Contents

Getting Started

If you have not yet done it, the first step is to run the Setup program to install *On Top Of The World*.

When you first start it, *On Top Of The World* will probably ask you to set or confirm the time zone that your computer's clock is set to. After that, you should see a view of the earth, centered over your home country, with the daylight side of the earth correctly depicted as it would appear right now from space.

With this done, it is time to start exploring the world. It is easy, and there is help available for every menu and for most of the dialogs.

What Is On Top Of The World?

On Top Of The World is an easy way to explore our earth on your   computer.   Unlike other geography programs, *On Top Of The World* has no maps.   Instead, it lets you fly around a colorful 3 dimensional model of the earth, whose position and sunlit side are correctly depicted for the time and date. *On Top Of The World* combines the fun of a   flight simulator with learning about our world.   It is a bit like having your own camera in space to send you live pictures, but it can move instantly, can travel in time, and knows the names of thousands of features.

All world maps are distorted because they are flat and the world is not. Many different map projections have been invented, but all have distortion of some kind. Globes, and *On Top Of The World* solve this problem by depicting the world as a sphere.

What Is New?

This is *On Top Of The World for Windows*, Version 2.0. It is based on *On Top Of The World* for DOS, but has many improvements :

It is a fully integrated Windows application.
You can <u>add your own permanent features</u>   on the world.
You can <u>add your own notes</u> about features.
You can <u>play</u>   and <u>record</u> demo files.
Help is much more complete.
Lots of smaller improvements.

Exploring The World

Now that you can see the world as it appears from space, you will want to get close and explore. The easiest way to move around is to use the <u>button bar</u> or the <u>arrow keys</u> on the keyboard. Once you are down close, you will want to try looking in different directions. The easiest way to do that is to use the <u>arrow keys</u> or the <u>compass icon</u>.

To find out the names of the things you see, just click on them. There are over 5000 named features, or places to see. If you know the name of a place, and want to find it, use the <u>find</u> dialog in the <u>feature</u> menu.

Another way to move around is to double click on the globe. That causes you to move directly over the point you clicked.

An especially exciting way to explore the world is to take a simulated <u>Space Shuttle ride</u>.

You can explore in <u>time</u> as well as space, to see how the earth turns and how the <u>seasons</u> happen.

These are the top level menu commands :
<u>File</u>,<u>View</u>,<u>Feature</u>,<u>Show</u>,<u>Options</u>,<u>Time</u>.
(Show and Options disappear when the main window is small.)

File Menu
Saving and Restoring Data from Disk

Save for Start
saves the current view of the world to be restored automatically   the next time *On Top Of The World* is started.   If you want a particular view to appear   each time you start, this is how to set it.

Delete for Start
wipes out the view that was stored by Save for Start. After that, *On Top Of The World* instead starts with a view of the world from above your home country.   Your home country   is the one set in Windows Control Panel, International settings.

Restore Last
restores the last view from the last time *On Top Of The World* was run.   This lets you continue exploring just where you left off last time.

Record Demo
lets you record a single view or a series of views, to be played back later.   You can type in some text which will be shown when the view is played back.

When you record just a single view, this is a way to save your   position and other settings, to return later.   When you record a series of views, this is useful for illustrating a concept. There is a prerecorded demo to illustrate how the   seasons work, and another general introductory demo.

Play Demo
plays a series of views recorded by the **Record Demo** command.   Each view appears on the screen for a few seconds.

Write BMP
lets you save a bitmap of the current view.   It's like taking a snapshot.   The bitmap is in the standard BMP format that can be used by any   Windows program that accepts bitmaps.   *On Top Of The World* cannot read it in again, however.

Exit
quits *On Top Of The World*.   Your last view is automatically saved, and you can restore it next time by choosing **Restore Last**. This lets you continue exploring just where you left off this time.

View Menu
Change Your View of the World

Move...

displays the position of your viewpoint and lets you change it   by typing in coordinates.   The arrow buttons   or the arrow keys on the keyboard   are a quicker and easier way to move.

Direction...

displays the direction of your view and lets you change it by typing   in angles.   It is probably easier to use the arrow keys or the compass icon for this.

