WorldTracker

DIGITAL GSM REAL-TIME
DATA LOGGING TRACKING SYSTEM

Owners Manual

Security Concepts

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INTRODUCTION

The Worldtracker is a digital GPS tracking system that is activated by a GSM cellular system.

Only a carrier can program the tracker with a cellular phone number. Contact your local carrier to do the following:
- Determine the best GSM cellular system in your area
- Obtain a SIM card and have it programmed for Internet usage
- Obtain the "Inbound Circuit Data Switch" or "GSM G-flex voice line number"
  This is the number the software using your PC calls to obtain data from the tracker.

The included software is easy to install and allows your computer to communicate with the tracker using its internal modem.

WorldTracker does not use the phone number of the SIM Card. Once you install the software, enter the phone number of the tracker to begin tracking and downloading stored data.

With this software, you can communicate with the tracker to do the following:
- Change data log intervals
- Delete the history
- Download data logs
- View the real-time location of the tracker with speed, heading, and altitude displayed while you view the location on a moving map display with real time results.
  The vehicle's ICON is updated every second on the map.

WorldTracker software makes it easy to incorporate local maps in a variety of formats including BSB, Maptech, SoftChart, SoftMap, ChartTiff, USGS DRG and TIF+TFW digital map products. You can scan map images from hard copy paper maps to a CD in bmp, gif, jpg, png, pcx or tif file formats. To use these scanned maps, you must provide a set of valid GPS co-ordinates for three points on the map.

CONTENTS OF THE SYSTEM

1. Worldtracker Tracker

2. Battery Pack

3. GPS Antenna

4. Cellular Antenna

5. Vehicle Power Cord

6. Software Packages

INSTALLING THE SOFTWARE

The CD labeled WorldTracker Software comes with three programs that you
need to install:
- **Microsoft Net Framework 1.1** program: To install, click on the program
  and then click the "OPEN" button.
- **Virtual Serial Port** program: This program allows the computer to use
  multiple programs at the same time.
- **Live Tracking Command (LTC)** program: This program enables the
  computer to contact the tracker and to perform downloads.

Fugawi provides tracking software and mapping software.
- The **Fugawi tracking software** allows you to view the vehicle on a
  moving map and display the downloaded data.
- The **Fugawi mapping software** is available on the CD provided. Copy the
  map data onto your hard drive for quicker tracking or use the CD directly.

SLEEP MODE

Sleep mode is always on. To minimize battery drain and to keep the tracker from
storing unnecessary data, it automatically powers down the unit if the vehicle
remains stationary for more than 8 minutes. When the vehicle moves the tracker
automatically powers up again.

You can adjust the Sleep Mode using the small trim located in the main board
inside the tracker. When shipped, this trim is set to midway position but if the
tracker wakes up too easily, turn it slightly counterclockwise to reduce the
activation level.

Activating the tracker automatically causes the sleep mode to turn off.

TESTING THE SYSTEM

The tracker receives data from the GPS satellites.

NOTE: *Security Concepts highly recommends testing the tracker to get familiar with it before installing it on any vehicle.*

The **GPS antenna** can receive the signals only if it is unobstructed by metal objects and is *preferably* facing towards the sky. The signal can travel through glass, wood, or plastic only if they are free of metal particles.

In certain vehicles, the glass and paint might have metal components that are not obvious. This is why sometimes the tracker cannot receive a signal—the GPS antenna is probably placed under such metallic objects.

To better understand the GPS antenna placement experiment with the tracker on different vehicles.

The Cellular antenna can be placed under metal objects or under the vehicle but placement of this antenna can become critical in very rural areas. If the tracker is placed under a hood or trunk, this can also have some degradation of the cellular signal.

Again, experimenting with placement will help you get to know the system better.

Battery duration will depend on how often the vehicle is moving and how often you call it. Depending on which battery pack you are using—standard or lithium-ion—you will obtain differing results. Typically you'll get from 3 to 7 days with the battery packs.

TEST BUTTON

The Test Button allows you to determine if the GPS receiver has a lock before you finish with the installation of the tracker. After you have installed the GPS antenna, press and hold the button. If the LED begins to blink, the GPS receiver has a lock on the satellites.

Once the lock is established, the LED continues to blink even if you lose the lock. Disconnect the power to the tracker and stop the blinking of the LED before you reestablish the lock.

