

TripTracer™

User's Guide v1.0

Trace the Route of Any Vehicle Using GPS Accuracy



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PACKAGE CONTENTS

- Quick Start Users Guide
- TripTracer GPS Recorder/Receiver
- GPSTrackP Software Installation CD-ROM
- Driver Installation CD-ROM*
- GPS Antenna
- Cigarette lighter adapter (12VDC/USB)
- Adhesive hook & loop mounting tape

SYSTEM REQUIREMENTS

DATA RECORDER (Record data only)	VIEW & MANAGE STORED DATA (PC used to view recorded data)	USB GPS RECEIVER (Optional application w/laptop PC)
12VDC cigarette lighter socket in the vehicle for power.	486 MHz or higher compatible PC	486 MHz or higher compatible PC
	WIN 98/ME/2000/NT/XP	WIN 98/ME/2000/NT/XP
	CD-ROM drive 8x or higher	CD-ROM drive 8x or higher
	128MB RAM or higher	16MB RAM or higher
	800 x 600 Video Display (256 colors)	640 x 480 Video Display (256 colors)
	2-Button Mouse	2-Button Mouse
	USB Port	USB Port
	You must have Microsoft® MapPoint and Office 2000/XP installed on your PC to run GPSTrackP.	Your NMEA compliant GPS street mapping software.

WELCOME

Thank you for purchasing TripTracer with GPSTrackP Software!
Your TripTracer utilizes some of the most advanced GPS technology for recording and displaying your vehicle's travel data through GPSTrackP software.

The TripTracer is actually two products in one!

- I. It's primary application is for use as a stand-alone device plugged into a standard 12VDC cigarette lighter (no laptop PC required) to record a vehicle's travel data such as route, speed and mileage summaries, complete with date and time stamps. Then to view or analysis the recorded travel data, a separate application like GPSTrackP or online subscription is required, which converts the recorded information and merges it with the most up-to-date maps for viewing and managing it.
- II. An optional application is a USB GPS receiver for your laptop PC to perform in-car navigation. By simply installing the USB driver, plugging in TripTracer into the PC's USB port and installing any NMEA street mapping or navigation software, you can view your real-time position in relation to surrounding streets so you can effectively plan your travel routes.

SAFETY & LEGAL NOTICES

Please read this section carefully before using TripTracer

Neither Rayming Corporation nor Mobile GPS Online will accept any responsibility whatsoever for accidents resulting from failure to observe common sense precautions. Your personal judgment, traffic regulations, and common sense must always take precedence over any driving direction produced by TripTracer or the mapping software.

WARNING: Make sure that the GPS receiver is secure and does not interfere with driving visibility and safety.

It is your responsibility as the vehicle operator to securely place the GPS unit and antenna so that they will not interfere with driving and will not prevent operations of any safety device (such as the Airbag) in your vehicle. Do not mount the devices in a place where the driver or passengers may receive injury during vehicle operation or collision. For your safety, take care to route all cables away from shifters, pedals, accessory controls and mechanisms.

WARNING: Drive safely and use common sense.

The vehicle operator's personal judgment, traffic regulations, and common sense must always take precedence over instructions provided by TripTracer or the provided mapping software.

It is your responsibility as the vehicle operator to drive safely, observe all traffic rules and above all use your own personal judgment while driving. If you feel that a route suggested by the navigation software instructs you to perform an unsafe or illegal maneuver, places you in an unsafe situation, or routes you into an area which you consider unsafe, do not follow the instructions.

WARNING: Keep your eyes on the road.

It is your responsibility as the vehicle operator to keep your eyes on the road and be an alert driver at all times, ESPECIALLY when the vehicle is moving. The vehicle operator should not be distracted by the navigation equipment or software. Should there be a distraction with the ability to drive responsibly, please turn off the device. Should you want to look at the display for a prolonged time, park the car safely, while following all traffic regulations before looking at the display.

WARNING: To reduce the risk of fire or shock hazard, do not expose this product to rain or moisture. Do not remove covers or open housings, there are no user serviceable parts inside. Refer servicing to qualified personnel only.

1. GETTING STARTED WITH TRIPTRACER

These are only a few simple steps you need to follow before using your TripTracer unit with GPSTrackP:

- First install GPSTrackP software on your PC.
- Next Install the USB driver and TripTracer download utility program onto the PC. The USB driver and download utility installation can be accomplished either from the included CD-ROM, or by downloading the files from our web-site.
- Last, set up the GPS recorder and GPS antenna in your vehicle.
- Optional: If you will be using the TripTracer as a USB GPS Receiver for real-time navigation, you will also need to install the USB driver and a NMEA compliant street mapping or navigation software onto your laptop.

