

# gps—photo link

EXPRESS series

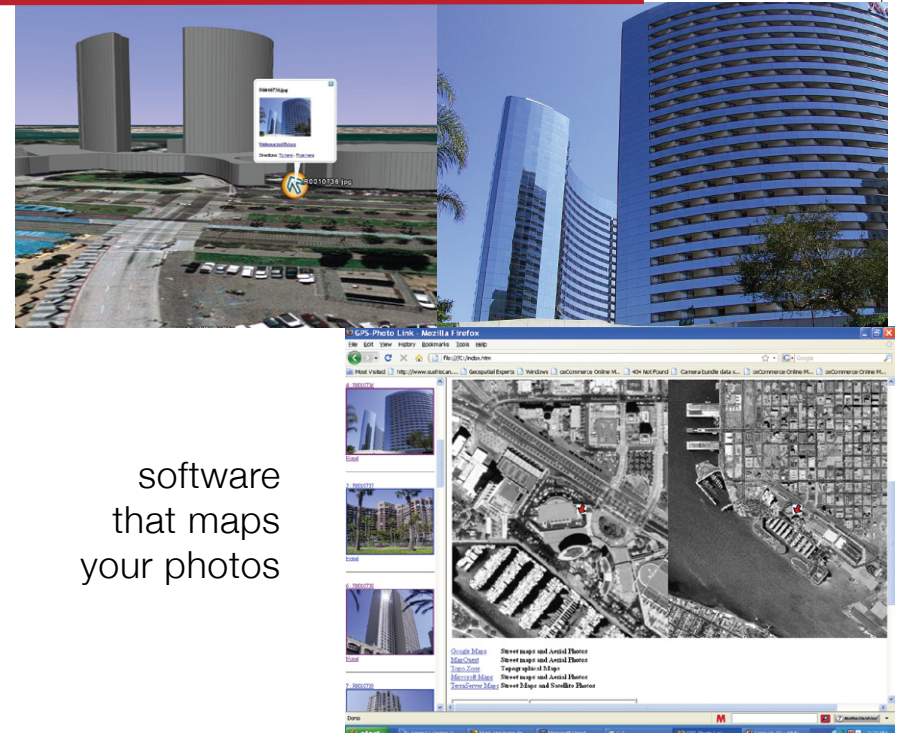
INCLUDES:  
Ricoh Edition — Nikon Edition — Standard Edition

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EXPRESS series



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software  
that maps  
your photos

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Includes: Ricoh, Nikon and Standard Editions

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## Software Support & Maintenance Agreement

This software comes with 90 days with free version upgrades and 30 days of free phone or email support from the date of purchase. Bug-fix upgrades will always be available for free.

Additional maintenance (free upgrades for 1 – 2 years) is available for purchase. That agreement does not include support. Phone and email support is charged on a fee for service basis. The rate is \$30 per incident of 30 minutes or less.

*NOTE: The help system in the software includes more detailed descriptions and screen shots than this manual. Simply click Help at the bottom of the screen to access this information. This manual, updated FAQ and an online user forum are available for free at:  
<http://www.geospatialexperts.com/Support.php>*

## Welcome

Thank you for your purchase of GPS-Photo Link: Express series! We are sure you will find this to be a great business tool.

Information from this guide and additional information may be found in the help files on the GPS-Photo Link CD or online at [www.GeoSpatialExperts.com/help/](http://www.GeoSpatialExperts.com/help/).

## Camera & GPS Set up

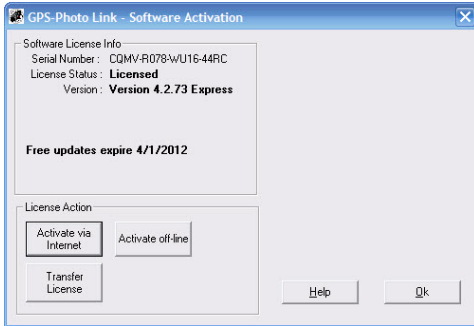
Please consult the provided pocket-sized quick reference guide for basic instructions most frequently used by photographers and tips for getting the most out of your camera system. Check online for the most recent updates to this information at [www.geospatialexperts.com/suport.php](http://www.geospatialexperts.com/suport.php)

## GPS-Photo Link Set-up

### Registration

GPS-Photo Link is designed to run on one computer at a time. To activate your software, begin by inserting the disc into the CD-ROM drive, installation will start automatically. When it is done, select “Run” and the program will begin by showing you the Activation screen.

