User Guide
Trackstick Manager installation

Download Trackstick Manager at www.trackstick.com/downloads
After downloading, open the file and follow the instructions:

1. Click OK.

2. Trackstick Manager requires the Microsoft .NET Framework 2.0. If this is already installed on your computer, this step will be skipped and you will be forwarded to the next one. If not, then it is recommended that you select to install it and follow the steps that appear onscreen. After it’s completion, you will be automatically returned to the installation of Trackstick Manager.
3 Read the terms and select **I Agree** and then click **Next**.

4 Select where you want to install the software. The default recommended path is: **C:\Program Files\Trackstick Manager**

5 Click **Next**.

6 Trackstick Manager will begin installing. If the below message appears, click **Continue Anyway**.

7 Drivers installed. Click **OK**.

8 You will be asked to either view the Quick Start Guide, User Guide, or you can choose to read nothing at all. After selecting your request, click **OK**.

9 Click **Close**. Trackstick Manager is now installed! It is now safe to plug Trackstick into your computer’s USB port and start viewing your data.

For instructions on installing the Trackstick, continue to the next page.
Trackstick installation

Plug in Trackstick

Once you have installed Trackstick Manager, plug the Trackstick into the computer’s USB port.

Wait for the dialog to appear onscreen.

1. Select **No, not this time** and then click **Next**.

2. Select **Install the software automatically (Recommended)** and then click **Next**.
3. Click **Continue Anyway**. *(Note: This screen now appears on all Windows™ systems if the Trackstick drivers are not installed on your computer yet. The Trackstick program will not harm your computer in any way. Click **Continue Anyway** and Trackstick hardware will be installed.)*

If you do not follow these instructions exactly, Trackstick will not be installed properly. *(If you did not follow this step correctly, please refer to the Troubleshooting Guide on page 38).*

4. Click **Finish**.

You’re ready to use Trackstick!
Using Trackstick

**Note:** The Trackstick Pro+ functions differently from other Trackstick models. Please refer to page 35 for Trackstick Pro+ details.

**Note:** The Trackstick Mini does not require batteries.

**Powering Trackstick**
Slide the power switch on the side of Trackstick towards the | so that the red light glows for a second or two (Super Trackstick will power off and on automatically according to movement as long as the power switch is on. See more about Super Trackstick features on page 34).

**Batteries**
Pull the end of Trackstick to remove the USB cap. Using your thumb, press down on the Trackstick logo and slide open the battery cover in the direction of the arrows as shown on the right. Install two AAA batteries (rechargeable NiMH will last the longest) and close the case. Do not try to open anything other than the battery cover, there are no user serviceable parts inside.

Connecting the GPS and recording data
The globe on Trackstick must face the sky without any metal objects to block its view of the satellites (except for the Trackstick Mini, which has a 360° antenna). Leave Trackstick outdoors with a clear view of the sky for at least 15 minutes so that it can map its own position internally. The green light should come on after a few minutes and continue to blink every few seconds. If the green light does not come on after a few minutes, move Trackstick to a better location.

After at least 15 minutes have passed with the green light blinking, with the globe facing the sky, you can place Trackstick on your car’s front dashboard and go for a drive, or take it with you on a walk. Make sure that the green light keeps blinking. Most car windshields are at an angle and will not block the Trackstick’s view of the sky (for more detailed information, see page 10).

For more specific information and features about the Trackstick Mini, including its 360° antenna, refer to page 37.
Introduction to Trackstick

About Trackstick
Tracksticks are small GPS location recorders capable of continuously logging their own location histories for extended periods of time. These detailed recordings include time, date, location, speed, heading and altitude. Built-in flash memory and long battery life allows for the storage of months of travel information.

All of Trackstick’s information can easily be downloaded to your computer via the USB port and quickly viewed on Google™ Earth’s 3D model of the planet (see page 20).

How it works
The Trackstick receives signals from twenty-four satellites orbiting the earth. With this information, the Trackstick can precisely calculate its own position anywhere on the planet to within 2.5 meters.

Where it works
The Trackstick will work anywhere on the planet Earth. Using the latest in GPS mapping technologies, your exact location can be shown on satellite-based maps and 3D geographical terrain.

The Trackstick’s micro-computer can even calculate how long you have been indoors. While visiting family, friends or even shopping, the Trackstick can accurately time and map each and every place you have been.

Route tracing
When histories are viewed, Trackstick overlays a red line on the map indicating where you’ve traveled. The location and length of each stop is clearly indicated on each map making it easy to see each and every place the Trackstick has been.
The belt clip and magnetic mount

Trackstick II comes with a belt clip, and Super Trackstick includes a magnetic mount.

Removing the belt clip or magnetic mount

Grip the Trackstick firmly in one hand and with your thumb push the tab at the top like you would click a pen. This may require some amount of pressure, but the clip will detach with a little force.

Mounting Trackstick into the belt clip or magnetic mount

Position a notch at either end of the clip into a groove at one end of the Trackstick and squeeze the Trackstick into position at the opposite end until the second notch snaps into place.
Recording locations and tracking

To start recording routes and tracking
Power Trackstick by sliding the power switch on the side towards the | so that the red light flashes quickly.

Both the Super Trackstick and Trackstick Mini are equipped with a vibration detector that will power the device off and on automatically according to movement as long as the power switch is on. See page 34 for more information about the Super Trackstick and Trackstick Mini’s vibration detector.

IMPORTANT NOTE:
Setting the Trackstick to record in fast track will yield the best results (see page 8). Although other record intervals are available, they all lack any real detail in travel history and will not show the red route lines within Google™ Earth. If memory usage is a concern, simply clear the memory after each download or charge cycle. The batteries will die long before memory is full, as long as the memory was cleared after each download.

IMPORTANT NOTE:
Although weatherproof, when using Trackstick outdoors for extended times or in very harsh weather environments, it is a good idea to place a clear plastic bag over all Tracksticks to ensure full protection from the environment.

Connecting to the GPS and recording data
Note: The Trackstick Mini has a 360° antenna, and there is no need to be as strict in facing the sky in the below instructions.

After switching on, the globe on Trackstick must face the sky without any metal objects to block its view of the satellites. Leave the Trackstick outdoors with a clear view of the sky for at least 15 minutes so that it can map its own position internally. The green light should come on after a few minutes and continue to blink every few seconds. If the green light does not come on after a few minutes, move the Trackstick to a better location.

