

DL-200BT

Data Logger

User's Manual



Date: July 2006

Version: 2.0

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Manual Revision History

Revision	Date	Update Summary
Issue 1.0	April 2006	Initial release
Issue 2.0	July 2006	Add Google Earth Function

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0. Quick Installation

1. Have the battery full charged.
Before using the battery, please put it in DL-200BT and have it recharged for 3 hours.
2. To Connect DL-200BT with PC or Notebook
 - 2.1 Check the COM port number used by Wireless Device. (Example: COM 6).
 - 2.2 To run DL-200BT utility and set the right COM port number.

LED Indicators:

Symbol	Color	Status	Light Indication
Battery	Red	Light On	Battery Low
	Green	Light On	In Charging
	N/A	Light Off	Battery Full or Not in charging
Wireless	Blue	Light On/Off 0.1 sec/1.9sec	Linking Completed
		Light On/Off Continued On	Pair Searching
GPS	Red	Light On/Off 1 sec/1 sec	Acquiring Satellites
		Light On/Off 0.9 sec/0.1sec	Position Fixed

1. Introduction

1.1 Overview

The DL-200BT is a unique with Wireless interface for vehicle tracking device in use friendly. DL-200BT uses the Global Positioning System (GPS) to record vehicle movement, speed, route and duration of stops. This information can be displayed on a GIS mapping with MapInfo formatted while download data to P.C. so user can view vehicle activity in precise details. Additionally, DL-200BT can be used as a receiver for navigation while user connected the unit to PC or Notebook.

1.2 Main Features

- Easy connector to PC/Notebook by Wireless interface
- Built-in patch antenna
- Receiver, Twelve parallel tracking channels
- Fast TTFF and low power consumption
- On-board rechargeable battery sustained real-time clock and memory for fast satellite acquisition during power-up
- Automatic cold start with no user initialization required
- Large capacity for continuous records for 25,000 positions
- Lithium-ion rechargeable battery lasts for more than 6 hours of use

1.3 Possible Applications

- Land/Marine Navigation
- Telematics
- Fleet Management
- Asset Tracking
- Timing Reference

1.4 Package

Before you start up, make sure that your package includes the following items. If any items are missing or damaged, contact your dealer immediately.

- DL-200BT data logger
- DC Car Power Charger
- CD includes User's Manual, Utility program and USB driver
- Battery (3.7V/1100mAh lithium-ion rechargeable)

(Optional Accessories)

- AC Power Adapter
- Super min din 6 pin to USB cable

1.5 LED Status



LED Indicators:

Symbol	Color	Status	Light Indication
Battery	Red	Light On	Battery Low
	Green	Light On	In Charging
	N/A	Light Off	Battery Full or Not in charging
Wireless	Blue	Light On/Off 0.1 sec/1.9sec	Linking Completed
		Light On/Off Continued On	Pair Searching
GPS	Red	Light On/Off 1 sec/1 sec	Acquiring Satellites
		Light On/Off 0.9 sec/0.1sec	Position Fixed

1.6 Power Jack

The power jack lets you to connect either a DC car power charger (included) or AC power charger to recharge the internal battery.

2. Technical Specification

Items	Description
General	L1 1575.42MHz, C/A code, 12-channel, Carrier-Aided with HWTrack©
Sensitivity	-143 dBm minimum
Update Rate	1Hz
Accuracy	Position: 15m CEP without S/A Velocity: 0.1 m/sec without S/A Time: $\pm 1\mu s$
WAAS Accuracy	Position: 5m CEP Velocity: 0.05m/sec
Acquisition	Cold start: < 120sec (average) Warm start: < 45sec (average) Hot start: < 15sec
Reacquisition	<100msec
Dynamics	Altitude: 18000m Velocity: 515 m/sec Acceleration: $\pm 4g$
Protocol	EverMore Private @ 4800/9600 baud, 8-None-1 NMEA-0183 v2.20 @ 4800/9600 baud, 8-None-1
Datum	219 standard datum, default WGS-84
DGPS	WAAS/EGNOS
Antenna	Built-in Patch Antenna / Option active antenna, MMCX jack
NMEA Message	GGA, GLL, GSA, GSV, RMC, and VTG
Dimension; Weight	98.8 x 48.3 x 28.1mm / 68.4g

Power Specifications

Items	Description
Battery	Lithium-Ion Rechargeable Battery 3.7V/1100mAH
Charger Power	5V $\pm$ 0.5Vp-p ripple (DC-Jack)
Current Consumption	170 mA
Operation Time	Up to 6 Hours after full charge

Switch Specification

Items	Description
Power Switch	System power switch except charge unit

Environmental Specification

Items	Description
Operation Temperature	-10°C to +60°C
Storage Temperature	-40°C to +90°C
Operating Humidity	5% to 95%

* Preliminary Specification, Subject To Change Without Notice

3. How to link DL-200BT with PC

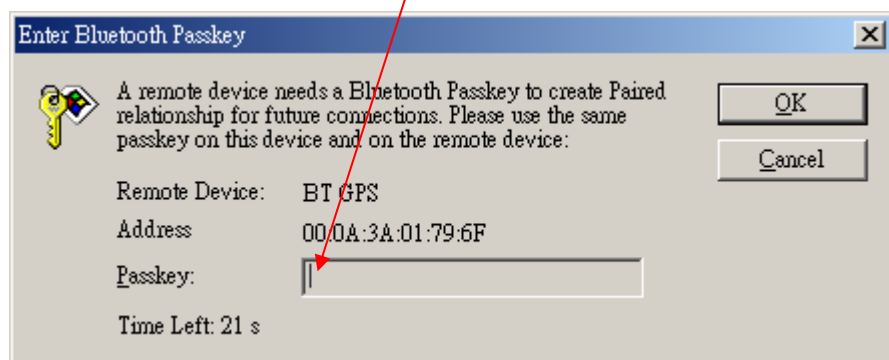
Wireless Dongle Installation Example

Step 1: To plug Wireless dongle into PC or Notebook.