Grid Incr

lets you adjust the spacing in degrees between the   latitude and longitude grid lines.   The smaller the spacing, the more lines you see.   The closest spacings are only available at low altitude.

Land Style

lets you choose a physical or a colorful political view.

Colors

lets you choose the colors of the Grid (latitude and longitude lines),   the Tropics (equator, tropics of Cancer and Capricorn, and the Arctic and   Antarctic circles.), Borders between countries, and Cities.

Night

lets you display the night side of the earth as   **black, dark,** or **light**,   all of which are darker than the day side.

Texture

turns on or off the texture of the land.   If small features are hard   to see, you may want to turn off the texture.

Split Countries

controls the coloring of the states or provinces of the largest countries. If checked, states or provinces will be colored using the same distinctive colors as countries. Otherwise, they will be colored in shades of the   the same color, to show that they belong together. These shades will only be visible when operating in 256 or more colors.

Feature Menu
Anything to do with Features, or Places on the earth

Find...
lets you find places by typing their names.

Phone & Radio...
lets you find the locations of telephone area codes, country codes, and radio call signs.

Recently Visited...
keeps track of all the places you have recently visited, in reverse order.   If you want to return to one, just choose it and hit the appropriate button,   or double click.

Info...
displays a Help screen describing any country or any state of the USA, or province of Canada. This is a hypertext verion of the CIA World Factbook.   The country or state being described is the one displayed in the status bar. You can read but not change this text.   If the current feature is smaller than a country or state, then the information will be about the country or state that the current feature   belongs to.

Notes...
displays a box of text that you entered about the current feature or   place, and lets you edit it, or add more text. The text is specific to the feature   that is being displayed in the status bar.

Add Custom...
lets you add your own feature or place.   Only point features can be added. Cities, mountains, and airports are examples of point features.

Delete Custom
lets you delete a feature or place that you added.   You cannot delete the ones that are built in to *On Top Of The World*.

Quiz
lets you test you knowledge of geographical features. If quiz is checked,   when you click on a feature, a dialog box pops up with several possible   names.   You choose one, and your correct responses are counted.   This can be   very easy or very hard.   If Quiz is not active, clicking on a feature causes   its name to appear in the status bar.

Reset Quiz
clears the counts of correct and incorrect responses to the quiz.

Show Menu

This menu lets you turn **on** or **off** the following things:

ButtonBar
Compass
Feature Window
Great Circle
Time Bar and Feature Bar: (Status Bar) Label On Screen

Options Menu
Identify...
controls what kind of features are named when you click your   mouse cursor on them.

Units
lets you choose <u>kilometers</u>, <u>miles</u>, or <u>nautical miles</u> for displaying distances.

Degrees
can be displayed as <u>degrees</u> with <u>minutes</u> (The traditional way to express fractional degrees.), or as decimal degrees, which are much easier to calculate with.

Distance Origin
lets you choose the beginning point of the distance calculation and of the   <u>Great Circle</u> route (if displayed). The choice is between a Fixed point, or the Previously   visited point.

Set Origin
sets the current point to be the beginning point of the distance   calculation and the <u>Great Circle</u>, but this only has effect if the Distance Origin is Fixed.

Time Menu

This menu gives you control over time.   Normally time is just true clock time, but you can set *On Top Of The World* to display   the earth as it would appear at any time or date.   Don't worry : any   changes you make to time here only affect *On Top Of The World*.   Your computer's clock will not be changed.

Speed Factor...

lets you control the rate that time passes in *On Top Of The World*.

Zone and DST...

lets you set the <u>time zone</u> that is used for the <u>time display</u> in the   <u>status bar</u>.

Set Time...

lets you set the time that the world view depicts.   This has no effect on   the computer's clock time.

Set Date...

lets you set the date that the world view depicts.   This has no effect on   the computer's clock date.   You are limited to the years between 1 and 9999.

Reset To Now

sets the date and time back to the true present time.   It also sets the <u>Speed Factor</u> to 1, so the time will stay true.