SCREEN SHOTS
1.1 LTC INITIAL WINDOW
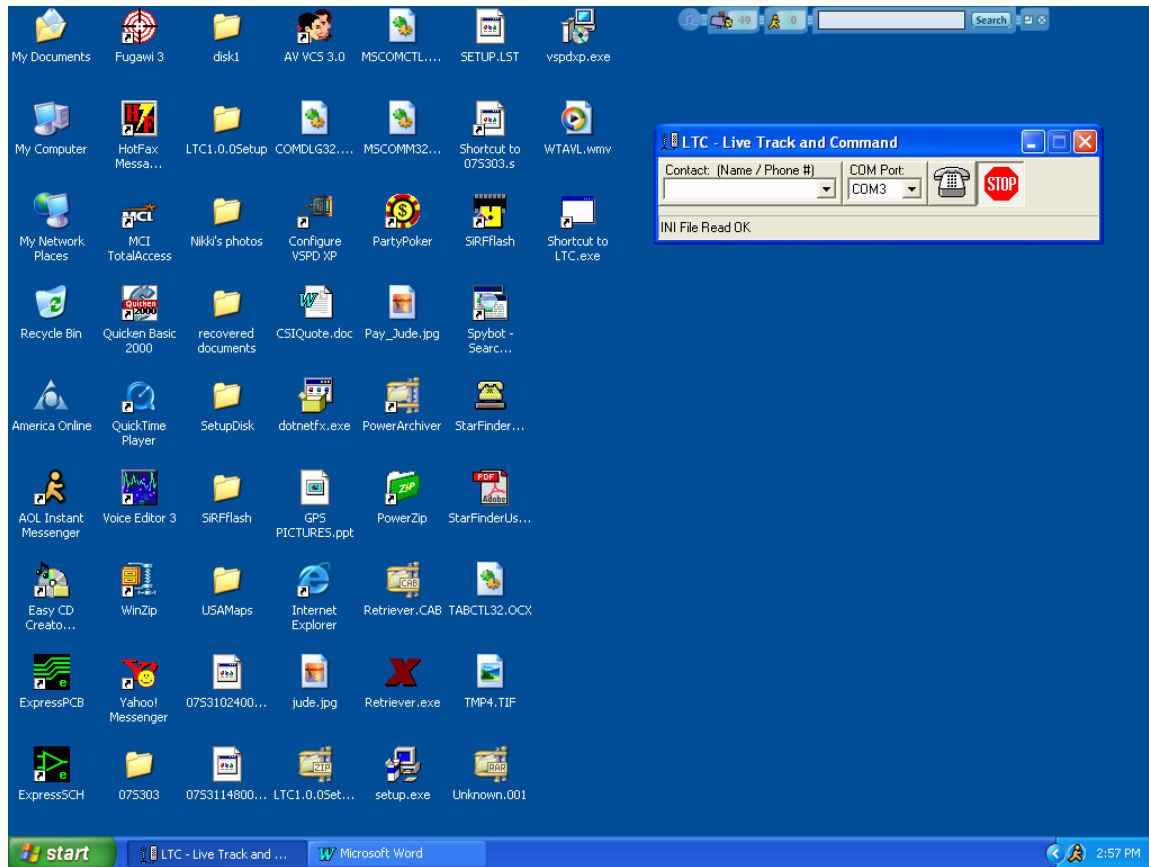
Before you enter a name and number for the tracker and make a call, the LTC or Live Track and Command window appears as in the figure above.

To activate:
- Right click on the "Contact (Name/Phone #)".
- Enter a name for the tracker and a phone number you want the computer to call.
  If the "COM Port isn't selecting your modem's Com Port, right click on this window and re-scan for the port.
- Click on the Phone Icon and the computer should automatically make a call to the tracker.
- Once communication is established with the tracker and data is being sent correctly to the computer, the LTC window expands into the Real-Time Tracking Screen *(See next page)*.