After at least 15 minutes have passed with the green light blinking, with the globe facing the sky, you can begin using Trackstick. Make sure that the green light keeps blinking. Most car windshields are at an angle and will not block the Trackstick’s view of the sky.

Troubleshooting
If you are experiencing problems related to the content of this page, refer to page 38 for troubleshooting information.
## LED light colors

The Trackstick LED light is an indicator of what Trackstick is doing.

<table>
<thead>
<tr>
<th>LED Color</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blinking red</td>
<td>All systems functioning normally, but no GPS lock has been established</td>
<td>10</td>
</tr>
<tr>
<td>Blinking green</td>
<td>Every 5 sec. Full power mode, GPS lock established, locations are being recorded</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Every 15 sec. Power save mode, GPS lock established, locations are being recorded</td>
<td>16</td>
</tr>
<tr>
<td>Solid red</td>
<td>If not connected to computer: Trackstick II / Mini Memory is full, must be erased before new data can be recorded.</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Super Trackstick Low battery power, needs replacement.</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>If connected to computer: Trackstick Mini Charging battery</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>II / Super / Pro+ Connected to USB and recognized, ready to transfer.</td>
<td>17</td>
</tr>
<tr>
<td>Solid green</td>
<td>Trackstick Mini Battery fully charged</td>
<td>37</td>
</tr>
<tr>
<td>Alternating red/green</td>
<td>Trackstick II Low battery</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Super Trackstick Memory is full, must be erased before new data can be recorded.</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Trackstick Mini Overheated from sunlight or weather. Allow cooling to room temperature before use.</td>
<td>37</td>
</tr>
<tr>
<td>When powered on</td>
<td>Blinks red Full power mode, recording every 5 sec. from 12 satellites, accurate tracing</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Blinks green Power save mode, recording every 15 sec. from 8 satellites, less accurate tracing</td>
<td>14</td>
</tr>
</tbody>
</table>

**PLEASE NOTE:**

All Trackstick models must be flashing **green** to record data. A **red** flashing light indicates the Trackstick is on and searching for a connection to the GPS satellites. Battery life is dramatically reduced if the LED is not flashing **green**. Nothing will be recorded while the LED is **red**.
Trackstick Manager installation

1. Download Trackstick Manager at www.trackstick.com/downloads
2. Follow the instructions on page 3
The Trackstick Manager interface

Download Trackstick Data
This will import all the data, location histories, and routes you have recorded from Trackstick to your computer so that they can be viewed.
See page 17

Open
Opens saved Trackstick histories that are in the .tsf file format.
See page 17

Save As
Save the .tsf file you are viewing as another name.

Device Properties
Allows you to configure your Trackstick. Includes name, time zone, power mode, sensitivity, record intervals, and much more.
See page 14

Options
Configure various aspects of Trackstick Manager, including data viewing options, file types, and route options. You can also manually update the software from here.
See page 29

Export
From the drop-down menu, export Trackstick data as a Google™ Earth fly-through, timeline, or pushpins (.kml), a web page (.html), in rich text format (.rtf), in comma separated values (.csv), or GPS eXchange format (.gpx).
See page 20

• Exporting to Google™ Earth
This will prompt you to name and save a Google™ Earth .kml file before automatically opening and viewing a red-traced route in Google™ Earth. This is the most common use of Trackstick data.
See page 20

• Export to Google™ Earth (as timeline animation)
This will prompt you to name and save a Google™ Earth timeline .kml file before automatically opening and viewing a red-traced route in Google™ Earth. From there, you can adjust and play the timeline controls next to Google™ Earth’s navigation panel. See page 20

• Export to GPX format
Turns Trackstick data into GPX (GPS eXchange format), which is an XML data format for the interchange of GPS data (waypoints, routes, and tracks) between applications and web services on the internet.

Help
Views the Trackstick User Guide.
Configuring Trackstick

Device Properties
After installing Trackstick Manager, remove Trackstick’s USB cap and plug it into a USB slot in your computer. Open Trackstick Manager and click the icon or select Tools and then Device Properties from the menu.

Trackstick Settings - General

- **Device ID**: Click Change and enter a name for your Trackstick up to 20 characters in length.

- **Memory**: The percentage of memory used. Click Erase All to clear the Trackstick’s memory. Removing the batteries will not erase any of the Trackstick memory.

- **Battery**: Shows the current status of the batteries.

- **Power Mode**: The unique power management features of the Trackstick allow for long battery life and covert operation. Understanding how each mode operates is vital to proper use of the Trackstick. See page 16 for descriptions of each of the two modes.

- **Restore Default Settings**: Click this to restore Trackstick’s configuration settings to default. This will not erase recorded location data or routes.
Trackstick Settings - Record

Record Interval

- Normal
  Customize the record interval anywhere from 1 to 15 minutes.
- Fast Track
  Yields the best results and enables the popular red route overlay on maps. It will record every 5 or 15 seconds depending on the Power Mode setting. (See the next page for more details.)

GPS Wobble (See top of page)

The Trackstick senses motion by comparing its current location to its last known location. If the Trackstick has moved greater than the selected boundary, a new location history will be recorded. Increasing this radius will cause less location histories to be recorded while the Trackstick is in motion. The default radius of 110 feet (34 meters) has been factory tested to give the best results and the least amount of “wobble” locations when the Trackstick is not in motion. GPS wobble refers to location drift that is recorded by all GPS receivers as the satellites move across the sky. The Trackstick incorporates proprietary algorithms that can virtually eliminate this common phenomenon.

Sensitivity (See top of page)

In order to save power, the Trackstick’s sensitivity can be adjusted. Increase to more accurately record the location histories of more confined moving objects such as children but also increase memory usage and mapped locations in the same area, causing a multi-dotted effect in one apparent location. Please Note: During regular and daily tracking, it is recommended that the Trackstick be kept in the Full Power mode for the best results and smoothest accuracy. If set to Full Power, the sensitivity should be left at default. The low power mode should only be used when the Trackstick cannot be retrieved for a long period of time, and you would then need to adjust sensitivity depending on what was being tracked.