When you first install the software it becomes available in trial mode. If you select “OK” the software will be begin in trial mode. This version will run for 15 days with limited features including only processing 10 photos and adding watermarks to each photo.



There are two ways to activate the software. The preferred method is by selecting the “Activate via Internet” button and typing in your 16 digit activation number provided to you at the time of purchase (look at your invoice or at the sticker on the DVD case.)

If you are unable to use the internet - you may call or email Geospatial Experts to unlock your license manually: (303) 255-2908 8:30—5:00 Mountain Time.

How it works: You will click the register off-line button. When you do a screen called "Provide Authorization Request Code" will appear. Indicate the "request type" for what you want to do (activate your license for the first time, extend an evaluation or reactivate a license that has already been used). Once the correct Request Type is entered, copy the number that appears at the bottom of the screen (Authorization request Code). Please email or call us with this code AND the 16 digit serial number you received upon purchase. We will use these numbers to create an off-line activation code. You will enter the code we create on the next screen and click OK to activate the software. See the online help guide for more information.

*NOTE: To transfer our license to another computer, see the instructions in the FAQ section of this booklet.*

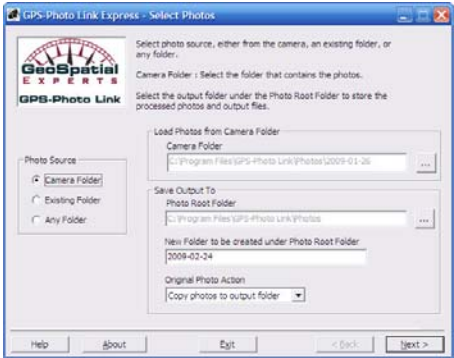
### Using GPS-Photo Link

The GPS-Photo Link camera icon should be available on your desktop after installation. When you click on the icon you will be prompted to begin processing your photos.

### Processing Photos

When you click on the GPS-Photo Link icon, the select photos window will appear on your screen. This is the first step in processing your photos.

### Select Photos



Identify the location of photos you wish to process in the box on the left called *Photo Source*. There are three options which you may select by clicking on the radial buttons on the left side of the screen:

- *Camera Folder* - Downloads the photos from your camera
  - If you select this option, you will need to specify the

camera folder, where the photos are stored (e.g. from a memory card inserted into the computer or an SD card reader).

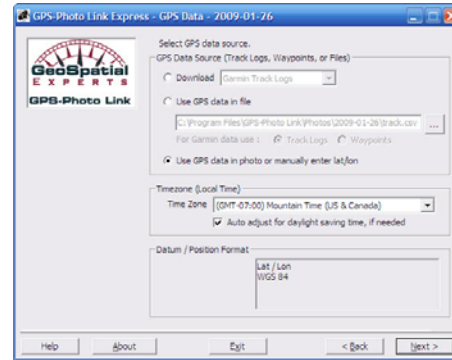
- Next, you will need to select where the output will be stored. The *photo root folder* is the path to the folder where you are storing your photos.
- GPS-Photo Link creates a new folder for each batch of photos processed. Under *New folder to be created under root photo* – type in the name of the folder you would like to create to store your processed photos. The default is today's date.
- GPS-Photo Link does not alter your original photos. Under *Original Photo Action*, you may create copies of the original photos in the specified folders.
- Click *Next* to proceed.
- **Existing Folder** –Identifies photos that are in the default *Photo Root* folder. Most of the time these will be photos you have already processed with GPS-Photo Link. Use this option if you wish to re-process photos or to process photos that you downloaded to this folder earlier.
  - Select the *photo root folder* -the path to the folder where you are storing your photos.
  - Select the *existing folder under the photo root folder*. When you reprocess photos the previous output will be overwritten.
  - Click *Next* to proceed.