1.2 LTC REAL-TIME TRACKING SCREEN
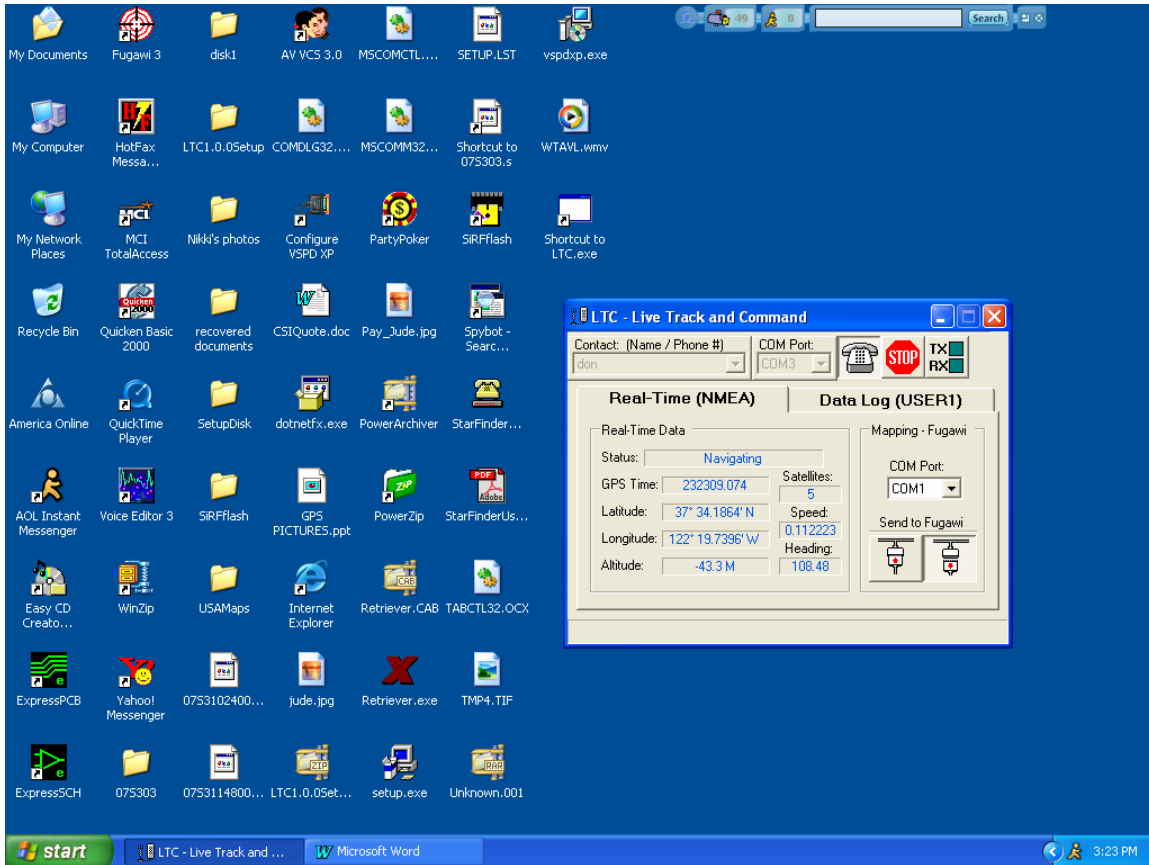
As shown in above figure, The Real-Time Tracking Screen presents two tabs that allow you either to view the real-time data or to select the Data Log screen.

To view real-time data on Fugawi, select the **Real-Time tab**
  - Select the correct COM Port and set it at 4800 baud
    --The correct COM Port depends on which two virtual COM Ports you opened with the "Virtual COM Port" program when installing the software. If the two Virtual COM Ports are COM 2 and COM 4, you can select either one.   When you open Fugawi, select the other COM Port.
  - Select the "Send to Fugawi" button to see the vehicle on Fugawi.