Restore Default Settings

Click this to restore Trackstick’s configuration settings to default. This will not erase recorded location data or routes.

Time Zone

There are two options for Time Zone settings. Time zones are explained on page 31. See page 33 for recommended settings.

GMT (Recommended): The Trackstick will record all times in Greenwich Mean Time (also referred to as Universal Time).

Specific Time Zone: The Trackstick will record all times in the selected Time Zone.
Power modes

The unique power management features of the Trackstick allows for long battery life and covert operation. Understanding how each mode operates is vital to proper use of the Trackstick.

Adjusting power modes

The power mode options can be found under Tools and then Device Properties in the Trackstick Manager menu, or by clicking the

The different power modes

You can tell which power mode Trackstick is in by paying attention to the LED color when Trackstick is turned on.

- **Mode 1 (Full Power):** LED blinks red after the Trackstick is turned on. When this mode is set, the LED will blink red about every second. With a clear view of the sky the LED will illuminate green after a few minutes and continue to blink to indicate a satellite “lock” and that valid locations are being recorded.

- **Mode 2 (Low Power/Power Save Mode):** LED blinks green after the Trackstick is turned on. When this mode is set, the LED blinks red once every 15 seconds and a location is recorded, then the Trackstick goes back to sleep to greatly lessen power consumption and extend battery life. If the Trackstick does not have a clear view of the sky or is indoors, its computer will attempt to communicate with the satellites for 3 seconds before returning back to sleep. This mode is not recommended for daily use but only if the Trackstick cannot be retrieved for a longer period of time. See the sensitivity adjustments that can be used with this power mode on page 14.

Refer to page 10 and page 14 for an explanation on acheiving the best tracking results.

**PLEASE NOTE:** Be sure to remove the batteries from the Trackstick when it is not in use. The Trackstick’s satellite receiver requires a small amount of power to keep its clock and other vital systems running. Leaving the batteries in will drain them after a few weeks even with the power turned off.
Viewing and downloading data

After the software has been installed, turn on Trackstick and plug it into your computer’s USB port. The LED will light **red**.

1. Open Trackstick Manager using the icon installed to your desktop.
2. Click the **Download Trackstick Data** (Ctrl+D)

You will be prompted for a name to save the file in the Trackstick folder. After saving, the recorded Trackstick data will appear similar to the example shown here:
Viewing Data
Recorded information is presented in four different ways.

- **All**
  All recorded locations are displayed together as a list.

- **Tracks**
  Recorded locations are grouped into tracks. A track is a path of records logged in a continuous recording session (between when the Trackstick was turned on and then off). Distance is calculated by measuring the distance between each successive location in a track. The more frequent the recording interval, the more accurate the distance measurement is. Altitude is excluded from the calculation. You can view all locations in a track by clicking the **Track Number** link. After viewing locations, you can return to the tracks view by clicking the **Back** link in the upper left corner of the grid:

- **Routes**
  Recorded locations are also grouped into routes. A route is a path between stops in the same track. The end points of this path are stopped longer than the amount of time specified in the Routes section of software options (default is one minute). Again, as for tracks, distance is calculated by measuring the distance between each successive location in a route. Travel Dates and Travel Duration describe the dates and amount of time the Trackstick was moving. Dates and Total Duration contains the same information, only it also includes the end points of a route. Routes are navigated in the same way as the Tracks section.

- **Dates**
  Dates are another group in which locations are sorted by. Distance is calculated by summing the distance of all tracks in a date. Total duration is the sum of the total duration for each track in a date. Date locations are navigated in the same way as the both the Tracks and Routes sections.
Filtering

By choosing the different filtering options, you can view the records that are most important to you. As an example, if you are only interested in the locations you visited and not the route you took to get there, use the Moving filter under Status to select places that you stopped for more than a few minutes. From here, you can fine tune the displayed results. Once you have selected your filtering options, be sure to click Update View. The actual saved data is not modified in any way and can be retrieved by selecting any All option from the various categories and updating the view.

There is a filter status bar the below the grid that summarizes the results of a filter. This includes the number of records found, dates covered, total duration, and cumulative distance (across tracks) of the filtered records:

Besides the basic recorded information, each item can be individually mapped by clicking the Google™ Maps link to the right of the record.
Exporting and mapping data

One of the most unique features of the Trackstick is its ability to export to internet and 3D based mapping programs. For the best results, a high speed internet connection is recommended.

Computer System Requirements
Minimum configuration for detailed mapping:

- WINDOWS™ (32 OR 64-BIT) 7, XP, OR VISTA
- INTEL® PENTIUM® PIII 500 MHZ
- 128MB RAM
- 200MB HARD-DISK SPACE
- 3D-CAPABLE VIDEO CARD WITH 16MB VRAM
- 1024X768, 32-BIT (TRUE COLOR) SCREEN
- USB1.1 PORT

Exporting to Google™ Earth (Be sure to get the free download of Google™ Earth at earth.google.com)

1. Open a Trackstick file (.tsf) by clicking the icon or by selecting File and then Open (Ctrl+O)
2. Select your preferred information using the filtering options and hitting Update View. Only the locations shown will be exported.
3. From the drop-down menu by the icon, select either Google™ Earth fly-through, Google™ Earth timeline, or Google™ Earth pushpins. You can also do this by clicking File and Export (Ctrl+E). (Learn about the different file types in the next section.)
4. Once a file type is chosen, click the icon.
5. Pick a name that you would like to save the Google™ Earth .kmz file as.
6. Click Save.
7. If you selected Automatically launch in the Trackstick Manager options (see page 29), Google™ Earth should open automatically and your route will be shown in red on its detailed 3D map.
8. Play with the navigation controls in the top right of Google™ Earth to zoom, rotate, and angle the view of your routes.
Google™ Earth file types (.kmz)

- **Fly-Through**: Used when showing the traveled routes and locations as a red-lined path in Google™ Earth. This is the default selection and is the most common and intuitive use of viewing Trackstick data and histories.

  *Flying the path* You can “fly” over your path by clicking on “Route” under the “Places” heading on the left side of Google™ Earth. Once selected, hit the play button ( ) and the camera will follow the path Trackstick recorded. You can change the camera speed and angle, among other options, under Tools and then Options and selecting the Touring tab in Google™ Earth. For other tips on using the program, refer to Google™ Earth’s website at earth.google.com

- **Timeline**: Used when showing the traveled routes and locations visited using animated dots to show the travel route.