Step 2: To run Wireless Dongle utility and to find Wireless device.

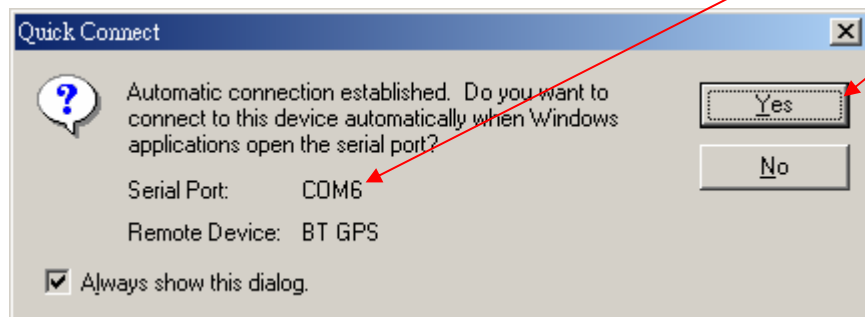
Step 3: To do Pair Device

Step 4: To key-in password "0000"



Step 5: To do connect device

Step 6: To memorize DL-200BT Serial Port number "COM6" and press "Yes"



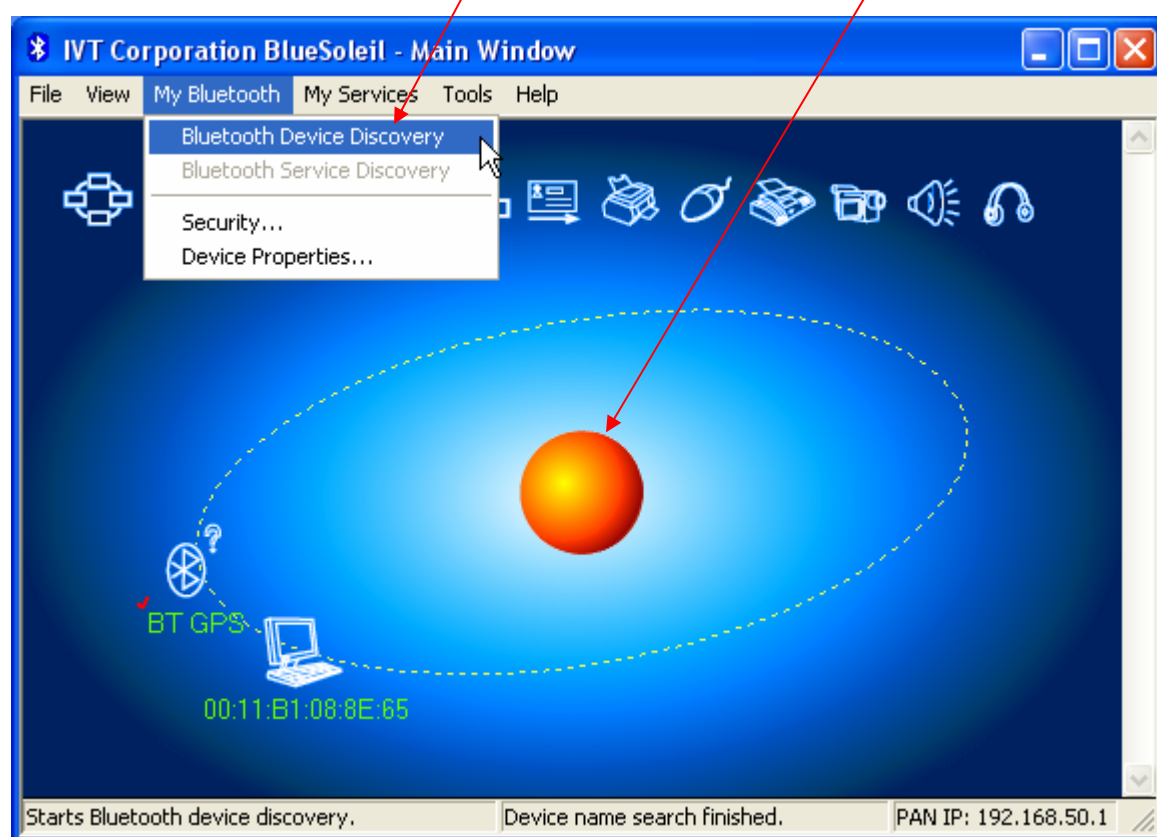
Step 7: The DL-200BT had finished assignment COM Port. (BT GPS → COM6)

To Link DL-200BT by Wireless Dongle

Step 1: Double click Wireless Dongle icon



Step 2: To click the “Wireless Device Discovery” or to click the ball.