1.3 LTC DATA-LOG SCREEN
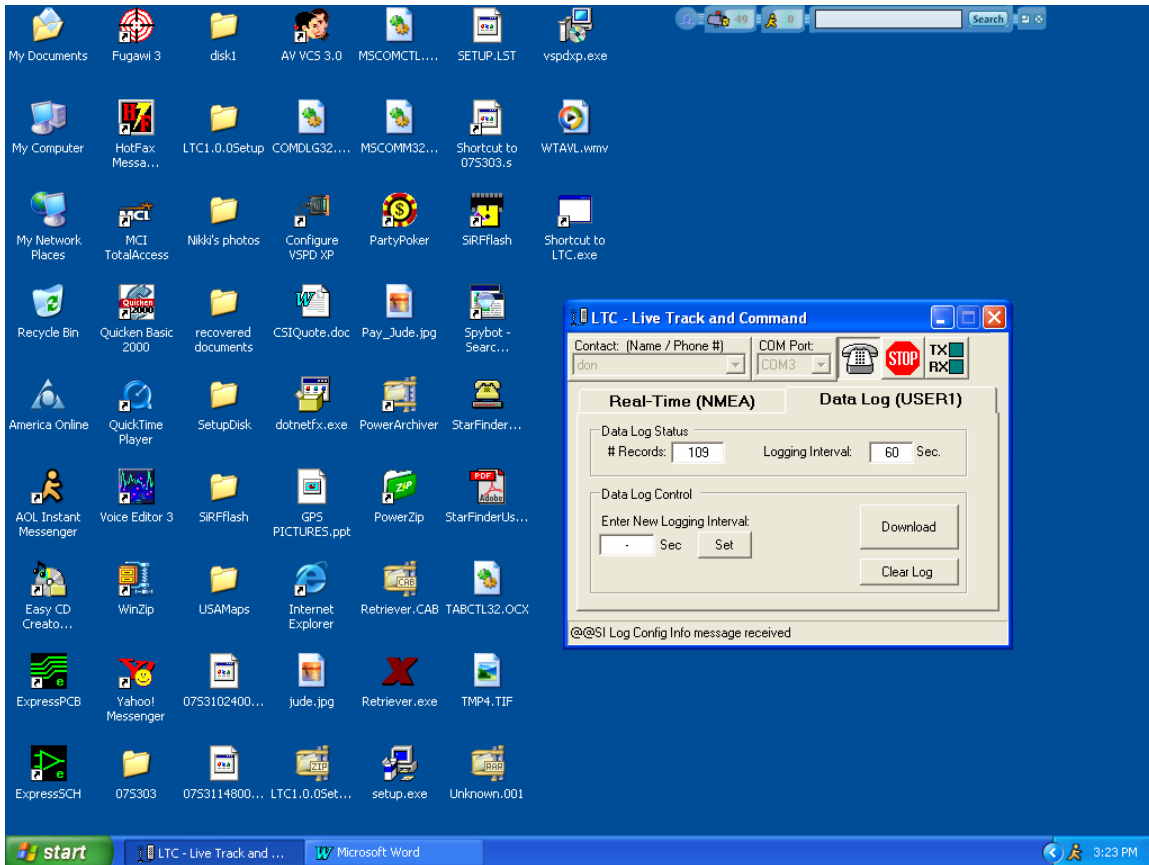
To download data records, select the **Data-Log or (USER 1) tab.** You will see the number of records for download. The tracker stores data in either mode but will not store data during a download.

To download the data, press the "Download" button. A status bar indicates the number of records being downloaded.

Once the download is complete, press the "Clear Log" button to delete the history. The tracker defaults back to Real-time mode.

The tracker downloads data at 1000 records a minute. You can change the Logging Interval by entering the number of seconds you want the tracker to wait between records.

NOTE: *Make sure you download the data first as changing the intervals settings erases the data log automatically.*

Pressing the "STOP" button ends the connection and allows the tracker to hang up.