  *Using the timeline feature* In the top right of Google™ Earth you will see the timeline pictured here.

  Grab the arrows from the center to expand them. The overall meter represents your route. The “onion skin” between the two arrows refers to the length of the animated dots that will appear when you hit the play button. After pushing play, the dots will follow the route in the same nature it was made.

- **Pushpins**: Good for showing each location visited (stopped) by the Trackstick or object being tracked. Each stop is represented with a pushpin.
Exporting to HTML

Another unique feature of the Trackstick is in its ability to show detailed maps of all recorded history without installing any special software. By exporting to .html, the location histories can be viewed on any computer with Internet Explorer and an internet connection.

1 Open a Trackstick file (.tsf) by clicking the icon or by selecting File, and then Open from the menu.

2 Select your preferred information using the filtering options (see page 19) and by clicking Update View. Only the locations shown will be exported.

3 Click the icon or select File and then Export.

4 Pick a name to save the new file and select the .html option from the drop-down menu.

5 The file will be exported and saved in the My Trackstick folder. In addition, a folder with the same name that you chose will be created which contains all the necessary data to view in Internet Explorer. Double-click on the chosen name .html file to start the mapping software.

Click on any location on the list for a detailed map of that recorded location. Double-click on the location to bring up satellite images and additional maps. If the map does not show, be sure to hit the Active X alert message at the top of the browser (click on the bar at the top) and allow the content to be shown.
Emailing HTML Files
Be sure to “zip” the entire folder and all its contents into one packaged file before emailing these files. A free .zip program is available at www.winzip.com. After the contents have been made into a .zip file, they can be emailed. The recipient must also have a .zip program to unpack and view the files.

Rich Text (.rtf)
The Rich Text format is a quick and easy way to display records in Microsoft Word and other document programs.

```plaintext
RECORD 402
DATE: 11/02/2005 10:43 AM
LATITUDE: 34.9039 LONGITUDE: -116.8870
STATUS: STOPPED 12 MIN
COURSE: N ALTITUDE: 1976.0 FT
GPS FIX: Y SIGNAL: 8
MAP LINK: HTTP://MAPS.GOOGLE.COM/MAPS?q=34.9039+-116.887&H=en&T=H
```

```plaintext
RECORD 492
DATE: 11/02/2005 12:32 PM
LATITUDE: 34.0683 LONGITUDE: -117.8476
STATUS: STOPPED 5 MIN
COURSE: W ALTITUDE: 839.2 FT
GPS FIX: Y SIGNAL: 7
MAP LINK: HTTP://MAPS.GOOGLE.COM/MAPS?q=34.0683+-117.8476&H=en&T=H
```

Comma-Separated Values (.csv)
When exporting Trackstick files to other mapping programs, they must first be converted to the comma-separated values (.csv) file format. Once they are converted, refer to the specific third party program’s instructions for importing these files into that program.
Please visit www.trackstick.com for up-to-date information regarding new products and your Trackstick personal GPS location recorder.
Geotagging photos

What is geotagging?
Geotagging photos is the process of adding location information to a digital photo. By carrying a Trackstick on you while out taking pictures, you can geotag the photos later and see exactly where you were when the pictures were taken.

Most modern software and photo management websites, such as Flickr™ and Picasa™, support geotagged photos and will automatically place them on a map. Please visit your preferred photo management website to see if it supports geotagged photos.

How to geotag photos
Geotagging your photos is easy with a Trackstick. **Just follow these 5 basic steps:**

1. **Sync your digital camera time with your current local time.**
   For the most accurate geotagging results, it's important you synchronize your digital camera’s clock with your current local time. Use your cell phone or some other source that automatically retrieves local time to set your digital camera’s clock.

   **TIP**  To perfectly synchronize your digital camera’s clock, configure the camera’s clock one minute ahead of the current local time, but don’t set it. Then wait for the current local time to catch up to your camera’s time and set it when they match.

2. **Bring your Trackstick with you and take plenty of pictures.**
   Before you begin shooting photos, make sure your Trackstick has received a valid GPS signal. The small LED light next to the globe on top of your Trackstick will flash **green** if it has a valid GPS signal. If it is flashing **red**, move to another location where the Trackstick has a clear view of the sky and wait until the LED flashes **green**.

3. **Match your photos with your recorded Trackstick data.**
   Before you geotag your photos you must first match them with your recorded Trackstick data.

   To do this, follow the steps on the **next page**...
Before you geotag your photos you must first match them with your recorded Trackstick data.

A Download your Trackstick data or open a .tsf file that contains the recorded GPS data from your photo shoot.

B Make sure Trackstick Manager’s display time zone is set properly. The recorded location times displayed in Trackstick Manager will be used to match photos with locations. Select the Properties tab and look at the Time Zone setting to see what your current display time zone setting is. Press the Change button to choose a different setting. If your Trackstick was recording locations with a specific time zone setting, then choose the Display Time setting, As recorded. If you set your Trackstick to record in GMT time, then select the setting Specific Time Zone and choose the time zone you were in when taking the pictures.

C Press the button and select the folder where you saved the JPEG (.jpg) photo files you just shot.

D Trackstick Manager will match each photo with a corresponding location using the date and time the photo was taken.
4 Map and verify photos in Trackstick Manager.
Once Trackstick Manager has matched your photos with appropriate locations you should verify them before they are actually geotagged. You can do this in a number of ways in Trackstick Manager.

By location

Once photos have been added to Trackstick Manager a new column labeled “Photos” is added to the list of recorded locations. This column tells you the number of photos that matched the recorded location.

To view all the photos matching a location, select any of its cell in the grid. A list of photo names appears to the right; you can select any photo name in the list for a preview in the box above the list. Double-clicking any of the photo names in the list will bring up a full-size view.

TIP If you want to quickly see only locations with photos you can select the checkbox labeled “with photos only” in the Filters.

Exporting to Google™ Earth
Another way to verify your matched photos is by exporting to Google™ Earth. Press the button in the toolbar and select any Google™ Earth (.kmz) file here. If any of the currently filtered locations contains photos they will be automatically mapped in the Google™ Earth file along with the typical export details.