2. INSTALL GPSTRACKP SOFTWARE

You will need to install GPSTrackP software before you can download and view the data from your TripTracer unit. To install GPSTrackP, insert the GPSTrackP installation CD-ROM into your PC. Your PC's autorun feature should start the installation automatically, however if your PC's autorun feature is disabled, select the GPSTrackP.msi file on the CD-ROM to manually start the installation process.

IMPORTANT:

GPSTrackP software is based on Microsoft Mappoint and Office 2000/XP. It is required that you have a legal copy of Mappoint 2002 or later version and Office 2000/XP installed on your PC to run GPSTrackP.

3. USING GPSTRACKP SOFTWARE TO VIEW TRIPS

GPSTrackP is a powerful and feature rich GPS tracking software for vehicle and driver management. It uses TripTracer to collect tracking data, and then display, analyze and report the tracking data on the map.

You can follow the online help for step-by-step instructions about how to use it. To view your recorded trips follow these steps:

1. Connect the TripTracer to your PC's USB port. See section 9 of this document for details.
2. Click on GPSTrackP's desktop icon to run GPSTrackP software.
3. After you logon, click "Data Loader" button and then "Download" button to start TripTracer data loader program.
4. Download the trip data to your local PC by clicking on CONNECT and saving the file into the directory: "<GPSTrackP installation directory>/data/GPSdata/*.gps".

Note: You may need to add the TripTracer as a tracking device into the Device Manager and assign a vehicle and driver to it before you download the data into the system.

5. Upon confirmation that your data was downloaded to GPSTrackP (able to be viewed), with the TripTracer unit still connected to the PC and click on the ERASE button. This will delete all data residing in the unit's memory to maintain maximum storage capacity.
6. Click the button "Process" to update database and view your trip on the map. With the updated database, you can view trip day by day and track the driver's activities in different time periods.

4. INSTALL THE USB DRIVER & TRIPTRACER SOFTWARE

Insert the Driver Installation CD-ROM into your PC.

Your PC's Autorun feature should start the installation process upon insertion of the CD-ROM and install the USB driver into the default directory C:\Program Files\TripTracer\USB Driver, however if your PC's Autorun feature has been disabled, select the SETUP.EXE file on the CD-ROM to manually start the installation process.

With the driver loaded, insert the TripTracer's USB plug into the USB port of your PC and when prompted by your computer's Operating System (O/S) for the driver, click HAVE DISK and browse to the location where it was saved (default C:\Program Files\TripTracer\USB Driver). The installation process will automatically select and load the correct USB driver that matches with your O/S version.

The installation process will have also copied the TripTracer download utility and placed a shortcut icon on your desktop (TripTracer) to extract the recorded data from the TripTracer unit.

5. SET-UP TO RECORD GPS IN YOUR VEHICLE

Select a location within the vehicle to place the TripTracer so it will not interfere with driving visibility or vehicle controls. Use the included hook & loop tape to secure the unit to a suitable and safe mounting area, preferably so that the LED indicators will be visible.

Place the GPS antenna in a location where it will have a clear view to the sky, such as on the dashboard or rear package tray. Route the antenna cable back to the TripTracer and connect it to the threaded antenna jack. For your safety, take care to route all cables away from shifters, pedals, accessory controls and mechanisms.

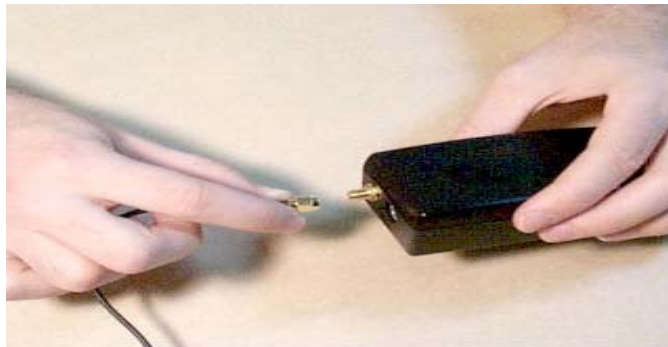


Fig. 1: Connect end of antenna to TripTracer's antenna port



Fig. 2: Insert the DIN connector (flat-side up) of the interface cable into the I/O port of the TripTracer.

Insert the other USB end into the cigarette lighter adapter's USB socket.