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1.4 FUGAWI SETUP SCREEN
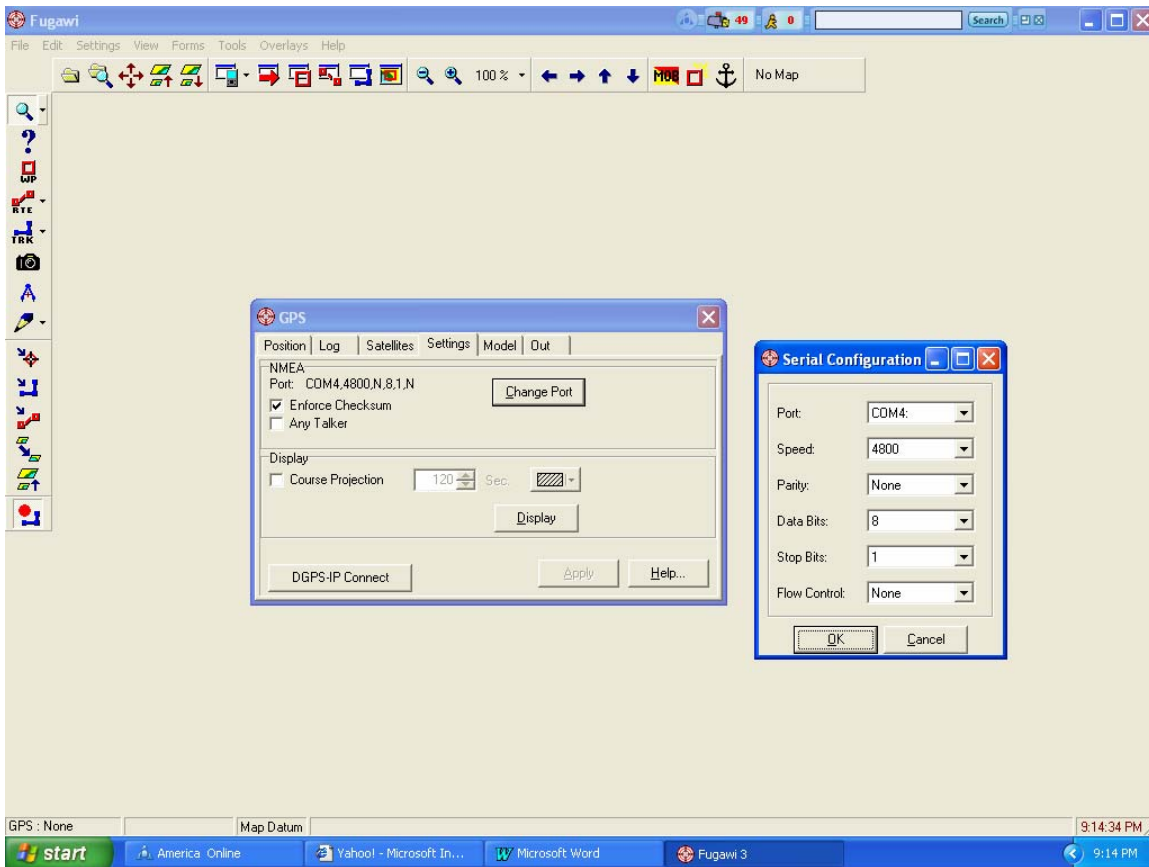
To arrive the Fugawi Setup Screen shown above, click on Forms > GPS > Settings > Change Port.

- Choose one of the virtual COM Ports that you added with the virtual COM Port Software.
- Use the other Port you used with the LTC Software and set it at 4800 baud speed.
- Close both of these windows
- Load the map by clicking on File USA Streets in the CD or from the data copied to your hard drive.

1.5 FUGAWI TRACKING WINDOW
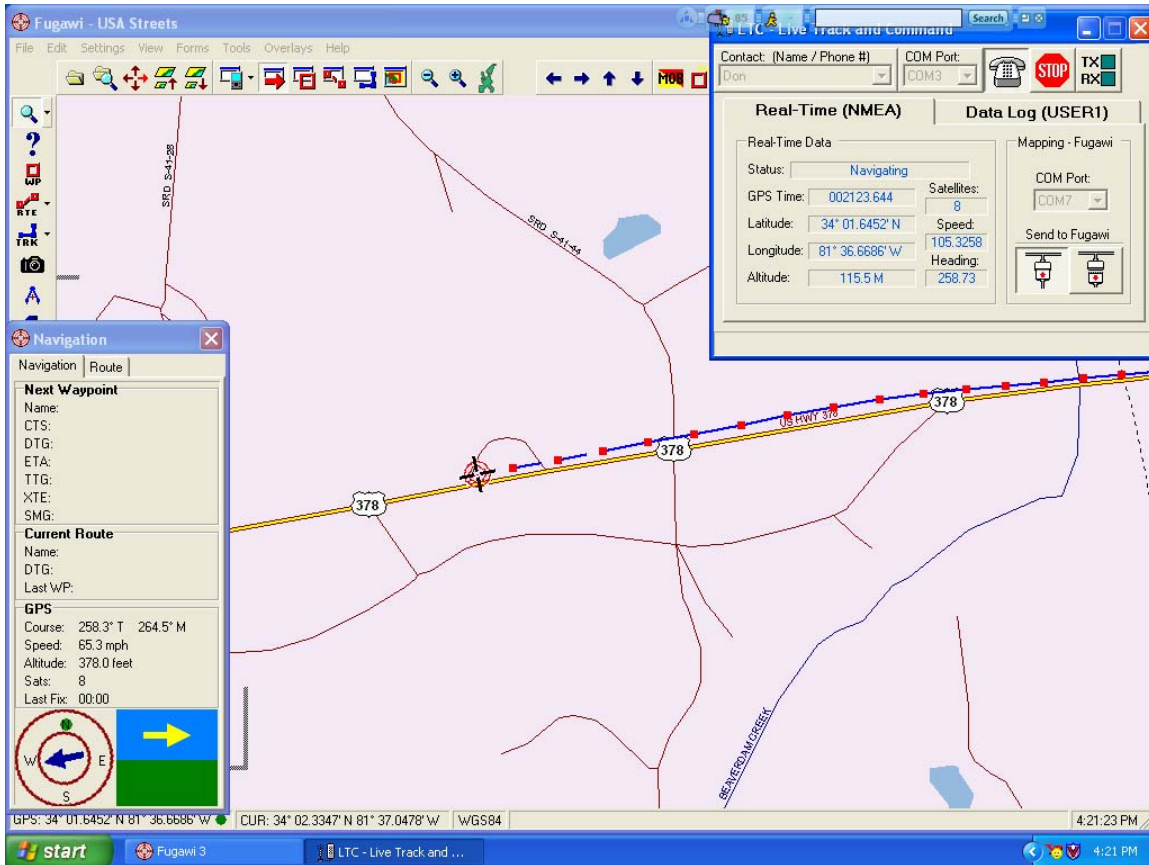
When you use Fugawi to perform a live track, you can enable the track option to draw a breadcrumb of the track.