By photo

This will launch the Trackstick Photo Viewer, which provides many different ways to browse through your matched photos along with a link to an internet map where each photo was taken.

TIP You can also view the photos in Google™ Earth here by pressing the “Export to Google™ Earth” button. This will produce a simple Google™ Earth file containing only the currently matched photos.

Browse matched photos by pressing the button.
5 **Geotag your photos.**

After your photos have been matched you can geotag them in Trackstick Manager by pressing the “Geotag Photos” button. The following window will appear:

**Output**

Select the directory where you want to output your geotagged photos here. You must output to a directory other than the one the photos are currently located in. By default, Trackstick Manager will output to a subdirectory in the photos’ current directory labeled **Geotagged**.

You can also upload your geotagged photos to Flickr™ by selecting the checkbox labeled **Upload geotagged photos to Flickr™**. Select a Flickr™ user name for upload, or if there are no users set up, press the **Add new user** button and follow the onscreen directions.

**Geotagging**

Select whether you want to geotag all matched photos or only the photos matching the currently filtered locations.

You can also watermark your photos with location information when geotagging by selecting the checkmark labeled **Watermark photos with location information...** This will overlay text at the bottom of each photo with the following details: date taken, latitude, longitude, altitude, and course (if applicable).

**HINT**

When travelling between time zones and geotagging photos, it is a good idea to have Trackstick record in the GMT (Universal) time zone setting in order to avoid any date confusion. See page 31 for an explanation on time zones, and page 15 for instructions on how to set the Trackstick’s time zone.
Adjusting photo properties

You can view and adjust the geotagged properties of photos in Trackstick Manager by selecting **Tools** and then **Adjust photo properties**.

From this screen, you can view any photo’s geotag properties as well as:

- Adjust the date and time the photo was taken
- Browse photos
- Export geotagged photos to Google™ Earth
- Geotag photos using .gpx files or NMEA logs
- Remove geotags

To adjust photo properties, you need to add photos by pressing either the or button.

Once you’ve added photos, there are a number of things you can do.

**Adjust all dates**

If your digital camera’s clock was not synchronized with local time then you can adjust the date/time each photo was taken here. There are two ways to do this. Offset each date and time by a specified amount of hours, minutes, and seconds, or, set all photo date and times to a specific date and time.

**Browse photos**

Browse through your photos using the Trackstick Photo Viewer, giving various ways to view your photos along with their geotagging information and an internet map link.

**Export geotagged photos to Google™ Earth**

If your photos are already geotagged then you can export all of them to Google Earth to see where they were taken.

**Geotag photos using .gpx files or NMEA logs**

You can also geotag photos using .gpx files or NMEA logs from non-Trackstick GPS devices. Press the **Open GPS log file** button and select the GPS log file type and file you would like to open. Trackstick Manager will match these locations with photos already added. All newly matched location information will be in red font.

Before you geotag the photos, you can verify their location by exporting to Google™ Earth (see the bottom of page 26).
Trackstick Manager options

Click the icon or select Tools and then Options from the Trackstick Manager menu.

Trackstick Manager Options - General

- **Default Directory**
  The directory to save raw Trackstick (.tsf) files.

- **Save files to a device name subdirectory when downloading**
  After choosing where to save your downloaded file, a subfolder will be created and named after the Trackstick you are downloading from. The file is saved to this subfolder for better organization.

- **Default File Type**
  When downloading from the Trackstick, this indicates what type of file to download to.

- **Erase memory after downloading**
  Automatically erase the Trackstick memory after successfully downloading location data.

- **When a Trackstick is plugged in**
  Indicates what Trackstick Manager should do when a Trackstick is plugged into your computer.

- **Default File Name**
  When downloading from the Trackstick, this indicates what the default file name should be.

- **Clamp altitudes to ground in Google™ Earth**
  Snaps locations to the ground when exporting to Google™ Earth.

- **Launch application after export**
  Automatically run Google™ Earth, Internet Explorer and other data-specific applications.

- **Prompt for save after downloading Trackstick data**
  Check to automatically save data.

- **Prompt for device name when the Trackstick is plugged in**
  When using multiple Tracksticks, this setting makes it easier to keep track of what each one is being used for.

- **Check for updates automatically**
  Check to have Trackstick Manager automatically look for software updates whenever the program is started.

- **Prompt for device name when the Trackstick is plugged in**
  Indicates what the default file name should be.

- **Clamp altitudes to ground in Google™ Earth**
  Snaps locations to the ground when exporting to Google™ Earth.
Trackstick Manager Options - Locations

Select the preferred formats for each recorded history item. If there is a check box labeled **Visible** then check this box for the item to appear when viewing recorded locations.

**Map Link**
Select your preferred mapping website. Choose from Google™ Maps, Mapquest, or Live Local.

**Display Items**
- **Display GPS Fix**
  Shows whether or not the Trackstick had a strong satellite lock-on for the recorded location
- **Display Signal**
  Shows the number of satellites the Trackstick was seen by while having a GPS fix
- **Power On/Off records**
  Displays the dates and times indicating when the Trackstick was turned on or off
About time zones and GMT

The Earth is divided into 24 lunes (crescents), and each one roughly represents a standard local time in its relation to the Greenwich Mean Time (GMT, also referred to as Universal Time, or UT), which is the solar time at the Royal Observatory in Greenwich, London. A rough map visualizing this concept is shown below. For a more detailed chart, visit www.trackstick.com/timezones

Trackstick sets its own time by the satellites, which are based on the world atomic clock and are accurate to within billionths of a second. If for some reason the recorded time is not your time, is important that you set the correct time zone and GMT in the device settings and software options.

See page 15 for Trackstick time configuration, and the next page for Trackstick Manager time settings.
Trackstick Manager Options · Time Zone

Details about time zones can be read on the previous page. Recommended time zone settings can be found on the next page.

Default Time Zone

Specifies the default time zone that is used to download and load .tsf files that have no time zone information saved in them.

You can save and change time zone information in .tsf files themselves in the Properties tab.

Prompt for time zone when downloading Trackstick data

Ask for time zone whenever downloading from the Trackstick. This time zone is then saved in the .tsf file itself, making the time zone portable across different computers.

- **As recorded**
  Select if specific time zone was set for the Trackstick in Device Properties (see page 15).