NOTE: *The included hook & loop tape can be applied to the bottom of the TripTracer to assist in a more secure mounting.*

6. VERIFY YOUR CIGARETTE LIGHTER'S OPERATION

You will now need to verify if your cigarette lighter turns on and off with ignition key, or if it's always on. To do this, follow these steps:

LIGHTER IS ALWAYS ON (manually disconnect)

With the ignition key in the OFF position, plug the TripTracer's lighter adapter plug into the vehicle's lighter socket and plug in the USB connector into the cigarette lighter adapter.

If the Red LED on the TripTracer lights, power is being supplied to your TripTracer at all times. This means you will need to manually unplug the adapter from the lighter socket when you wish to stop recording. It's also recommended that during long periods when the vehicle will not be in use, being serviced or parking for an extended period, that the TripTracer be unplugged to conserve battery life.

LIGHTER TURNS ON/OFF WITH IGNITION KEY

If the Red LED does not light up; try starting your vehicle. If the Red LED lights, then your ignition key controls power and you will not need to unplug the TripTracer to turn it off to suspend recording.

TROUBLESHOOTING ON/OFF POWER

If the vehicle is running and you don't have power to the TripTracer (Red LED does not light), please check the following:

- That the power/data cable is securely inserted into the TripTracer's DIN port and the other end into the lighter adapter's USB socket.
- That the adapter is inserted all the way into the cigarette lighter socket.
- That the fuse, which supplies power from the vehicle's fuse box to the cigarette lighter, is not blown.
- That the fuse inside the TripTracer's lighter adapter is not blown.

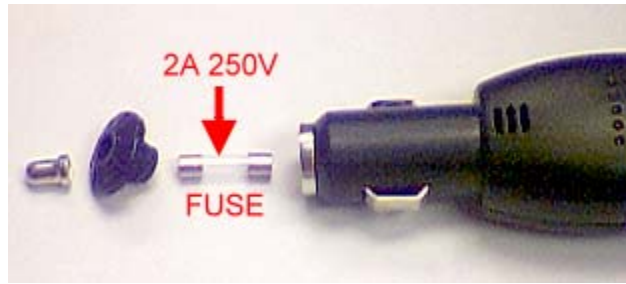


Fig. 3: If the Green LED on the adapter does not light, and the cigarette lighter works, see if the fuse is blown

7. INITIALIZE YOUR GPS RECEIVER

Before using your TripTracer (especially for the first time), the receiver must obtain a local GPS fix (coordinates) of the current position. Initialize the GPS without the laptop if you intend only to record and display travel trips. Initialize the GPS with the laptop if you want to use the in-car navigation feature.

Because the time needed to initialize the GPS each time it's powered up can vary due to factors such as GPS signal strength and surrounding terrain (tall trees and buildings can block satellite signals). This is something you will need to be aware of if you have already started driving before initialization has completed when viewing or printing your on-line reports or mileage summaries.

Initializing without a laptop:

Initialization of the TripTracer with GPS satellite data is indicated by a flashing Green LED on the TripTracer. A flashing Green LED indicates that the GPS signal is being successfully received. A solid green LED indicates NO GPS signal is being received. Because the time needed to initialize the GPS each time it's powered up can vary due to factors such as GPS signal strength and surrounding terrain (tall trees and buildings can block satellite signals). This is something you will need to be aware of. If you have already started driving before initialization has completed when viewing or printing your on-line reports or mileage summaries.

Initializing using a laptop:

Take your laptop PC (with your USB driver and mapping software loaded and properly configured), to an open area that has a clear view to the sky (such as a park or empty field).

Start the mapping software and depending on the conditions mentioned above before GPS data should be displayed on the screen or possibly a GPS status window, which many need to be opened from within the program.

8. RECORD GPS DATA

Once the TripTracer has been properly connected in the vehicle, data recording will begin whenever power is applied through the cigarette lighter as outlined in the proceeding section and after the GPS has initialized (see 6. INITIALIZE YOUR GPS RECEIVER).

NOTE: You can record up to 2,400 continuous hours (100 days) before the TripTracer's memory is full, however there is no indicator to notify you when the TripTracer's memory is full. When the device has reached full memory capacity, it will begin to overwrite the oldest stored data, thereby deleting it from the TripTracer's memory. This data CANNOT be recovered. It's recommended that you download your TripTracer data every 3-7 days in order to keep the file sizes manageable and to possibly avoid any loss of data.

GPSTrackP - TT-300

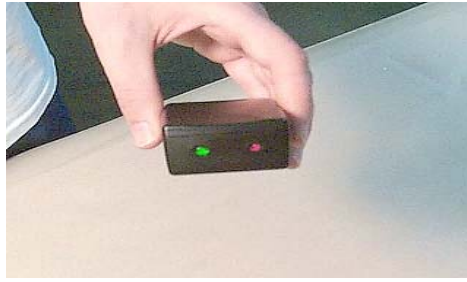


Fig. 4: LED's on the front of the TripTracer indicate power and GPS signal status.

