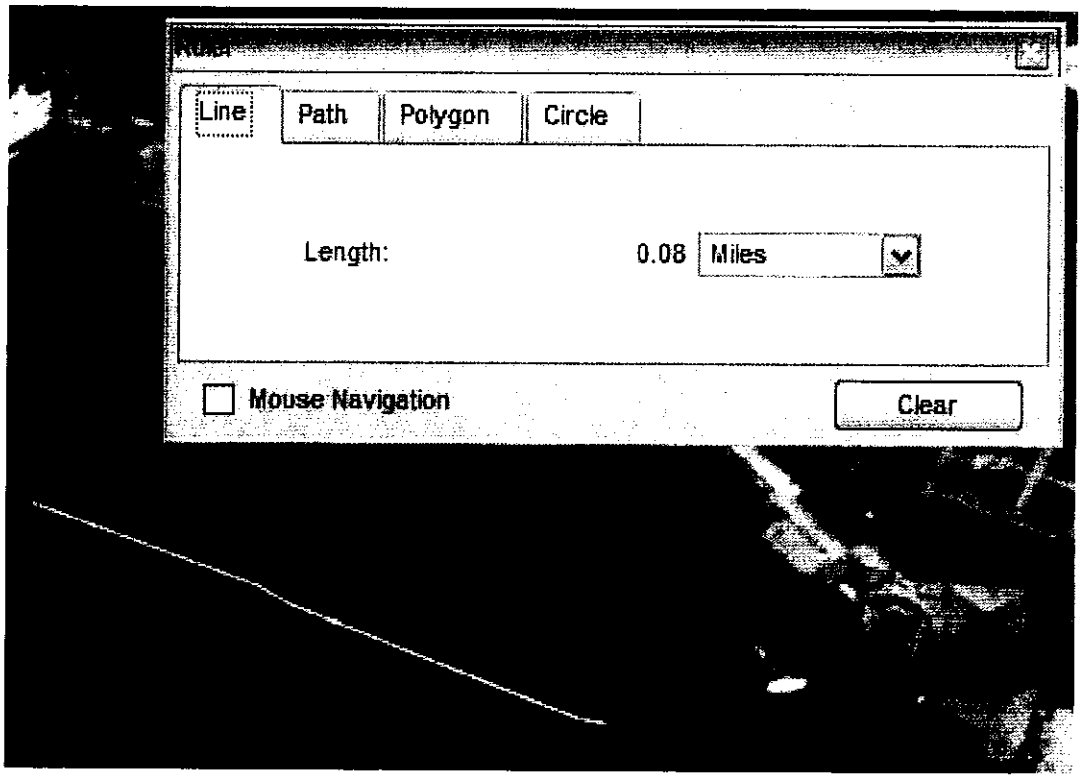
- Click the North-up button  to reset the view so that north is at the top of the viewer.
- Click the Reset Tilt button  to reset tilt to the default "top-down" view.
- (Windows and Linux only) Click in the 3D viewer and type r on the keyboard to reset the view (see Keyboard Controls for more).

Note: To quickly return to a known, familiar spot if you get lost, click on the *default* placemark in the *My Places* folder. This returns you to the center of your country (or a country that speaks your language). You can also edit the location and name for that *Default* placemark if you want to. See Editing Places and Folders for more information.

Measuring Distances and Areas

Google Earth offers a number of tools that you can use to measure distances and estimate sizes. Depending upon which version of Google Earth you are using, you have access to the following measuring tools:

- Measuring with a line or path (all Google Earth versions)
- Measuring with a circle radius or polygon (Google Earth PRO)



Use the *Ruler* window (*Tools* menu) to measure length, area, and circumference as follows:

1. Position the imagery you want to measure within the 3D viewer and make sure you are viewing the earth from top-down (type U) and with terrain turned off for best accuracy. Measuring is calculated using the lat/lon coordinates from point to point and does not consider elevation.
2. From the Tools menu, select Ruler. The Ruler dialog box appears. Consider moving the dialog box to a region of your screen that doesn't obstruct the 3D viewer.
3. Choose the type of shape you want to measure with. All versions of Google Earth can measure with Line or Path. Google Earth PRO users can also measure using a polygon or circle.
4. Choose the unit of measure for length, perimeter, area, radius, or circumference, as applicable. See the table below for a list of supported units

- Using Style Templates
- Using GPS Devices with Google Earth
- Making Movies with Google Earth
- Keyboard Controls
- 3D Viewer Options

of measure.

5. Click in the 3D viewer to set the beginning point for your shape and continue clicking until the line, path, or shape measures the desired region. (For circle, click in the center and drag out to define the circle.)

   A red dot indicates the beginning point of your shape, and a yellow line connects to it as you move the mouse. Each additional click adds a new line to the shape, depending upon the tool you chose. The total units for the shape are defined in the Ruler dialog box, and you can choose other units of measure for the existing shape.

For more details on how to modify the shape, reposition the viewer while measuring, and use other shape features, see the features table.

Measuring Tool Features and Options

The following table describes the options available to all measuring tools, as well as the features specific to each tool.

Feature or Function	Description
Modify or reposition a shape	Once you define a line, path, or other shape in the 3D viewer, you can change its dimensions by clicking on a desired point and dragging it to the new position. First make sure you have the type of shape you want to modify selected in the Ruler dialog box. When you place the cursor over an existing point, the cursor changes from a drawing box to a finger-pointing hand to indicate that you can click on the highlighted point if you want to reposition it. For circles, you can click on the radius point and drag the circle to a new position on the earth. For area shapes, you can add additional points by clicking in the 3D viewer. Points are added in an area shape in a strict sequence from first to last, regardless of where you click in the 3D viewer.
Remove selected shape	If you want to remove a shape from the viewer, right click (CTRL click on the Mac) the shape in the Places panel and click Delete.

Remove selected point	If you want to remove a point from either a path or an area shape, select a point and press the *Backspace* key.
Remove all shapes	You can clear all measuring shapes from the viewer by clicking on the *Clear All* button in the *Ruler* dialog box regardless of which tab is active.
Reposition the viewer	By default, navigation with the mouse is disabled when you use measuring mode, but you can enable it by checking *Mouse Navigation*. When enabled, mouse navigation works in conjunction with measuring: click and *hold* to add a new point; click and *drag* to move the earth.
Line	All Google Earth versions support measuring with a line. A line consists of two points connected by a straight line, and measurement is done along its length.
Path	All Google Earth versions support measuring with a path. A path in the measuring mode consists of two or more points connected with a straight line. Measurement is done along the entire length of the path. To follow a natural boundary or road more closely, try zooming in closely to the feature and adding more points.
Polygon	Google Earth PRO version supports measuring with the polygon tool. A polygon consists of three or more points. Measurement for a polygon tool is done for both perimeter and area.
Circle	Google Earth PRO version supports measuring with the circle tool. Measurement for a circle is done for its radius, area, and circumference (in the appropriate measurement unit).

Available Units of Measure

The following table describes the units of measure available for length, perimeter, area, and radius.

Feature or Function	Description

Length, Perimeter, and Radius	Centimeters
	Meters
	Kilometers
	Inches
	Feet
	Yards
	Miles
	Nautical Miles
	Smoots
Area	Square Meters
	Square Kilometers
	Hectares
	Square Feet
	Square Yards
	Square Miles
	Square Nautical Miles
	Acres