- **Local time zone**
  Select if Trackstick was set to record in GMT time zone (page 15).
  This will display times based on your local time zone.

- **Specific time zone**
  Select if Trackstick was set to record in GMT time zone (page 14).
  You can then choose any time zone you wish to see the recorded times for.

Automatically adjust for daylight savings time

Check to automatically adjust for daylight savings time if applicable. Do not check this box if daylight savings time is not observed in your time zone.
Recommended time zone settings

It is best to set Trackstick’s internal hardware time to the GMT (Universal) time zone setting, and to set the Trackstick Manager software installed on your computer to your local time zone or an alternate, specific time zone (whichever of these two you prefer).

By doing this, you have direct control over the displayed time through Trackstick Manager in relation to the permanent records stamped on the routes by your Trackstick, which allows for a much more intuitive experience. This makes viewing data more convenient since the routes are not bound to a specific time zone, and because the records made by Trackstick cannot be changed once they are recorded.

See page 31 for a detailed explanation on time zones.

1 **Set Trackstick’s internal time to record in GMT.**
   This is shown on page 15, which explains the Device Properties menu.
   
   1 Click the icon or select Tools and then Device Properties from the menu.
   2 At the bottom of the pop-up, select GMT in the Time Zone section and click OK.

2 **Set Trackstick Manager to display a local or specific time zone (whichever you prefer).**
   This is shown on the previous page.
   
   1 Click the icon or select Tools and then Options from the menu.
   2 Select Local time zone to create a .tsf data file using your current time zone, or select Specific time zone to view recorded times from a different zone.

**HINT** If you find yourself frequently switching between viewing routes in your local time or viewing them from a specific time zone, check the box next to Prompt for timezone when downloading Trackstick data. This way, Trackstick Manager will always ask you for a preference by default when you download new data from the Trackstick.
Trackstick Manager Options - Photos

Location Matching
Select how you want Trackstick Manager to match photos with recorded locations when adding photos to a Trackstick (.tsf) file.

- **Closest to the date/time the photo was taken**
  Force all photos to match a location

- **Within**
  Match any location within x minutes of the date/time a picture was taken (default is 1 minute)

_Match the direction of photos when they were taken as the direction of Trackstick movement_ will add matched locations’ direction to their respective photos’ geotags.

Google™ Earth
Select whether you want your matched photos included in Google™ Earth (.kmz) exports.

- **Save photos in .kmz files**
  Resize the photos according to the max pixel size specified and include them in the Google™ Earth file. This makes the file portable, meaning you can open it on any computer with Google™ Earth and still see the pictures.

- **Link to photos stored on my computer**
  Makes a Google™ Earth file linking to the photos stored on your computer. Allows you to view your matched photos in full resolution, but the Google™ Earth file will only work on the computer the pictures are stored on.

Flickr™
Select the default Flickr™ user when uploading geotagged photos. This only specifies which user is chosen by default when you geotag photos, you can still change the user when geotagging photos. From this section, you can add new Flickr™ users or remove existing ones from Trackstick Manager. To add a new user, press the **Add new user** button and follow the directions that appear on screen.
Trackstick Manager Options - Advanced

**Routes**

Routes are paths between stops in a recorded track. The start and endpoint of a route are locations stopped for longer than the amount of time indicated here.

**Stops**

- **Group Stops**
  Groups consecutive recorded stops that are within a specified number of degrees latitude/longitude of each other into a single stop.

- **Extend Stops**
  Extend the duration of stops until the start of the next track if the next recorded point is within a specified number of degrees latitude/longitude.

**Power Interruption Alerts**

This will notify whether the Trackstick was turned on and off more than once for any .tsf file. This helps easily identify whether a Trackstick was turned off when it wasn’t supposed to.

**Device Name Validation**

When downloading data, device name validation will prompt for a valid Trackstick device name should the current one become invalid. If not enabled, Trackstick Manager will replace any invalid characters with ~ (a tilde).
Trackstick Mini
The Trackstick Mini is the most advanced of the four Trackstick models and the smallest GPS tracker in its class at 3 1/2" x 1 1/2" x 3/8". It has a 360° antenna that is seven times more sensitive than the others, and is capable of receiving a satellite signal without having to directly face the sky. No batteries are required in the Mini, because it has a rechargeable lithium-ion battery that can be conveniently recharged though a computer’s USB port while you are downloading its data.
It ships with a weatherproof rubber boot and detachable vehicle magnetic mount.

Trackstick II
The Trackstick II includes all the standard features of recording, power, and battery life. It is designed for every day personal GPS tracking use.

Super Trackstick
The Super Trackstick includes all the features of Trackstick II but has longer battery life thanks to a built-in vibration detector that can sense when the Trackstick is moving. When the Super Trackstick is set to the ON position, the vibration detector will power off the Trackstick when it senses no movement and power on again when movement is resumed. Couple that with the included magnetic mount and Super Trackstick becomes more ideal for covert and less user-interactive tracking.

Trackstick Pro+
Unlike the portable Trackstick models, the Trackstick Pro+ is powered by an included cigarette-lighter plug, and can even be hard-wired to any vehicle (see page 31 for hard-wire installation). Trackstick Pro+ can also do real-time recording (see page 29).
The Trackstick Mini

See the previous page for a brief introductory description of the Mini.

**ATTENTION**

The Trackstick Mini is shipped with the batteries fully discharged. After installing the software, be sure to plug the Trackstick into your computer’s USB port and leave it there, with the power turned on, for at least two (2) hours, to charge the battery before using it for the first time.

The LED on the Trackstick will light up solid green when charging is complete and will automatically stop the charge. Once charged, be sure to remove the Trackstick Mini from the USB port and turn the power switch to the OFF position.

Important points about the Mini

1. **Be sure to download the latest version of Trackstick Manager from** www.trackstick.com/downloads. Older versions are incompatible with the Mini.

2. Although the Mini antenna is 360°, metal objects or surfaces cannot obstruct or be placed above the Mini.

3. If Trackstick has been sitting in the heat, wait at least half an hour before plugging into a computer’s USB port. If the Trackstick has been sitting in the hot sun, it can overheat just like any other electronic device. In the event that the Trackstick is overheated from direct sunlight, a warning will be indicated by alternating green and red flashing lights. When the Trackstick cools down to room temperature, it will begin functioning normally.