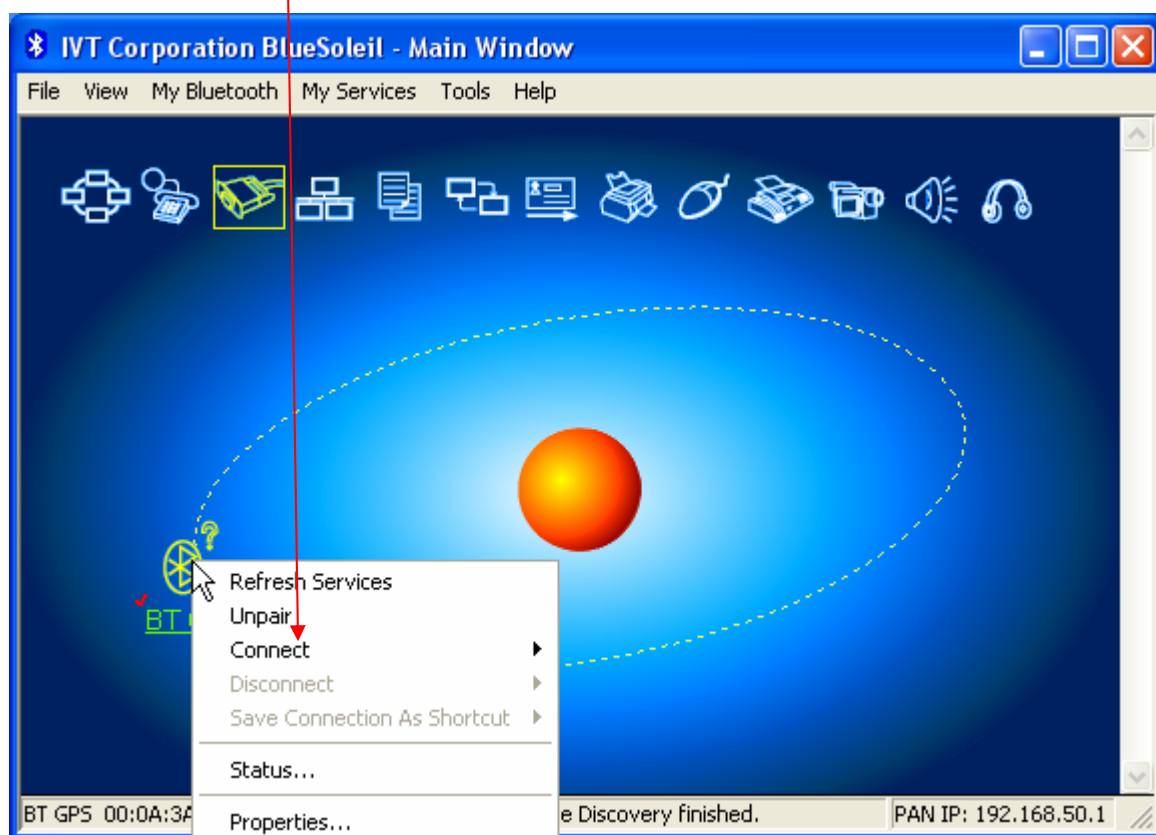


Step 3: To put mouse course on “BT GPS” icon and to click mouse right button

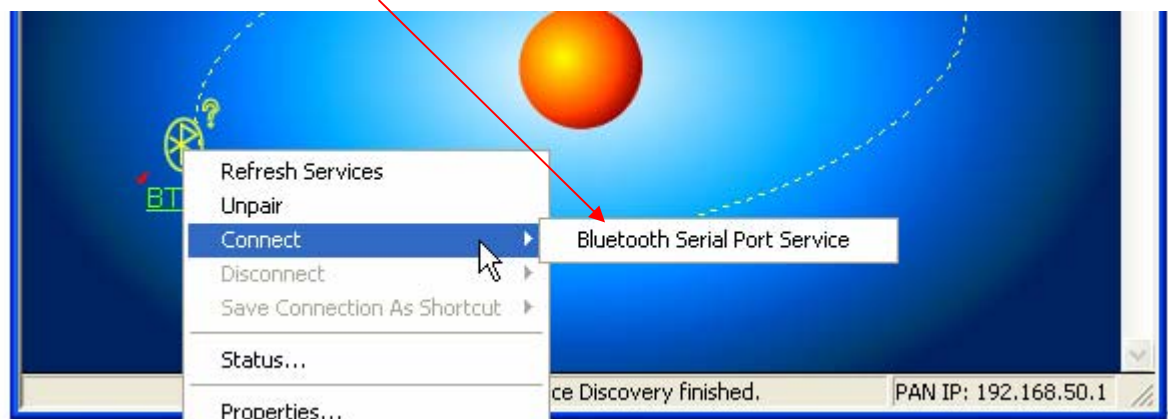
To select “Refresh Services”