This screen also allows you to view output created in prior sessions. To view the output, select

- Browse existing folder to find processed photos, .csv or Word (.doc) files.
- View web pages – to view previously created .html pages.
- Google Earth – to view previously created Google Earth files.
- **Any Folder** – *New Folder to be created under Photo Root*

**Folder** - Will process photos from any directory on your computer. All photos will be saved to the same folder as the originals.

## GPS Data



GPS-Photo Link allows you to use embedded GPS data from the Ricoh 500SE, the Nikon CoolPix P6000, and the iPhone as well as GPS data from separate sources. On this screen you will tell GPS-Photo Link which type of GPS data you are using.

- **Download** - Reads the data directly from a Garmin GPS, Magellan GPS, or the GPS Datalogger.
- **Use GPS Data in File** - Imports GPS data that was saved by another program (or reuses data stored by downloading from a device), click on the browse button to find the file with your GPS data. If you are importing from Pathfinder Office, see specific import instructions in the online help guide.
- **Use GPS Data in Photo** - Imports the data that was saved as part of the photo. Select this option if you are using the Ricoh 500Se, Nikon CoolPix P6000 or a cell phone which embeds the GPS data directly into the photos (like iPhone). You may also select this option if you are planning to

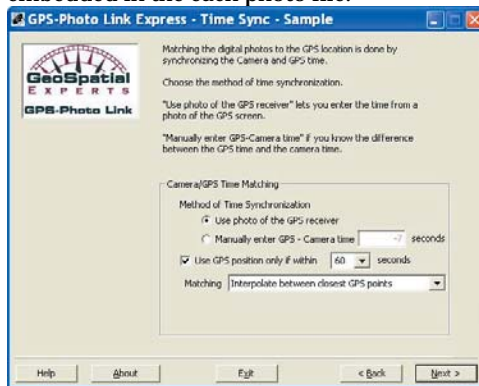
manually enter the lat/lon information for your photos.

- **Time Zone** - In this field, indicate the time zone your camera was set to when you took the photos.
- **Datum/Position Format** – Shows the datum and position format of your output data. This cannot be modified in the Express series software. These features are available in GIS Pro series of GPS-Photo Link.

Click *Next* to proceed

## Time Sync

If your camera or cell phone has built in or attached GPS, this screen will not appear because the GPS coordinates are already embedded in the each photo file.



If your camera does not have built-in or attached GPS, matching the digital photos to the GPS location is done by synchronizing the camera and GPS time.

*Method of Time Synchronization:*

- *Use photo of the GPS receiver* will allow you to enter the time from a photo of the GPS screen (See *Camera Set-up*

*in your quick reference guide*).

- *Manually enter GPS-Camera time* if you know the difference between the GPS time and the camera time.

GPS-Photo Link will match each photo with the GPS point with the time closest to the time of the photo. You may wish to specify how close the times need to be in order to match the photo (i.e. if you are flying, you will want a very small interval, and if you are standing still for several minutes, you may use a longer interval).

**Matching:** Photos are matched to GPS position using one of the following methods:

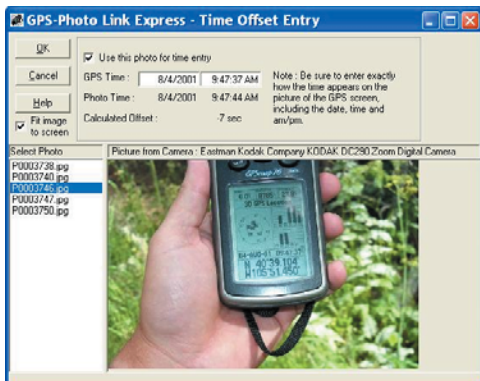
- **Match to nearest** - Will associate the photo with the GPS point with the time closest to the time when the photo was taken.
- **Interpolate** - If you are traveling, you may wish GPS-Photo Link to *interpolate* your position between two GPS points. GPS-Photo Link will assume you are traveling at a constant rate between two GPS points and place the photo at the appropriate point based on the time of the photo.
- **Match to closest point Before or After** - In some cases you will collect the GPS data point at the site of the object and then back up to take the photo. This option allows you to associate the photo with the point you took before or after taking the picture. When using this method, it is important to consistently collect the point either before **or** after taking the photo. This option will be used primarily when you are using a separate GPS and collecting points.