LED Color	Function
Red LED	Indicates power is on and the TripTracer is in RECORD mode.
Green LED (flashing)	Indicates signals received from GPS satellites.
Green LED (solid, not flashing)	Indicates no signal available from GPS satellites. As the user moves to an area with a more open view to the sky (as buildings or dense foliage may be blocking GPS satellites), the GPS should be able to gain signals from GPS satellites. (NOT RECORDING)

9. CONNECT FOR DOWNLOAD

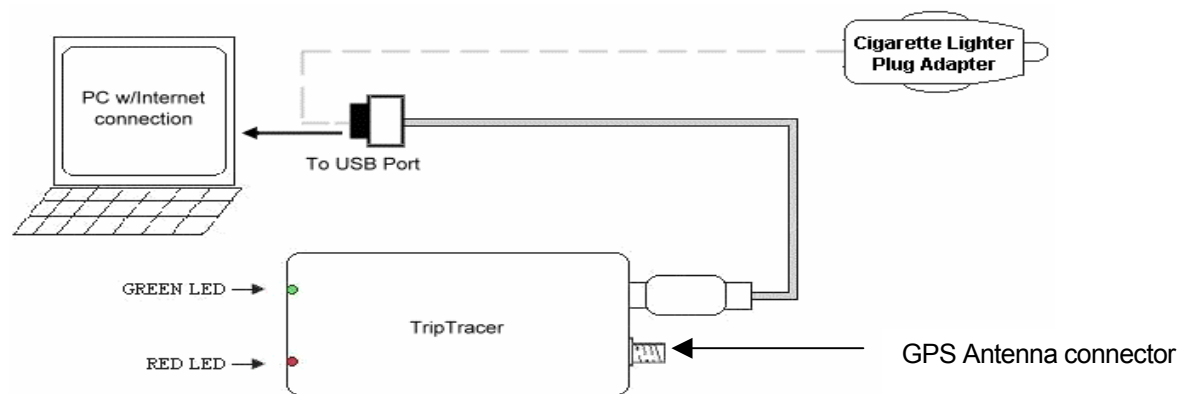


Fig. 5 TripTracer connection diagram

When you are ready to view the recorded data stored inside the TripTracer, simply disconnect the antenna connector by unscrewing counter-clockwise and unplug the USB connector from the back of the cigarette lighter adapter. (It's advisable that the cigarette lighter adapter also be removed from the socket and put into a secure place such as the glove box to avoid damage or loss to the adapter.)

Reconnect the TripTracer's USB connector to your PC's USB port. Now click on the GPSTrackP icon or the TripTracer icon found on your desktop to open the download utility program used to extract the recorded data from the TripTracer's memory into your local PC. You should save the file in <GPSTrackP Installation directory>\data\GPSData*.gps so that GPSTrackP can see it automatically for further processing.

Depending on the size of the file (the time since your last download), the process may take several minutes, but please be patient. Upon confirmation that your data was downloaded to GPSTrackP (able to be viewed), with the TripTracer unit still connected to the PC and click on the ERASE button. This will delete all data residing in the unit's memory to maintain maximum storage capacity.

10. USING TRIPTRACER AS A USB GPS RECEIVER WITH A STREET MAPPING OR NAVIGATION SOFTWARE

There are just two easy steps required in order to begin using your TripTracer as a USB GPS Receiver.

- Install the USB driver for the TripTracer from the included CD-ROM to your laptop PC.
- Install any NMEA compliant street mapping or navigation software onto your laptop PC and follow the instructions to configure it to read the GPS devices assigned COM port with the proper Baud Rate setting.

INSTALL THE USB DRIVER INTO YOUR LAPTOP

Insert the Driver Installation CD-ROM into your laptop PC (or file download from the Internet at www.rayming.com).

Your PC's autorun feature should start the installation process upon insertion of the CD-ROM and install the USB driver into the default directory C:\Program Files\TripTracer\USB Driver, however if your PC's Autorun feature has been disabled, select the SETUP.EXE file on the CD-ROM to manually start the installation process.

With the driver loaded, insert the TripTracer's USB connector into your laptop's USB port and when prompted by your computer's Operating System (O/S) for the driver, click HAVE DISK and browse to the location where it was loaded (C:\Program Files\TripTracer\USB Driver). The installation process will automatically select and load the correct USB driver that matches with your O/S version.