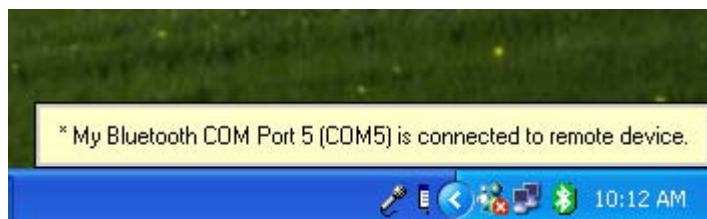
Step 4: To select connect



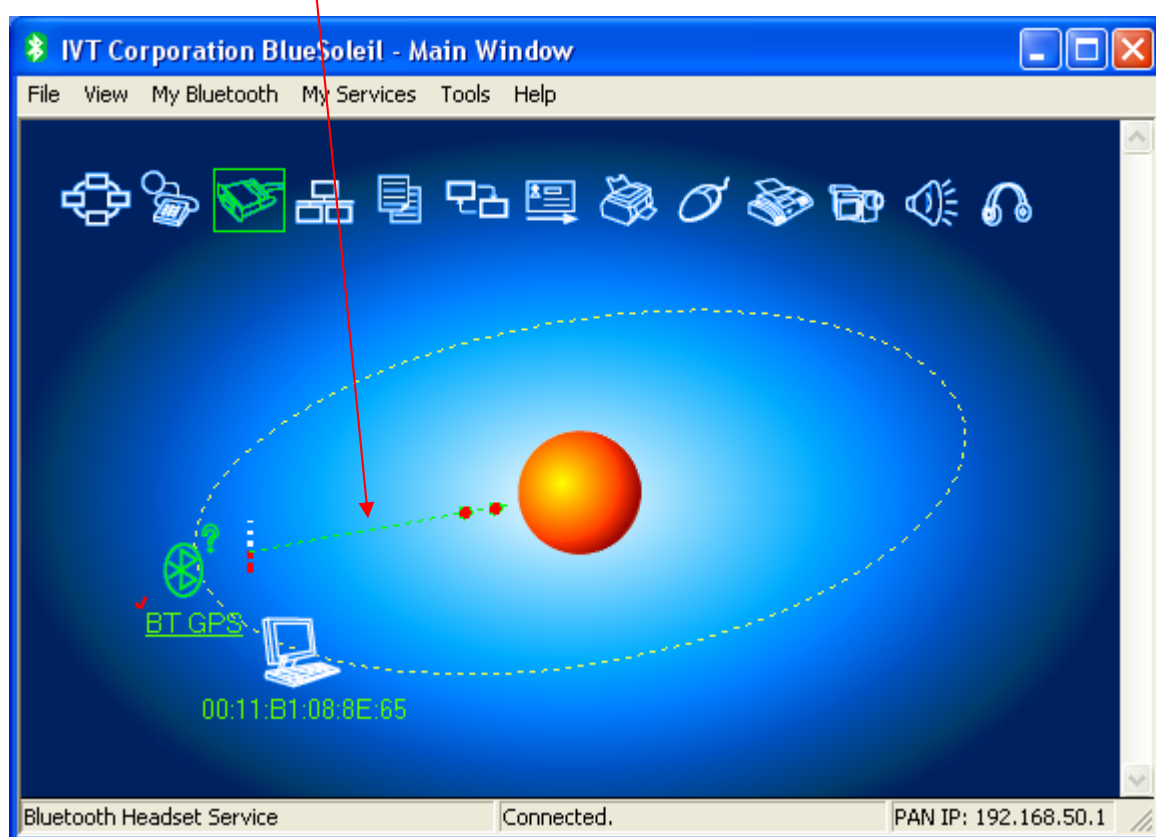
Step 5: To select Wireless Serial Port Service