Click *Next* to proceed

## Time Off-Set Entry

If you selected *Use photo of the GPS receiver* as the method of synchronization, this is the screen where you will synchronize your photos with the GPS.





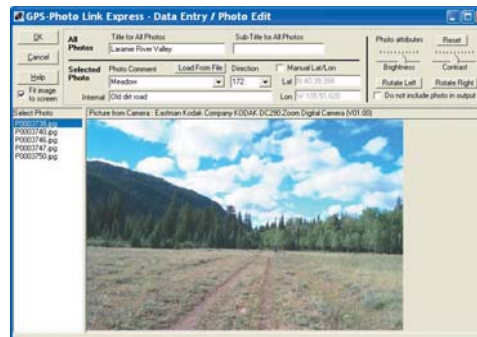
In this screen you will see the names of photos on the left and the selected photo in the middle. Scroll down and select the photo you took of the GPS (see *Camera Set-up in your quick reference guide*). At the top of the screen, check the box that says *Use this photo for time entry*. Next, enter the time that is shown in the photo where it says *GPS Time*. GPS-Photo Link will automatically calculate the difference between the actual time (as shown in the photo) and the internal time of the camera (*photo time*). The calculated offset will be displayed. All photos will then be adjusted to match GPS coordinates according to this offset.

*Do not include photo in output* - Check this box to exclude a photo from the output.

Click *Next* to proceed

### Data Entry/ Photo Edit

The data entry portion of this screen is divided into two data entry parts. The top left portion applies to all the photos. The lower portion is only for photo selected.



- *Title for All Photos* - Select to have a title appear on *all* photos (i.e. "Copyright 2001, ABC Inc." or "Park Photos").
- *Sub-Title for all Photos* - Select to have a sub-title appear on *all* photos.
- *Photo Comment* - Each photo can have a comment. After a comment is entered for one photo, the comment will be available for use in other photos via the drop down list box.
- *Load From File* - The comment list displayed can be customized by creating a text file. Click on *Load From File*, select the file with the comments.
- *Direction* - If you gathered direction data when you took the photo, this box will be automatically populated (See *Taking Pictures in quick reference guide*). If the box is blank, you may manually enter the direction the camera was facing when the photo was taken. The direction abbreviations can be customized by editing the *compass.txt* file.
- *Internal Comment* - This comment will not appear on the watermark, only in the text file.
- *Manual Lat/Lon* - Allows the editing of the photos computed lat/lon or the ability to manually enter a lat/lon.

### Photo Editing

This part of the screen (upper right) allows you to preview each

photo and do some basic photo editing:

- Select photo from the list at the left.
- Change brightness, contrast and rotation as desired (described below).
- Select *Reset* to return the values to the default.
- These attributes will be applied only to the watermarked photo (the original file is left untouched).

*Brightness/Contrast* - Use these controls if the photo cannot be seen very well (this will affect the watermarked photo).

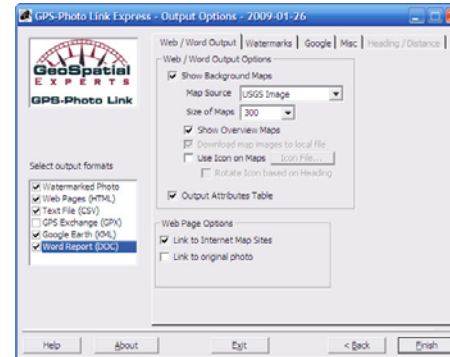
*Rotate Left/Rotate Right* - Rotates image, used for viewing photos if camera was tilted when taking the photo.

*Do not include photo in output* – Select this option if you do not want the displayed image to be processed.

*Fit image to screen* - Select to fit the whole photo in the screen. Uncheck to view photo in actual size. Use the scroll bars to view other portions of the photo.