After installation is complete, you will need to verify the COM port that was assigned to the GPS device. Do this by opening the "Control Panel," click on "System," select "Devices Manager" and look for the heading "Port (COM & LPT)."

Maximize it by clicking on the "+" sign. You should see "USB to Serial Port" assigned to one of the listed COM ports (generally COM3, but this may vary from PC to PC).

From within your mapping or navigation software, you will need to configure which COM port was assigned to the GPS device (this is not done automatically) in order for the map to communicate with it.

IMPORTANT:

You must change the default baud rate setting from 4800 to **9600**, by clicking on your software settings or the GPS data cannot will not be able to be read by the map program.

11. UN-INSTALL THE USB DRIVER

Should you need to remove the USB GPS driver for any reason, you must follow this 2-step process:

- Run "C:\PROGRAM FILES\TRIPTRACER\USB DRIVER\FTDIUNIN.EXE" .
- Then uninstall the TripTracer download utility by going to: Start> Control panel> New Added/Remove> Select "Trip Tracer" and click "REMOVE"

12. TROUBLESHOOTING

USB DRIVER

- **No GPS response after installation:**

If you have followed the above installation steps but the GPS device still does not work, try unplugging the GPS device from the USB port , wait for at least 10 seconds, then re-connect. Should you want to re-start your map software, wait at least 10 seconds before re-opening it.

- **Regarding erratic mouse cursor (WIN2000):**

If your mouse doesn't work properly after installation of the USB driver, this situation is caused by a problem in WIN2000 and is not related to the GPS device. Microsoft has acknowledged and stated that "the serial device (USB is actually converted to serial), may be detected as a serial mouse in WIN2000 O/S." To best resolve this issue, unplug the GPS device from the USB port during boot-up and only re-insert after boot-up is completed.

See: <http://support.microsoft.com/default.aspx?scid=kb;en-us;q283063>

OTHER

Should you have any additional questions regarding the operation of our USB GPS receiver box, please see additional FAQ's on our web-site at www.rayming.com or www.mobilegpsonline.com

It's important that you include the following information in any e-mail correspondence for assistance:

- Which step, or function, were you attempting when the problem occurred?
- What error message was displayed?
- What operating system you are using?
- The USB GPS receiver driver version you currently have loaded?

13. CONTACT US

Send an e-mail with your questions or comments to the appropriate company's Customer Service Dept. We monitor your e-mails and will promptly reply to your inquiries.

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Technical Support

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14. LIMITED ONE-YEAR HARDWARE WARRANTY

Rayming Corporation warrants this product hardware against manufacturing defects in material and workmanship under normal use for one (1) year from the date of purchase from an authorized dealer. Except as provided herein, Rayming Corporation makes no express warranties, including but not limited to any warranties of merchantability or fitness for particular use, or non-infringement. You acknowledge that your use of the product or service is at your sole risk and you agree that the information provided are without warranty of any kind by Rayming Corporation.

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In the event of a product defect during the first 30-days of the warranty period, return product and the sales receipt as proof of purchase date to place of original purchase. Defect discovered after 30-days from date of purchase, you must contact Rayming Corporation's Technical support for a Return Merchandise Authorization (RMA) number for return to manufacturer.

Rayming Corporation will, at its option, unless otherwise provided by law:

- a.) Correct the defect by product repair without charge for parts and labor;
- b.) Replace the product with one of the same or similar design; or
- c.) Refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of Rayming Corporation. New or reconditioned parts may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover:

- a.) Damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow the instructions, improper installation or maintenance, alteration, lighting or other incidence of excess voltage or current;
- b.) Any repairs other than those provided by Rayming Corporation;
- c.) Consumables such as fuses or batteries;
- d.) Cosmetic damage;
- e.) Transportation, shipping or insurance costs;
- f.) Costs of product removal, installation, set-up, service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights, which may vary from state to state.

Additional products bundled in this package not manufactured by Rayming Corporation will hold separate warranties as expressed by the individual manufacturer of that product(s). Product specifications, functions and features are subject to change without notice.

15. GPSTRACKP SOFTWARE WARRANTY

The GPSTrackP Software provided by Mobile GPS Online is provided “as is” and “as available” without warranties of any kind, either expressed or implied, including but not limited to any warranties of merchantability or fitness for particular use, or non-infringement. You acknowledge that your use of the Software is at your sole risk and you agree that the software and the information provided are without warranty of any kind by Mobile GPS Online.

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Some states do not allow the exclusion of certain warranties, so customers in those states are recommended to use other options.

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