Step 6: It will pop up a message on right-down corner of the PC screen



Step 7: This is a linking finish window



For example Wireless Dongle real picture

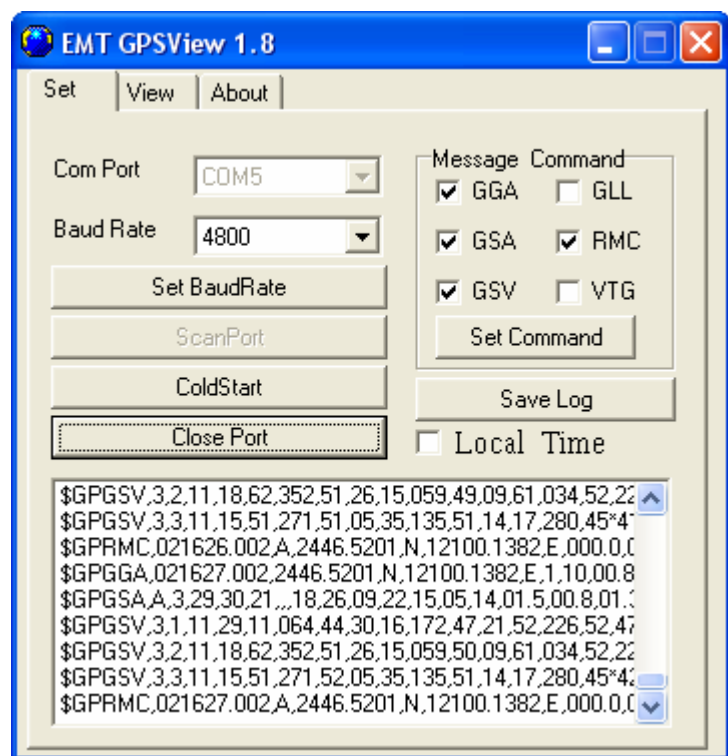


4. Test Datalog By GPSView

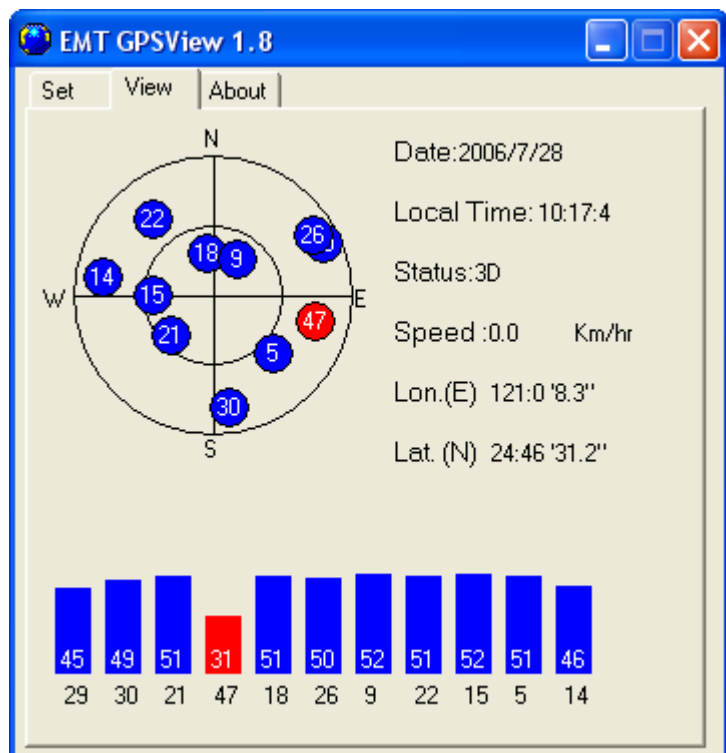
Step 1: Double click GPSView icon



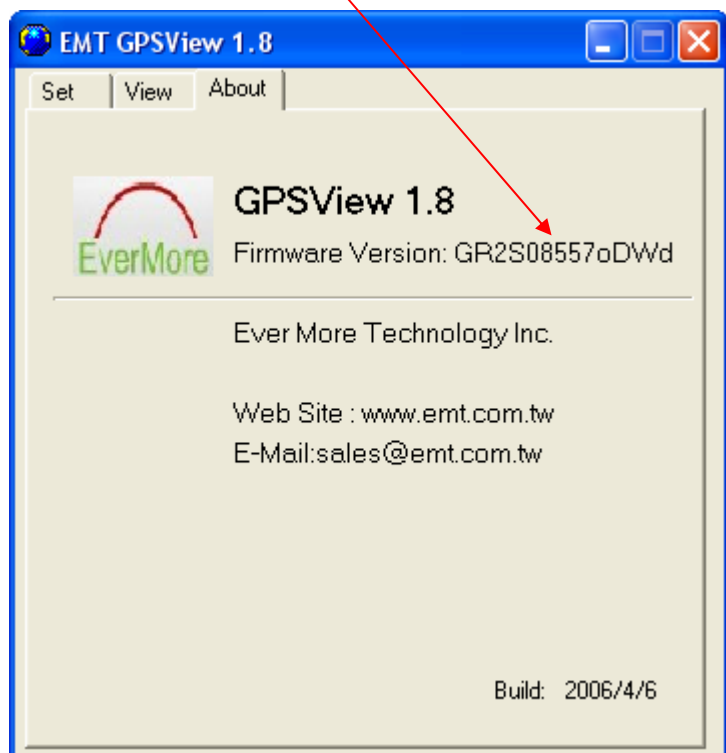
Step 2: To select Com Port and Baud Rate then press "Open Port"