4. There is a battery meter in Trackstick Manager that indicates remaining battery life.
Trackstick Pro+ Features

Using Trackstick Pro+
When power is applied to the Trackstick Pro+, it will begin trying to communicate with satellites. Once a valid location is calculated, the LED on the top of the unit will begin blinking green. There is nothing else to do. The Trackstick Pro+ is working as long as the LED is green.

Real-time recording
Trackstick Pro+ supports real-time recording using Trackstick Manager and Google™ Earth. With real-time recording, Trackstick Manager can record a location every two seconds and update the current view in Google™ Earth accordingly.

Recordings are stored in the Google™ Earth .kml file format (see page 21). After installing Trackstick Manager, plug the Trackstick Pro+ into a USB port on your computer. After the device is detected in Trackstick Manager, you will see two buttons, Record and Stop and a link in the Device Status bar. The link will show the current location of the device in the designated mapping website (see page 22). To begin recording, press the Record button. A window will appear prompting for a file name for the recording. Enter a file name and click Save. Google™ Earth will launch automatically and display the current location once a GPS signal is received.

Trackstick Manager will then record a location every two seconds and Google™ Earth is refreshed each time a new location is recorded. In fact, Google™ Earth is not necessary for real-time recording. Trackstick Manager will still record if Google™ Earth is closed.

To stop real-time recording, just press the Stop button.

Next page: Installing Trackstick Pro+ in your vehicle...
Trackstick Pro+ vehicle installation

**Dash mount**
The simplest way to use the Trackstick Pro+ is by plugging it into the cigarette lighter receptacle on any vehicle. Double-face tape or Velcro will hold the Trackstick Pro+ firmly in place on the vehicle’s dashboard.

This type of installation is ideal for travelers, salespeople, and anyone else wanting to track mileage or route histories.

Law enforcement and government agencies can benefit from this type of installation during search and recovery efforts, disaster planning and other location-specific operations.

**Vehicle mount**
For fleet applications, the provided cradle can easily be attached to the vehicle using its screwholes. In most cases, double-face tape is sufficient in holding the Trackstick Pro+ to the side or top of any vehicle. A cable-tie or tamperproof seal can be added to protect against unwanted tampering. The cigarette-lighter plug should be cut off and the remaining cable permanently wired to the vehicle.

**Hard-wiring**
For installations that require a more discreet approach, the Trackstick Pro+ can be removed from its cradle and hardwired to any vehicle.

*Next page:* Trackstick Pro+ step-by-step hard-wiring instructions...
Trackstick Pro+ vehicle hard-wiring instructions

1. Cut off the cigarette-lighter plug and strip back the plastic insulation.

2. Attach the red wire to the vehicle's +12 volt supply. The Trackstick Pro+ should have power attached at all times. Be sure NOT to hook it to a source that switches with the ignition. Attach the black wire to the vehicle ground.

3. Plug the power jack into the Trackstick Pro+’s receptacle.

4. Attach the USB cable to the Trackstick Pro+.

5. Install the Trackstick Pro+ under the vehicle’s dashboard with the globe facing skyward. The Trackstick Pro+ must have a clear view of the satellites without any metal blocking its signal. Due to safety regulations, all modern vehicle dashboards are made of plastic and will not interfere with the Trackstick Pro+’s satellite reception. Be sure that there is no metal insulation from air ducts or other objects that could interfere with the operation.

6. The USB cable can easily be hidden under the dash for later data retrieval via a laptop computer, or the entire Trackstick Pro+ can be removed for downloading if the vehicle layout permits.
Troubleshooting

Before investigating any of the problems explained in the following pages, you should first make sure that your Windows™ driver signing setting is set to Warn. Follow these steps:

1. Go to Start, and then Settings, and open the Control Panel.
2. Open the System Properties by double-clicking the icon.
3. Click the Hardware tab, and then the Driver Signing button.
4. Select the bubble next to Warn - Prompt me each time to choose an action and hit OK.
5. Click Apply and then OK in the System Properties window to exit.
6. If you were having trouble installing the Trackstick drivers before this, try installing them now.
**Problem:** Trackstick Manager runs but is unable to see the Trackstick when connected.

OR

**Problem:** Hardware wizard says “Unable to install drivers for this device”

OR

**Problem:** When Trackstick is plugged into the USB port and Trackstick Manager is opened, I get the following message:

```
Unable to load DLL C:\windows\system32\kernel32.dll
```

**Cause 1**
Make sure two fresh AAA batteries are installed and the Trackstick’s red light is on when connected to the USB.

**Cause 2**
Wrong drivers were installed by Windows™ because the Trackstick was plugged in **BEFORE** the software was installed.

The most common mistake made by Trackstick users is not reading the warning above. If you plug the Trackstick into a computer without the software installed, Windows™ will install the wrong drivers for the Trackstick. This is a common problem with most USB devices on the market. To fix the mistake, follow these steps:

**Solution**

1. Make sure the Trackstick is unplugged from the computer.
2. Click on the **Start** menu, then go to **Settings**, and then open **Control Panel**, and go to **Add or Remove Programs**.
3. In the **Add or Remove Programs** window, find **Trackstick Manager** and remove it.
4. Now find **Trackstick Drivers** in the **Add or Remove Programs** window, and remove it.
5. Reinstall the Trackstick Manager file from [www.trackstick.com/downloads](http://www.trackstick.com/downloads)
6. Follow the steps on page 3 of this manual for instructions on installing Trackstick Manager.
7. Once you have installed the Trackstick Manager program, plug the Trackstick into the computer’s USB port.
8. Follow the steps on page 5 of this manual for instructions on installing the Trackstick.
Problem: No errors appear and everything appears to work OK, but Trackstick is not being seen by Trackstick Manager.

Solution: Try the previous solutions on page 42. If they fail, then follow these steps:

For Windows™ 7 and Vista users (see page 47 for Windows™ XP):

Part 1: Uninstall Trackstick drivers.

1. Turn on the Trackstick and plug it into the computer’s USB port.
2. Click the (Windows Start icon) from the taskbar, type “device manager” and press Enter.
3. When the Device Manager window opens, select the item Universal Serial Bus Controllers.
4 Click the arrow to expand the selected item, right click the entry for your Trackstick, and select Uninstall.