Click *OK* when finished to proceed.

## Output Options



GPS-Photo Link allows you to create many types of output. Different output styles are indicated in the check-boxes on the lower left and include:

- Watermarked photos (`_tag.jpg` files)
- Web pages (.html files)
- Text file (.csv file to use in spreadsheets)
- GPS Exchange (.gpx to use with multiple programs including Garmin's MapSource)
- Google Earth (.kml or .kmz to launch Google Earth)
- Word Report (.doc file to use in Microsoft Word)

After selecting the types of output you want using the check-boxes in the lower left, use the Tabs to determine the format of your output.

Tabs include:

- Web/Word Output
- Watermarks
- Google
- Misc

Options on each of these tabs are discussed in that order.

## Web / Word Options

- *Show Background Maps* - GPS-Photo Link automatically downloads background maps for your web page if you check the box beside *Show Background Maps*.
  - *Map Source* - Allows you to select which internet maps to download; choose from public Google Maps, Tiger maps, USGS Topos, USGS Aerial Images or USGS High Res Urban Photos, MS Windows Live.
  - *Zoom Level* - Sets the maximum zoom level to allow for different resolutions in different areas.
  - *Size of Maps* – Allows you to select the size (in pixels) of the background maps. The Overview map will be twice the size of the photo specific map.
  - *Show overview maps* - Creates an overview map, showing where all the photos were taken.
  - *Download map images to local file* - Select this option to download the map images in the output folder instead of linking to them. This allows the creation of stand-alone maps that do not need an internet connection to view.
  - *Use Icon on Maps* - Allows you to select the icon you would like to show where photos were taken. You may choose from the standard icons or select your own icon using the *Icon File* button. Icons may be .jpg, bitmap or .gif files.
    - *Rotate Icon Based on Heading* - If you select the arrow or airplane icon, it will automatically rotate the symbol to point in the direction indicated for each photo on the *Data Entry* screen.
- *Output Attributes Table* - Includes a table showing attributes of each photo.

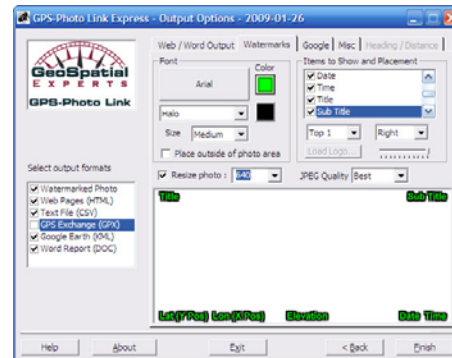
## Web Page Options

- *Link to Internet Map Sites* - This option will enable links to Google Maps, Tiger maps, USGS Topos, USGS Aerial Images USGS High Res Urban Photos, or MS Windows Live maps so that you can view the maps on those sites.

- *Link to original photo* - Select to link the original photo in the web page output, so that if you click on the watermarked photo, the original photo will be shown.

**NOTE:** If you process the photos and the background maps are blank, it means that no maps are available for your coordinates at this site. Choose a different map source and reprocess the photos.

## Watermark



The options on this screen allow you to manipulate what will be displayed on the processed photos as a watermark on the photo itself or “outside the photo” as a label underneath. You may adjust the color of the labels, create a halo or other highlight, or adjust the size of the text. You may also indicate what information to display on the photos. For each item you include, you may select the placement of that item on the photo. Two lines at the top and two at the bottom of each photo are available.

If you choose to include your logo (up to two), you must



indicate the location of that file on your computer. GPS-Photo Link will import the logo “as is”. You may then adjust the logo to be more transparent if desired.

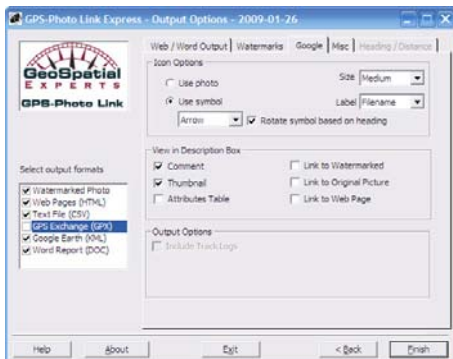
Finally, you may choose to resize the photo and determine the quality for the watermarked photo.