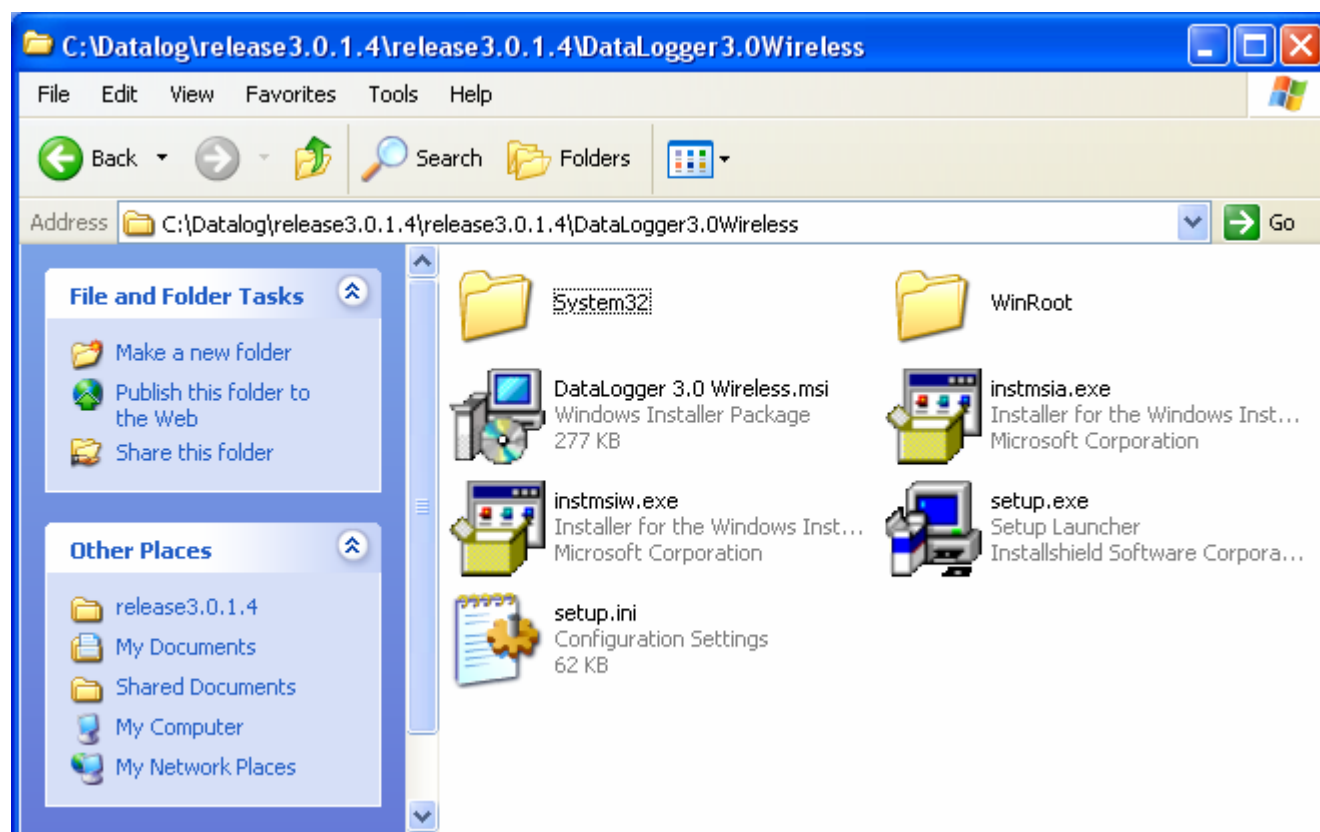
Step 3: To check the datalog fix



Step 4: To read firmware version



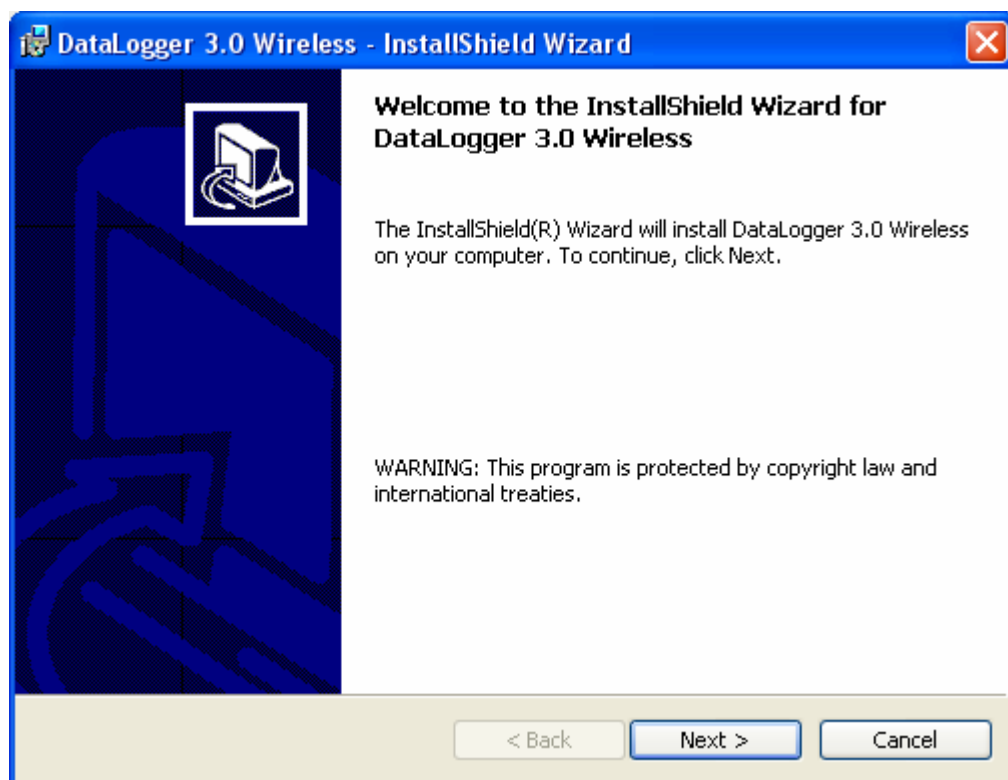