5 A new window should appear asking to confirm the uninstall. Check the box labeled Delete the driver software for this device and click OK.

6 Remove the Trackstick from your computer and turn it off.

Next page: Part 2: Reinstalling Trackstick drivers...
**Windows™ 7 and Vista**

Part 2: Reinstall Trackstick drivers.

Please make sure Trackstick Manager is already installed before attempting to manually install the drivers.

1. Turn on the Trackstick and plug it into the computer’s USB port.

2. Click the  
   (Windows Start icon) from the taskbar, type “device manager” and press Enter.

3. When the Device Manager window opens, under Other devices, right click the item Unknown device and select Update Driver Software...
4 A new window should appear, asking “How do you want to search for driver software?” Select *Browse my computer for driver software.*

5 Enter the location where you installed Trackstick Manager. Usually this is:
   - `C:\Program Files\Trackstick Manager` (32-bit Windows™)
   - `C:\Program Files (x86)\Trackstick Manager` (64-bit Windows™)

   Check the box labeled *Include subfolders* and select *Next.*

   Windows™ will automatically search for and install the Trackstick drivers.
Problem: No errors appear and everything appears to work OK, but Trackstick is not being seen by Trackstick Manager.

Solution  Try the previous solutions on page 42. If they fail, then follow these steps:

For Windows™ XP users (see page 43 for Windows™ 7 and Vista):

1  Turn on the Trackstick and plug it into the computer’s USB port.

2  Right click on the (My Computer icon) from your computer’s desktop, and then select Properties. If the My Computer icon is not shown on your desktop, you can find it by going to the Start Menu, then Settings, and then go to the Control Panel, where it will be listed.

3  Click on the Hardware tab at the top

4  Select Device Manager
5. Find Trackstick in the list (should be under *Universal Serial Bus controllers* when you hit the “+”), right click on the Trackstick item, and select *Uninstall*.

6. Once the Trackstick drivers are uninstalled, close the Device Manager window.

7. Remove the Trackstick from the USB port and then plug it back into the USB port again with the power turned on.

8. The *New Hardware Found* wizard should pop up and you can continue from page 5 of this manual to reinstall the Trackstick drivers.
Problem: The red route line is not showing up in Google Earth, how do I get it to reappear?

Solution
The record interval has been changed. Return the Trackstick to normal by setting to Fast Track in the Trackstick Manager menu by going to Tools, Trackstick Settings, and setting the Record Interval to Fast Track (see page 15).

New data must be recorded since old data lacks the resolution to show the route traveled. Fast Track is the only setting capable of showing the red route line.

Problem: My Trackstick stopped recording.

Solution
All Tracksticks must be flashing green to actually be recording data. A red flashing light means the Trackstick is ON and looking for satellites. Battery life is dramatically reduced if the LED is not flashing green. Nothing will be recorded if the LED continues to flash red.

If you are seeing a green blinking light and nothing is being recorded, make sure that the Trackstick is restored to factory settings. In Trackstick Manager, go to Tools, Trackstick Settings, and click Restore Defaults. Now record new information by placing the Trackstick on your car’s dash, wait for a green flashing light, go for a drive, download the data, and the travel history should be displayed.
Photo geotagging problems

Should you encounter any problems geotagging your photos, see the list below before contacting Trackstick support. You must rematch your photos in Trackstick Manager after applying any of the following suggestions for the changes to take effect.

**Problem:** None of my photos match my recorded locations.

OR

**Problem:** My photos are not mapped in the right places.

**Cause 1** Your digital camera clock was not set correctly before you took your pictures.

**Solution** Adjust photo date and times.

1. Go to **Tools**.
2. Select **Adjust Photo Properties**.
3. Add the folder containing the photos you are trying to match.
4. Press the **Adjust All Dates** button and adjust your photos accordingly.

**TIP** If you don’t know how much to adjust photo date/times by, then export all your locations to Google™ Earth. Find a location that is a better match for one of the photos in the file and figure out the time difference between the date and time the photo was taken and this new location. This will be how much time you are going to offset all your dates by.

**Cause 2** Trackstick Time Zone is not set correctly in Trackstick Manager options.

**Solution** Adjust Trackstick Manager display time zone.

If you set Trackstick to record in GMT time, then configure Trackstick Manager with the correct time zone:

1. Go to **Tools**.
2. Select **Options**.
3. Select the **Time Zone** tab.
4. In the **Display Time** section, select **Specific Time Zone**.
5. Select the time zone you were in when you were shooting your photos

*Continued...*
Cause 3  Location matching settings are incorrect.

**Solution**  Adjust Trackstick Manager location matching options. Depending on your Trackstick’s record interval settings, you may need to adjust how Trackstick Manager matches photos.

1. Go to **Tools**.
2. Select **Preferences**.
3. Select the **Photos** tab.
4. Select the proper **Location Matching** setting according to the Trackstick’s record interval.

Cause 4  The wrong Trackstick file (.tsf) is being used.

**Solution**  Try matching another Trackstick file (.tsf) with your photos.

If none of these suggestions solve your problem then you may not have had a valid GPS signal when you were taking photos, therefore Trackstick Manager cannot match the photo with a recorded location.

**Problem:** My photos are not in the right place on the map, but they are close.

**Solution**  Adjust photo and date times.

1. Go to **Tools**.
2. Select **Adjust Photo Properties**.
3. Add the folder containing the photos you are trying to match.
4. Press the **Adjust All Dates** button and adjust your photos accordingly.

**TIP**  If you don’t know how much to adjust photo date and times by, then export all your locations to Google™ Earth. Find a location that is a better match for one of the photos in the file and figure out the time difference between the date and time the photo was taken and this new location. This will be how much time you are going to offset all your dates by.
Problem: Some of my photos will not match any of the recorded locations.

Solution
Adjust Trackstick Manager location matching options. Depending on Trackstick’s record interval settings, you may need to adjust how Trackstick Manager matches photos with locations.
1. Go to Tools.
2. Select Preferences.
3. Select the Photos tab.
4. Select the proper Location Matching setting according to your Trackstick record interval when you were shooting photos.

Additional support can be given from the trackstick.com website in the Contact Us section.