Time or distance, and the color, specify the intervals and size of both the line and the dots. The LTC window always shows metric values but with the Navigation window, you can specify the values as metric or statute.

1.6 FUGAWI NAVIGATION WINDOW
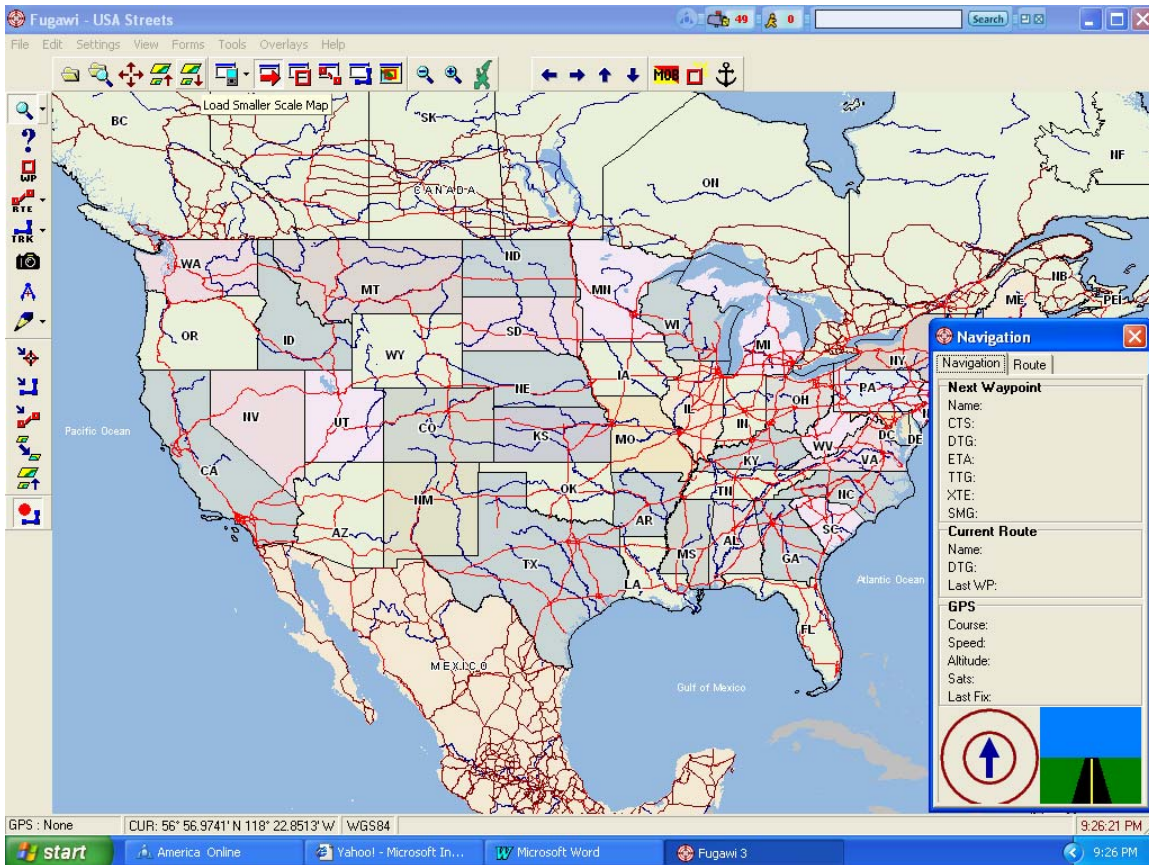
The Navigation Window allows you to see the Course, Speed, Altitude, and Number of Satellites being received. To open this window, click on Forms > Navigation.