Set Home Zone...

should only be done once, unless you move to another <u>time zone</u>.   This sets the <u>home</u> time zone that your computer's clock is set to.
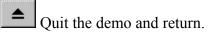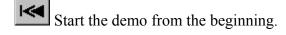
Recording a Demo

The Recording Demo dialog in the <u>File</u> menu lets you record a demo file, which is just a scene or a series of scenes that can be played back by *On Top Of The World*.

To record a demo, choose your first scene by setting up a view of the world. Then press **Record** to save the current view of the world. Enter some text to describe it, and enter how long it should stay on screen. Then set up a new scene and **Record** it. When done, press **Done**. To edit a demo, use **Back, Forward, Delete** to find scenes and replace them.

Playing Demo

The Playing Demo dialog in the <u>File</u> menu controls the playing of a demo, which is a set of scenes. When playing a demo, each scene appears on the screen a pre-set number of seconds. When all the scene have been shown, the demo pauses,   unless you set it to in loop mode, in which case it will start again, and continue until you stop it.   The number in the lower right is the number of the current scene.   When you start or restart a demo, it will   automatically play without looping.

⏏ Quit the demo and return.

⏮ Start the demo from the beginning.

◁ Go back one scene.

■ Stop or pause the demo.

▶ Play, stopping at the end.

↻ Play in a continuous loop.

▶□ Skip to the next scene.

? Pause, and display this help screen.

Note that in any scene time may be running fast, and the view may be   constantly changing. Stopping the demo does not stop the action.

Move

The Move dialog in the <u>View</u> menu displays the position of your <u>view point</u>   above the earth, and lets you change it by typing in new values. The view point has three coordinates :
 <u>latitude</u> in <u>degrees</u>,
 <u>longitude</u> in <u>degrees</u>,
 <u>Altitude</u>, which is given in <u>kilometers</u>, <u>miles</u>, or <u>nautical miles</u>, depending on the Units setting in the <u>Options</u> menu.   The altitude must be between 250 km and 15000 km.

The <u>arrow buttons</u>   or the <u>arrow keys</u> on the keyboard   are a quicker and easier way to move. Another way to move around is to double click on the globe.   That causes you to move directly over the point you clicked.

Move With lets you choose:

Sun : means your <u>view point</u> is fixed in space with respect to the Sun, so that the earth rotates below you.

Earth : means your <u>view point</u> rotates with the earth so you are fixed above a point on earth.

Orbit : means your <u>view point</u> is on a simulated spacecraft in a circular orbit around the earth.

Travel By lets you choose how you move when using the <u>arrow buttons</u>   or the <u>arrow keys</u>.

Sight : means you travel in the direction you are looking.   This appears   natural, but it means your <u>azimuth</u> (compass heading) changes while traveling, especially near the poles.

Lat - Lon : means you travel along   <u>latitude</u> or <u>longitude</u> lines.   This has the advantage that your <u>azimuth</u>   (compass heading) does not change as you travel. This can appear strange when you are near the North or South poles.

View Direction

The View Direction dialog in the <u>View</u> menu displays and lets you adjust your <u>elevation</u> and <u>azimuth</u>, which may be easier to adjust with the <u>Compass</u> window.

This dialog also displays and lets you adjust your tilt and zoom,   and this is the only way to do that.   **Tilt** causes the whole view to be tilted, or even upside down.   You probably want to keep tilt at 0.

Zoom lets you adjust the angle of view.   It works like the zoom control on a 35mm camera lens.   A setting of 35 or less is usually best.

Color Choose

The Color dialogs in the <u>View</u> menu let you change the color of the grid, tropics, borders, or cities. Just click on the appropriate icon and press **OK**.   You can also turn off each item by choosing the first icon.

If you click on <u>Political</u>, the colors of countries will swap with each other. You may click this repeatedly to find a color arrangement you like.

Find

The Find dialog in the Feature menu lets you find features or places anywhere in the world. To find a feature, type in its name, or just the first few letters of its name.   To control the kinds of features that are found, check the desired boxes.   When you press the **OK** button,   another dialog pops up listing all the features that were found that start with the name you gave. Press **Go To** to go to the feature,   or **Don't Go** to make this the current feature in the status bar, but not go there.

If you type "York" you get New York, as well as York, so you can find a feature by using just one word of its name.

If you type something like "New", you may get so many matches, they will not all fit in the list.