5. Datalog Utility Installation



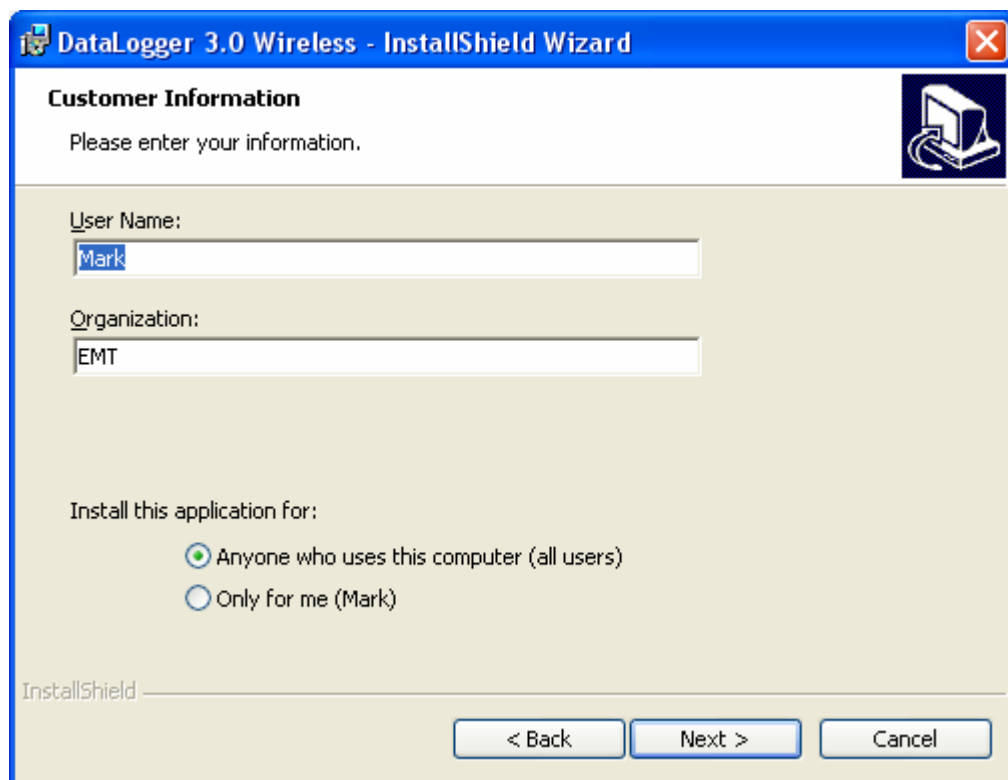
Step 1: Double click “setup.exe” icon



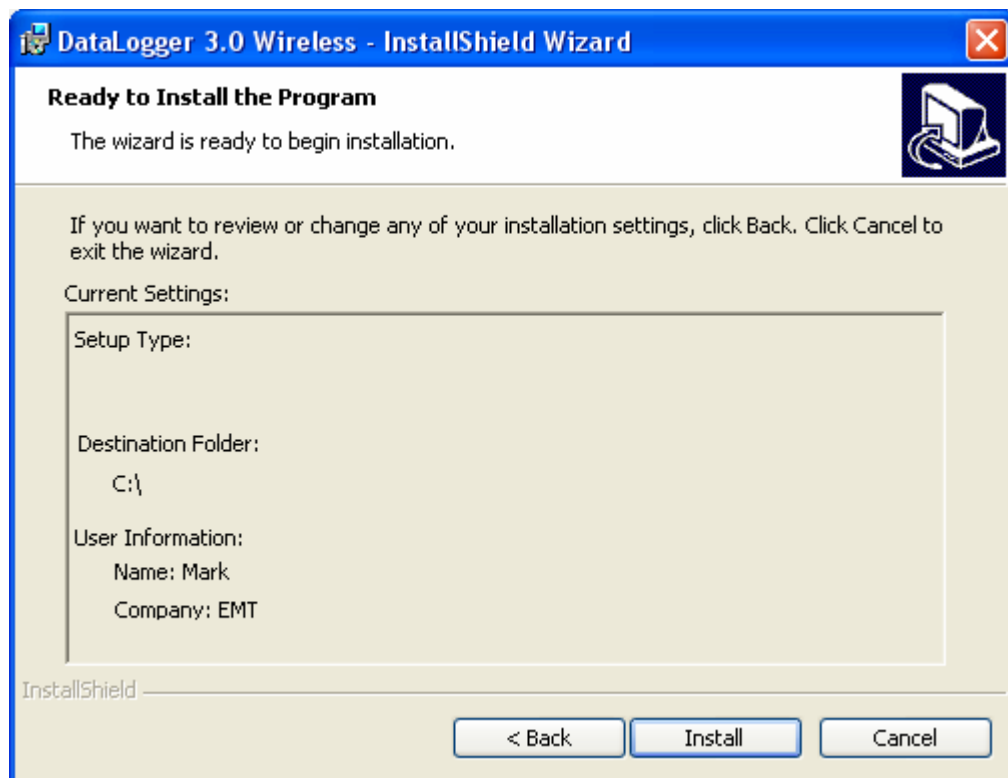
Step 2: To press “Next” button