**NOTE:** *If you wish to include your logo on the photos, make sure the file is in the correct size for the photos before importing it.*

## Google Earth

GPS-Photo Link automatically creates two files: .kml and .kmz. The .kml file automatically launches and displays your photos in Google Earth with live links to the original photos, watermarked photos and web pages. The .kmz files are a compressed version of the .kml file that includes photos so that you can easily email or post this file for others to see.

This screen allows you to select how your data will be displayed in Google Earth.



*Icon Options* - Select the icon that will represent your photo in Google Earth. You may use a thumbnail of the photo itself or choose a symbol from the drop down menu. If you choose an arrow or an airplane, GPS-Photo Link can automatically rotate the symbol to face the heading indicated for each photo on the *Data Entry* screen. You may also determine the size of the icons. Google Earth includes a label associated with the icon. Use the *Label* drop down list to determine how your icons will be labeled.

*View in Description Box* - When you click on an icon in Google Earth a description box appears. You can determine what information to include by checking boxes in the section of GPS-Photo Link. You can select to include comment (from the data entry screen), the thumbnail photo and the attribute table. The three “link to” options will only work in .kml files. These files allow you to see any of those files while in Google Earth.

*Output Options* allows you to include *track logs* in Google Earth along with the photos. Please note: Track logs are only available for standalone GPS units. Cameras and cell phones with embedded GPS do not capture track logs.

## Sharing Google Earth files

If you want another person to see the photos you will need to send the .kmz file. In this file only the photo type indicated in the *View in Description Box* screen will be included.

If you want others to see any of the photos (thumbnail, tagged or original) you may send them the .kml files along with all the photos. Make sure the other person stores the photos and .kml file in the same directory. Once you process your photos using GPS-Photo Link you will have three different versions of each photo. The original photo (\*.jpg), the watermarked photo (\*\_tag.jpg) and thumbnail photos (\*\_small.jpg). If you want

the viewer to see the icon with thumbnails send the thumbnail photos. If you want them to view the complete description when they click on the icon you will need to send an additional photo. Which photo you send will be determined by what you selected under " View in Description Box". If you included the watermarked photo then send the \*\_tag.jpg photos. If you linked to the original photo send those instead.

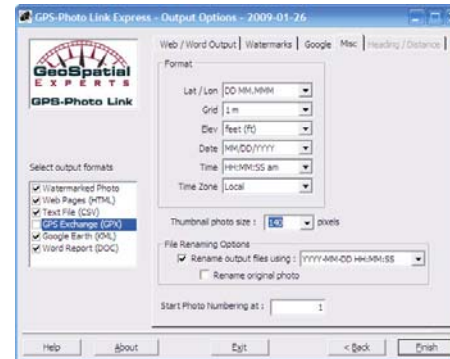
**NOTE:** To use the Google Earth output, you must first download Google Earth to your computer. Go to <http://earth.google.com/downloads.html>. Google Earth is free, however upgrades are available for purchase.

## Miscellaneous

This page allows you to format fields that are used in many forms of output including Lat/Lon, grid, elevation, date, time, and time zone. It also allows you to determine the size of the thumbnails created.

*File Renaming Options* allows you to change the format to rename the watermarked photos, associated web pages and original photos using different time/date patterns, comments, or memos associated with your photos. This may make specific photos easier to find.

*Start Photo Numbering At* – Allows you to set the numbering in the web output and watermark beginning with the number you select.

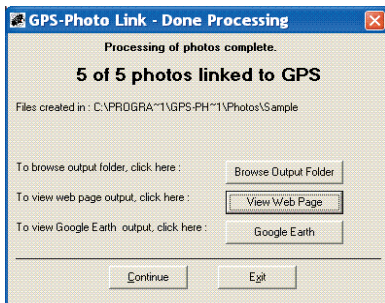


## Heading/Distance

Heading and distance options are not available in the Express series. These features are available in GIS Pro series of GPS-Photo Link.