To control the kinds of features that are found, check the appropriate boxes in **Kinds of Features to Find**.   This list is just like the one in the Identify dialog, but the two lists are completely independent. That means your settings here do not affect the Identify list.**Physical Areas** means things like mountain ranges, deserts, and wetlands.**Airports and Dams** refers to any man-made object except cities.

You can also control where features are found.   **Global**   means anywhere on earth. **Local** means closer than the   horizon of your current view point.

Telephone Codes and Radio Call Signs

This dialog in the Feature menu lets you find the locations for telephone area codes in North America, and telephone country codes for anywhere in the world. You can also find the country for radio call signs anywhere in the world. Aircraft registration numbers are their radio call signs, so you can use this to find out where any airplane is registered.

To find the location of an area or country code, type in the complete code and press the **Area Code** or **Country Code** button. To find the location of a radio call sign, type in the first few characters   of the call sign, and press the **Call Sign** button. In either case   the location now appears below the buttons.

Press **Go To** to go to the location,   or **Don't Go** to make this the current feature in the status bar, but not go there.

If the Feature Window is turned on, the location also appears there, along with the distance and azimuth from the previous location. See Distance and Direction for more   information.

If you know the location, and want to find out the area code, click on info. Info gives the area codes for each U.S. state and Canadian province.

Identify

The Identify dialog in the <u>Options</u> menu lets you control what is identified. When you click your mouse on the world, the name of the country   you are in, or the nearest place or feature appears in the <u>status bar</u>.   If you want to control the kinds of places that are identified this way, you can turn on or off the appropriate check boxes.

If the Quiz is on, this controls the features that you are quizzed on.

If you turn off all the boxes, then only the   <u>latitude</u> and <u>longitude</u> are displayed.

This list is just like the one in the <u>Find</u> dialog, but the two lists are completely independent. That means your settings here do not affect the Find list. **Physical Areas** means things like mountain ranges, deserts, and wetlands. **Airports and Dams** refers to any man-made object except cities.

Notes

The Notes dialog in the <u>Feature</u> menu lets you enter text about any feature or place on earth. These notes are permanent, unless you delete them. When you first install *On Top Of The World*, all the notes are blank.   This is your chance to add your own notes about the places you visit. Each note belongs to just   one feature, and you must find that exact feature again to find the note. Two different features with the same name have two different notes. Any feature can have a note, not just countries or states.

Add Feature

The Add Feature dialog in the <u>Feature</u> menu lets you make your own feature or place, which becomes a permanent part of *On Top Of The World's* data, until you delete it.   You can add as many features as you like.

You can only create point features, that are displayed as dots or symbols.   You can choose the **Kind Of Feature**,   and give it a **Name**, which can be anything that fits in the box.

The location of the feature is where you last clicked your mouse on the world. The <u>latitude</u> and <u>longitude</u> of the location is displayed here, and you can type in a new one, or you can Cancel, and click on a new location.

You should be below 1000 km <u>altitude</u>   when you add a feature, to make sure the location is set accurately.

Quiz

This dialog presents possible names for the place that you have clicked on.   Choose one of these names and push the **Check Answer** button.   A message appears telling if your choice   was right or not.

If you want to control the kinds of features that the quiz finds, use the <u>Identify</u> dialog.

You can turn Quiz mode on and off in the <u>Feature</u> menu.

Speed Factor

This Speed Factor dialog in the <u>Time</u> menu lets you change the speed that time passes in *On Top Of The World*.   Normally, the time is the true time, so if you want to see the earth actually spin, you have to speed up the passage of time. If you speed up time to 720 times normal, for example, you can see a complete day pass in two minutes.

 For true time, the speed factor must be set to 1.   You can also Stop time, so the view will not change.

Time Zone and Daylight Savings

The Time Zone and DST dialog in the Time menu lets you control for which time zone the time is displayed, and whether Daylight Savings Time is displayed.   This only affects the time displayed on the status bar, nothing else.

Time Zone for Display buttons let you choose the time zone that is displayed on the status bar : Universal, Local, Home, or stay on the currently displayed time zone. If you want to stay on a time zone that is not displayed, choose **Local**, then **OK**.   Then click on a place that uses the time zone you want, and finally use this dialog again to choose the currently displayed zone.