1.7 OPENING A DOWNLOADED TRACK
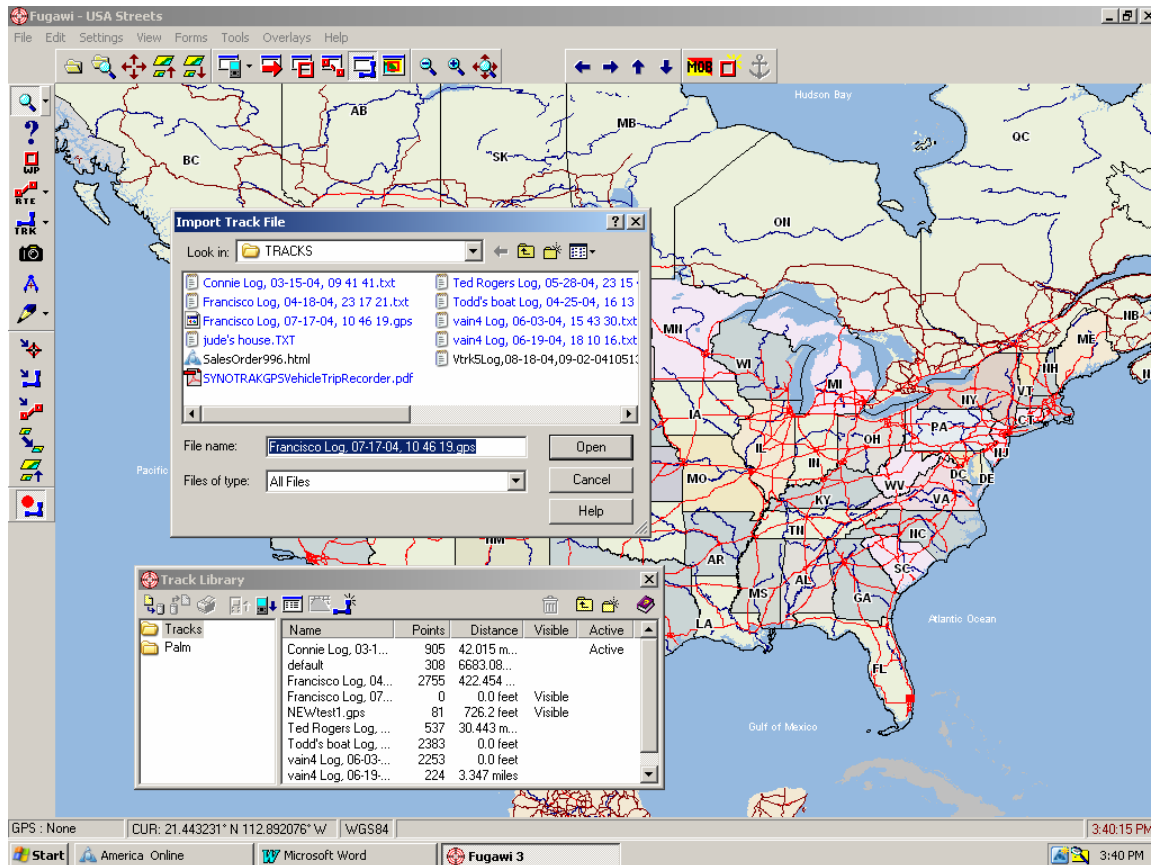
To open a downloaded track, click on Forms and Track Library.