## Processing

Once you have finished selecting options, click the *Finish* button. You will see a screen with a progress bar during processing. Once the photos are processed, a screen will appear that shows how many photos were linked to a Lat/Lon position. If no photos were linked, the notice will be in **red**.



- Click *Browse Output Folder* to open *Windows Explorer* to the output directory.
- Click *View Web Page* to launch internet browser to display the web (HTML) output.
- Click *Google Earth* to launch Google Earth browser and display your photos.
- Click *Continue* to return to the first wizard screen.
- Click *Exit* to leave GPS-Photo Link.

### View Output after leaving GPS-Photo Link

After leaving this screen, you may view your output by returning to the *Select Photos* screen and choosing *Existing Folder*. At the bottom of that screen you will see buttons that allow you to open output previously created for the selected Photo Root Folder. You may also browse to the folder where the photos are stored and open the index.htm to view Word documents (.doc) web pages, or .kmz or .kml files to view Google Earth output.

### Frequently Asked Questions

#### Should I turn on my camera's clock so that it shows on the display?

No! The date and time are stored internally in the image file.

GPS-Photo Link has many more options for watermarking than what are built into digital cameras.

However, you should set your camera's clock to be near the actual time. Cameras with clocks that are months or years off sometimes have difficulty linking to coordinates.

#### I want to record the location of the object, not the location where the picture was taken. How can I do this?

##### If using a Ricoh 500Se

The Ricoh 500SE now supports a GPS lock feature. To obtain the coordinates of the object being photographed rather than the camera itself:

1. Press the *left arrow* button on the camera and the current GPS position will lock.
2. Walk back and take photos. The GPS coordinates stored will be of the position of the object, not the camera.
3. Remember to press the *left arrow* button again to unlock the GPS position.

If the object is distant and you are using the Ricoh 500SE, use a laser range finder with Bluetooth to record the distance to the object. This will be stored as a memo associated with the photo.

##### If using a Nikon P6000

Walk up to the object and stay still for a few moments to make sure the GPS is fixed on your current position. Then partially depress the capture button. This locks the position of the GPS. Step back and completely depress the button. Please note that the focus will remain as it was when you began to depress the button.

##### If using separate camera and GPS

If using an external GPS (Trimble, Garmin, etc.), place it next

to the object, then step back and take a picture. The picture will be linked to the coordinates of the GPS at the time it is taken.

### **Can I use GPS-Photo Link with aerial photography?**

Yes, in fact we have many customers who do just that. See our website for examples.

### **I'm trying to get a satellite fix but it is taking a long time. Why?**

It may take up to 15 minutes for the GPS to get its first fix. This is what we call "initializing" the GPS. To "initialize" the camera, turn the camera on and leave it outside. Since it is new and has never been used in your location, it takes some time to locate the satellites. The camera will sound a series of beeps when it locates the satellites. After initializing, it will obtain a fix relatively quickly.

### **How do I unlock the software?**

See instructions on pages 1-2 of this booklet.

### **Can I transfer my license to another computer?**

Yes! You can easily transfer the license to another computer without contacting GeoSpatial Experts.

While running GPS-Photo Link click the About button and Registration on the screen that pops up. Next select the Transfer License option and follow the instructions. To use this option you need to be connected to the Internet. When you transfer the license it "checks in" your number on our server making it available for another computer to unlock. You can use the same 16 digit serial number to unlock the software from any computer.

**NOTE:** You may not transfer the software off one computer and back on to the same computer on the same day. You will have to wait until the next day or call GeoSpatial Experts for assistance.

If you do not have internet access you may call or email GeoSpatial Experts and we can assist you. We will need to know the 16 digit serial number associated with your software.

### **How many pictures can I process at once and how long will it take?**

Gps-photo link can process hundreds of photos at once. It takes around 1 second for each photo, depending on computer speed and size of the photo in mega pixels.

### **What happens to the original photo?**

The original photo remains untouched by GPL.

### **We hope you enjoy using GPS-Photo Link!**

If you have questions or comments please email us at [Info@GeoSpatialExperts.com](mailto:Info@GeoSpatialExperts.com).