Daylight Saving buttons let you choose whether the time displayed on the status bar adjusts itself for summer.   Most locations in the world use daylight saving time in the summer, except those near the equator. *On Top Of The World* knows about this and will usually do the right thing if you choose **Auto**.   Daylight saving time is never used with Universal time.

Set Time

The Set Time dialog in the <u>Time</u> menu lets you set the simulated time that *On Top Of The World* uses to display the world.   Normally, the simulated time is the true time, but you can set the simulated time to anything you like, without affecting your computer's clock.   The <u>status bar</u> displays the simulated or true <u>time</u>.

You can set the time either by using the slider, by typing in a **Time Change** (hours:minutes), or by typing in a whole **New Time** (hours:minutes).   In **New Time**,   you can use AM or PM or a 24 hour   notation (for example, 2:00 PM = 14:00).   The slider is easy, because both **Time Change** and **New Time** update themselves as you use the slider, and as time passes.

Set Date

The Set Date dialog in the <u>Time</u> menu lets you set the simulated date that *On Top Of The World* uses to display the world.   Normally, the simulated date is the true date, but you can set the simulated date to anything between 1 AD and 9999 AD, without affecting your computer's clock. Just type in the day of the   month, and the year, and choose the month from the list.   This does not affect the time of day.

Set To Today sets the simulated date to the true date, but does not affect the time of day.

This is very useful for demonstrating how the <u>seasons</u> work.   If you set the date to June 21, for example, you will see the   Arctic in continuous sunlight.

Compass Icon

The Compass Icon shows a compass rose with N,E,S,W directions marked. It displays a "+" sign to show the compass heading or <u>azimuth</u> of your view of the world.   The distance between the center and the "+" sign indicates your <u>elevation</u>. If you click on the Compass Icon, it changes your azimuth and elevation. If you click anywhere inside the central circle, you will be looking straight down (0 elevation and 0 azimuth).

You can turn the compass icon on or off from the   <u>Show</u> menu.

Latitude is the distance north or south of the equator measured in <u>degrees</u>.   Latitudes range between -90º or 90ºS (the South Pole),   to +90º or 90ºN   (the North Pole). The equator is at latitude 0º.

Longitude is the distance east or west of the Greenwich meridian, measured in <u>degrees</u> (º).   The Greenwich meridian runs north/south through   Greenwich, England, a suburb of London. Longitudes range between   180º west to 180º east.

A degree is the unit of measure for angles.   There are 360 degrees   (360º) in a whole circle. The distance between the equator and the North Pole is one quarter of a circle, or 90 degrees. Fractions of degrees can be expressed as decimals or as <u>minutes</u>, which is the traditional way, and still widely used.

A minute is 1/60 of a degree.   It is abbreviated as '. For example, 45.50º = 45º30'. Minutes are the traditional way to express fractions of degrees, and they are still widely used.   A second is 1/60 of a minute,   but *On Top Of The World* does not use them.

Of course, the other definition of a minute is 1/60 of an hour.

Universal time is the <u>local time</u> of Greenwich, England.   Universal time is used in aviation, astronomy, the military, and anywhere that   <u>local times</u> would cause confusion.   Universal Time is never adjusted for daylight saving time. All the <u>time zones</u> of the world are based on an offset from Universal Time.   It is abbreviated UTC or GMT, and is sometimes called Greenwich Mean Time.

Local time is a time that is used in a particular location.   In *On Top Of The World*, the location is the one shown in the <u>status bar</u>.   Local times are set so that the sun crosses overhead at approximately 12:00 Noon.

A time zone is a geographical area that uses the same <u>local time</u>.   About 38 different time zones are used in the world.   They are all based on offsets from <u>Universal Time</u>.

Home time is the local time that your computer's clock is set to. *On Top Of The World* needs to know this to determine the <u>Universal Time</u> from your   computer's home local time.   All the world's times are referenced to   Universal Time.   The position of the sun is determined by the Universal Time.