- In the Track Library, click on the Import File button.
  An Import Track File window opens.
- Under "Look in:" look under C:\Tracks.
  Change the "Files of type" to All Files. Find the name of the file you are looking for and click on Open to see the Import Fields Window. *(See next page)*

1.8 OPEN TRACK

The track will now be visible in the Track Library. Double click on the track to open a table of all the records stored in the track. You can manipulate the track by double clicking on a record to view where the vehicle was at that time and date or double click on a record on the map to see what time it was there.

The track opens on the map displayed in blue with a blue and green Icon indicating the location of record number 1. A table of records also opens and you can then close the Track Library.

1.9 TYPICAL DOWNLOADED TRACK DISPLAY
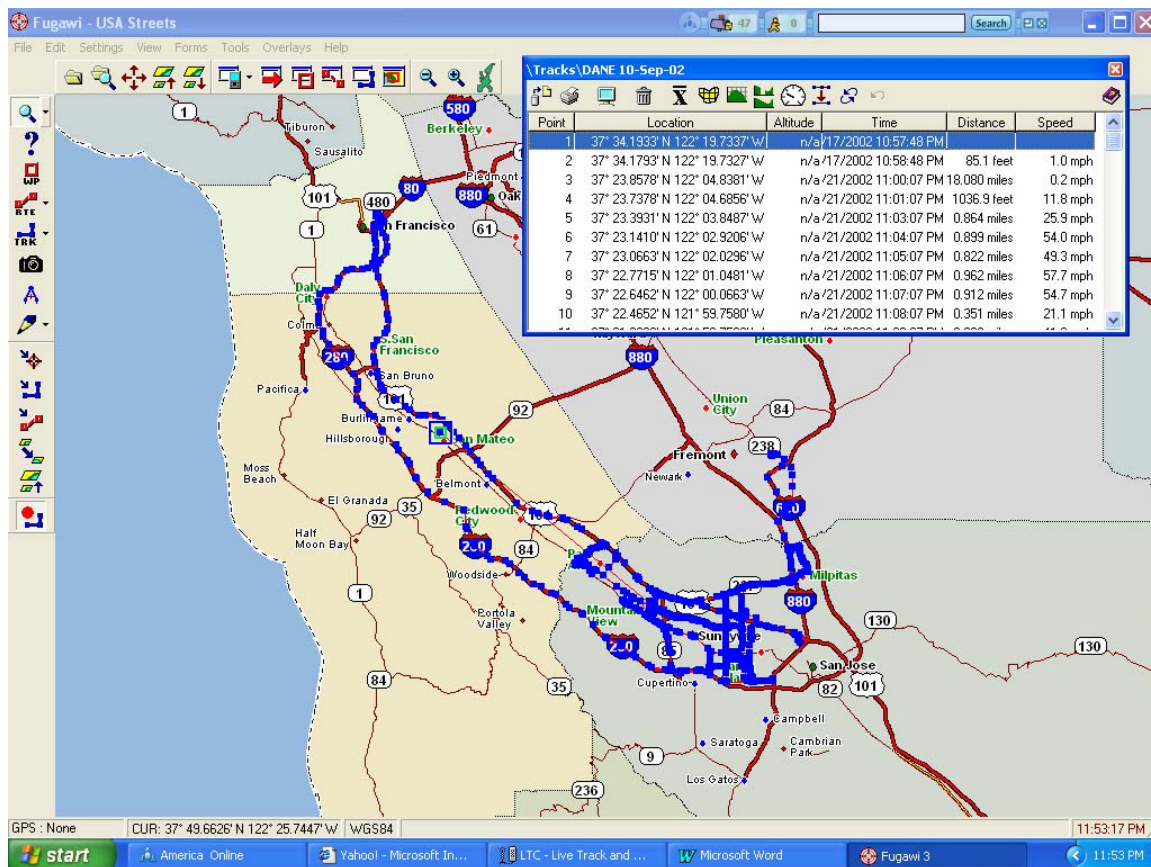
Once you have opened the downloaded track you can:
- Zoom in on the track
- Click on the speedometer button to display the speeds
- Look at the times of any particular record
- Change the color of the track and records
- Display more than one track on the map at a time.