Setting the Home Time Zone

When you first install *On Top Of The World*, it prompts you to set your <u>home</u> time zone.   You do this by clicking on your home location on the world. You may move around the world to find your location before clicking on it. Then it prompts you to confirm the location.

 If you live in a country with only one time zone,   you may not have to click on it.

 If you have your computer's clock set to <u>Universal Time</u> then click on   the North or South Pole.

The home zone setting is permanent, but you can change it if you change the time zone that your computer's clock is set to.   Change it by choosing Set Home Zone... from the <u>time menu</u>.

Because of the tilt of the earth's axis, during part of the year the northern half of the earth gets more direct sunlight and more   hours of sunlight per day than the Southern Hemisphere.   This is summer in the Northern Hemisphere.   Half a year later, the situation is reversed, and we have winter in the north.

Elevation is the direction you are looking relative to the ground. If you are standing on the ground, 0º elevation is looking down   at your feet, and 90º elevation is looking straight out at the horizon. In *On Top Of The World*, you are always high above the ground, so the horizon is at less than 90º elevation.

Elevation can also mean height above sea level of something on the earth's surface, but we call that altitude.

Azimuth is the direction you are looking or heading, measured along the   horizon. Another name for azimuth is **compass heading**. 0º is north, 90º is east, 180º is south, 270º is west.

Altitude is the height above the surface of the earth. Since your <u>view point</u> is out in space, its altitude is measured in   <u>kilometers</u>, <u>miles</u>, or <u>nautical miles</u>, The altitude of a mountain is measured in feet or meters.

A mile is 5280 feet or 1.609 <u>kilometers</u>.

A kilometer is 1000 meters or 0.621 <u>miles</u>.There are 10,000 kilometers from the equator to the North Pole.

A nautical mile is 1.15 miles or 1.85 <u>kilometers</u>. A nautical mile is equal to one <u>minute</u> of <u>latitude</u>. There are 5,400 nautical miles from the equator to the North Pole.

How Do I...

If you want to know what countries or cities are below you, just click on them.   They are identified in the status bar.

If you want to know what geographical coordinate you are at, use the move dialog.   It displays your position, and you can change it.

What Time Is It?

It is very easy to tell what time it is anywhere in the world. Just click on the location with your mouse.   If things are set right,   the time appears in the status bar   at the bottom of the view window.

First make sure that the **Time Zone for Display** is set to **Local** in the Zone and DST dialog (from the Time menu). **Daylight Saving** should be set to **Auto**.

Make sure that the status bar is showing. If not, check **Time Bar** in the Show menu,   to turn it on. Also make sure the time being displayed is True.   If not, choose **Reset To Now** from the **Time** menu.

Changing Time Zone Abbreviations

The abbreviations for the time zones   that appear in the time display in the status bar   can be changed if you don't mind editing a file by hand.

To change the abbreviations, edit the file **ontop.ini** in your windows directory using Notepad or the equivalent.   The [Time Zone Name] section contains lines like
Zone04=EST,EDT,-300
This means that the time zone EST (Eastern Standard Time) is 300 minutes behind Universal Time, and it is abbreviated EDT when daylight saving time is in effect. Each abbreviation may be up to 5 characters, and   there may be up to 40 named time zones.   The order does not matter. Each time zone must have a different number and a different offset from Universal Time.

The Time Display

The <u>status bar</u> displays the time. The time may be true, which means it is the true time somewhere in the world, assuming your computer's clock is correct. Otherwise, the time may be simulated, in which case it is labeled as simulated and is drawn in red.

The time may be for any <u>time zone</u>. You can tell which time zone it is by the abbreviation after the time. EST, for example, is Eastern Standard Time, which is the time zone of the east coast of the USA during the winter. It is possible to <u>change the time zone abbreviations</u>.

Not all time zones have abbreviations. Those that don't are indicated by <u>UTC</u> with an offset in hours.

Distance and Direction

Finding the distance between two locations is easy. First make sure the Feature Window is turned on in the Show menu. Then click on the first location, then the second. The feature window displays the distance, expressed in your choice of kilometers, miles, or nautical miles. This distance is very accurate, within a mile or two, even across half the world.

The feature window also displays the azimuth of the shortest route from the first point to the current point. This is the direction to point an antenna if you are at the first point, and want to communicate with a station at the current point.

In the Options menu, if the **Distance Origin** is set to **Previous**, these measurements are from the last point to the current point you clicked on. If the **Distance Origin** is set to **Fixed**, all the measurements are from the same point. You set this point by clicking on **Set Origin**.

If you are measuring the distance between two points that are both within the same feature, the feature window may display something like "Colorado 291 Mi at 90º from Colorado". This just means that two points in the same state are 291 Mi apart.

Time of Sunrise or Sunset

To find the time of sunrise or sunset, first go to the location you are interested in.   Then there are two methods :

One is to use the Set Time dialog from the Time menu to adjust the time. For sunset, experiment with the time until the area to the west is sunlit, and to the east is dark.   For sunrise, it is opposite.

The other method is to set the Speed Factor from the Time menu to get the world moving fast (try 120x). Then just wait until you see the sun rise or set.

The sunrise and sunset times depend on the season, so make sure the date is set to the one you want.   These times are accurate, usually within 5 minutes.

Dates and Days of the Week

Use the Set Date dialog from the Time menu to set the date to your birth date, or your 1000th birthday, or whatever date you are interested in. The date, along with day of the week, appears in the status bar. Make sure that Time Bar is checked in the   Show menu, to turn on the status bar. The date must be between 1 AD and 9999 AD.

The View from the Space Shuttle

On Top Of The World lets you orbit the earth in a circular orbit. The amount of time it takes to orbit the earth depends on your <u>altitude</u>.   It is about 90 minutes of simulated time at 250 km, which is a typical altitude   for the Space Shuttle.   It takes longer at higher altitudes.

To start your orbital flight, just choose **Orbit** from the <u>move</u> dialog.

You are moving fast when orbiting, as much as 21000 km/h (17000 mph), so don't set the <u>Speed Factor</u> more than about 12.

An orbit is a circular or elliptical path around the earth.   The things you pass over depend on the orbit's inclination. If you orbit around the equator (inclination of 0),   you only see things near the equator.   In *On Top Of The World*, your orbital inclination is equal to the <u>latitude</u> where you start your orbit.   This means you eventually pass over everything between this latitude, and the opposite latitude.   You pass over new things on each orbit, because in the 90 minutes or more that it takes, the earth has rotated. Try it, and enjoy the view.

You can't see your house or your street in *On Top Of The World*, unless you put it there yourself. *On Top Of The World* is meant to give you a global perspective, as if seen from space, so the smallest things you can see are cities, mountains, and major airports.

Getting Information

You can get different amounts of information about places on the earth. The <u>status bar</u> gives you just the name of a place, and what time it is there.   The <u>feature window</u> gives its name, its distance from another place, and possibly the population of a city, or the height of a mountain. Info in the <u>Feature</u> menu starts up a hypertext version of the CIA World Factbook, which gives information on   countries, US states, and Canadian Provinces.

The status bar is the strip along the bottom of the main view window that can display Time and the current Feature or place.   If there is no status bar, the main window may be too narrow to display it, or both Time and Place may be turned off in the   Show menu.

The time is displayed in red if it is not the true current time.   The place name is grayed out if it is beyond the horizon.

The Button Bar

The button bar is the little row of buttons along the top of the main view window. The **blue arrows** on the left change your altitude.   The **black arrows** on the right move your view point around the world.   See the Move dialog for more information on moving. The **"+"** button sets your view to look directly down on the current feature displayed in the status bar.
You can turn the button bar on or off using the   Show menu.

The Arrow Keys

The arrow keys on your keyboard can be used for moving and changing your view direction. The keypad arrow keys (keypad 2,4,6,8) change the direction of your view.   You can also do this with the   compass icon, or with the View Direction dialog.

The regular arrow keys, between the keypad and the regular keys, move you over the earth.   The **Page Up** and **Page Down** keys change your altitude.   You can also move yourself with the button bar or with the   Move dialog.   The **Home** key moves you way out into space, and the **End** key moves you down almost as close as possible.

If you hold down the **Ctrl** key, each arrow key moves about 3   times as far as normal, so you can move rapidly. If you hold down the **Shift** key, each arrow key moves about 1/3   as far as normal, so you can adjust your position precisely.

A physical map or globe shows the different kinds of land in different colors.   In our case, green represents lowlands, and yellow is high elevations and deserts.   To see different countries, you need <u>political</u> map or globe.

A political map or globe shows the different countries or states of countries in different colors. To see different kinds of land, a <u>physical</u> map or globe is what you need.

On Top Of The World displays images of the world that are true perspective views from a point in space.   It simulates what a camera, or eye would see from that point.   <u>Moving</u> the   viewpoint changes the view, and so does changing the   <u>direction</u> that the camera is looking.

Feature Window

The Feature window gives details about the feature you are visiting,   and the previous feature. The population may be given for a city, and the <u>altitude</u> for a mountain.   The <u>latitude</u> and <u>longitude</u> are given for all features.

This window also gives the   <u>distance and direction</u> from the previous feature to the new feature.

You can turn on On Screen Labels in the <u>Show</u> menu, and a white label will appear on the screen whenever you click on a new feature. The label gives the simple name of the place you clicked.

A Great Circle route is a curve that is the shortest route between   two points on the earth.   You can turn this on in the <u>Show</u> menu,   and a white Great Circle   curve will appear whenever you click on a new feature.   It runs   either from the previous point to the new feature, or from a fixed point to the new feature.

If you are used to looking at world maps, instead of globes, the shortest routes between certain places may surprise you.

The horizon is the curve on the earth's surface that is the farthest that you can see from your current view point. The horizon is actually a circle which expands as you increase your altitude. No matter how high you go, you can never see as much as half the earth.

The Shareware "Lite" Version

On Top Of The World LITE is a simplified version of the regular "full" version.   It is not just a demo, it is a useful program on its own.

These are the differences between the "lite" version and the "full" version:

The "lite" version is available as <u>shareware</u>   and can be downloaded from the Exploration Software Web page.
http://www.tiac.net/users/hlynka
 The "full" version is only available by mail <u>order</u>.

The "lite" version requires less memory and disk space. The install kit is small enough so it can be downloaded in just a few minutes.

The geographic data in the "lite" version has about half the amount of detail of the "full" version, and the minimum altitude is twice as high as the "full" version.

The "lite" version doesn't have the following advanced functions that are in the "full" version:
<u>File</u> Menu:
Write BMP is not available, and neither is <u>Record Demo</u>. However, you can <u>Play Demo</u>.
<u>View</u> Menu:
<u>Direction...</u>, Grid Incr, and <u>Colors</u> are not available.
<u>Feature</u> Menu:
<u>Calls...</u>, Info..., <u>Notes...</u>,<u>Add Custom...</u>, and Delete Custom are not available.
<u>Show</u> Menu:
<u>Great Circle</u> is not available.
<u>Options</u> Menu:
All functions are available.
<u>Time</u> Menu:
All functions are available.

To find out about the functions you are missing, click on the hot links above.

How To Order or Register

If you use *On Top Of The World* LITE beyond the 30 day trial period you should register it by sending your name and address (including email if available) and a check for $15.00 to the address below. We will mail or email a code you can use to turn off the shareware messages.

If you want the higher detail and more advanced functions of the "full" version of *On Top Of The World*, just send your name and address (including email if available) along with a check for $29.95 to Exploration Software.   We will send your software by first class mail within a few days.   We pay the postage within the USA.

For orders to Massachusetts, please add 5% for sales tax.
For orders to Canada or Mexico, please add $2.50 extra postage.
For orders to anywhere else in the world, please add $7.50 extra postage.

Exploration Software
PO Box 961
Groton, MA 01450
email: hlynka@tiac.net
Comments and suggestions are welcome.

Unfortunately, we cannot take credit cards or Euro Checks.

These prices are in effect until June 30, 1996.

Shareware is a kind of software that is available on the honor system.   You may try the software without paying for it for a limited time, 30   days in the case of *On Top Of The World*.   Then, if you decide to keep using it, you need to register it.

You may freely distribute the shareware "lite" version of *On Top Of The World*, as long as the kit you distribute is the complete original kit, and you must not charge money for it, beyond the cost of your materials.