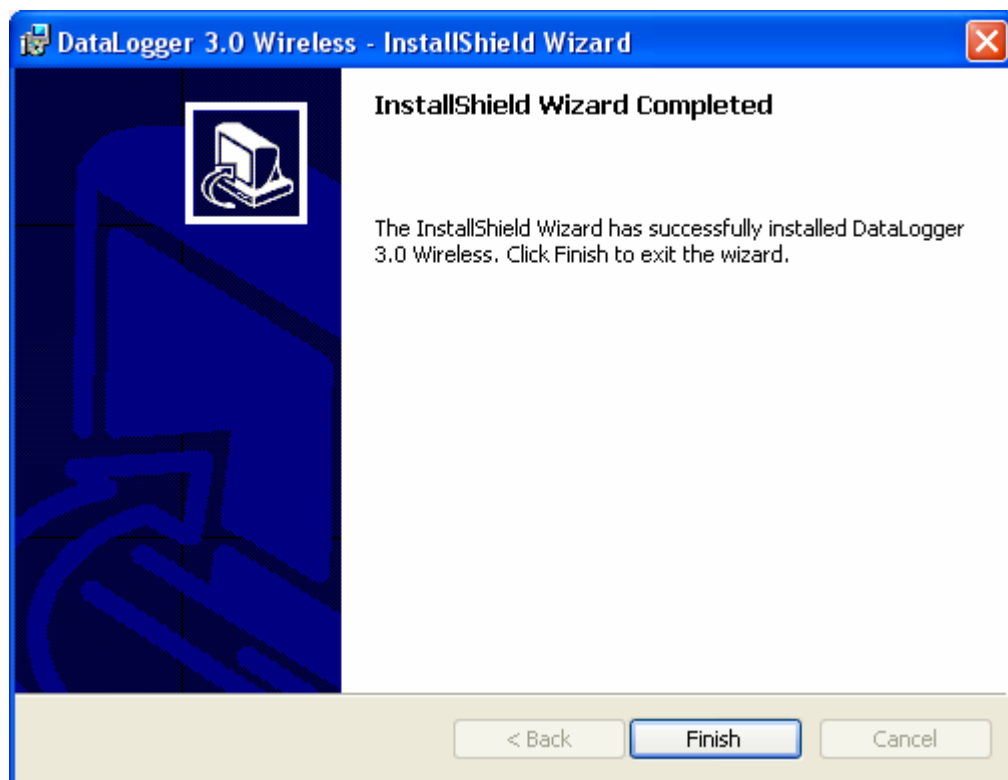
Step 3: To press “Next” button



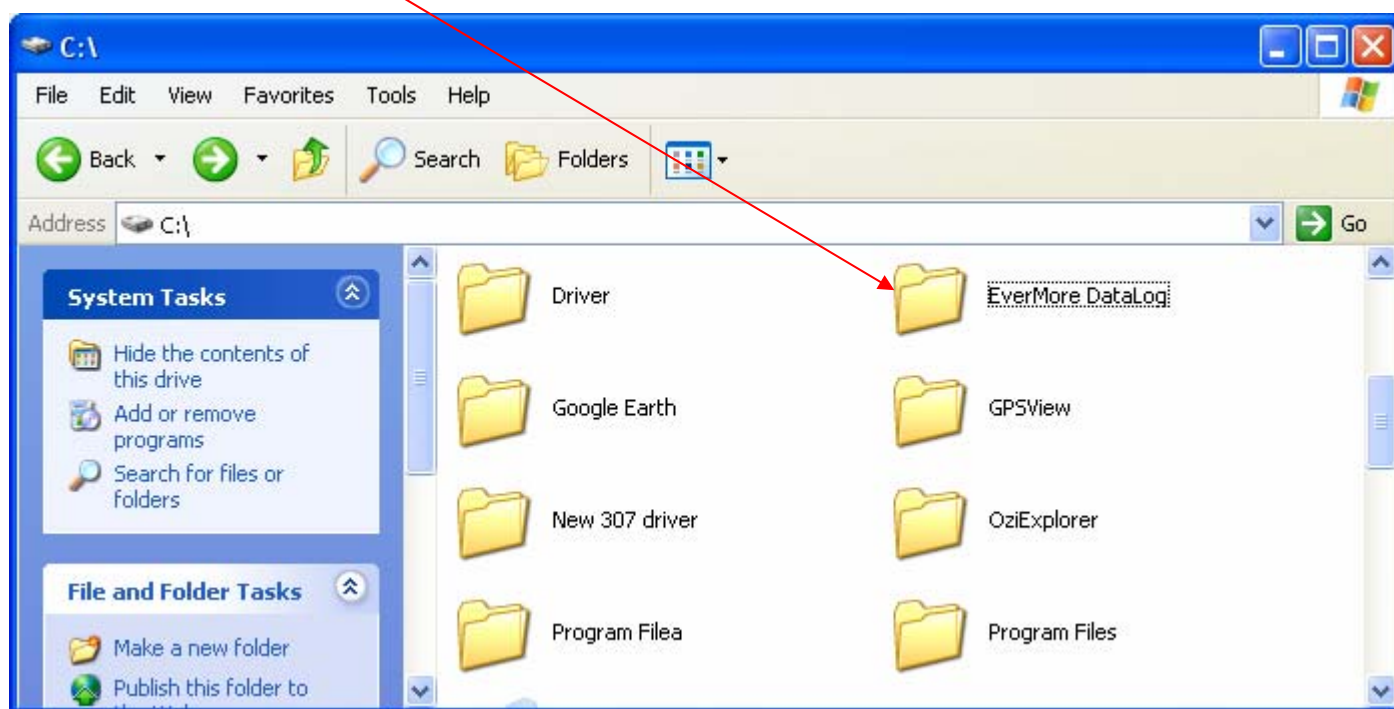
Step 4: To press “Install” button



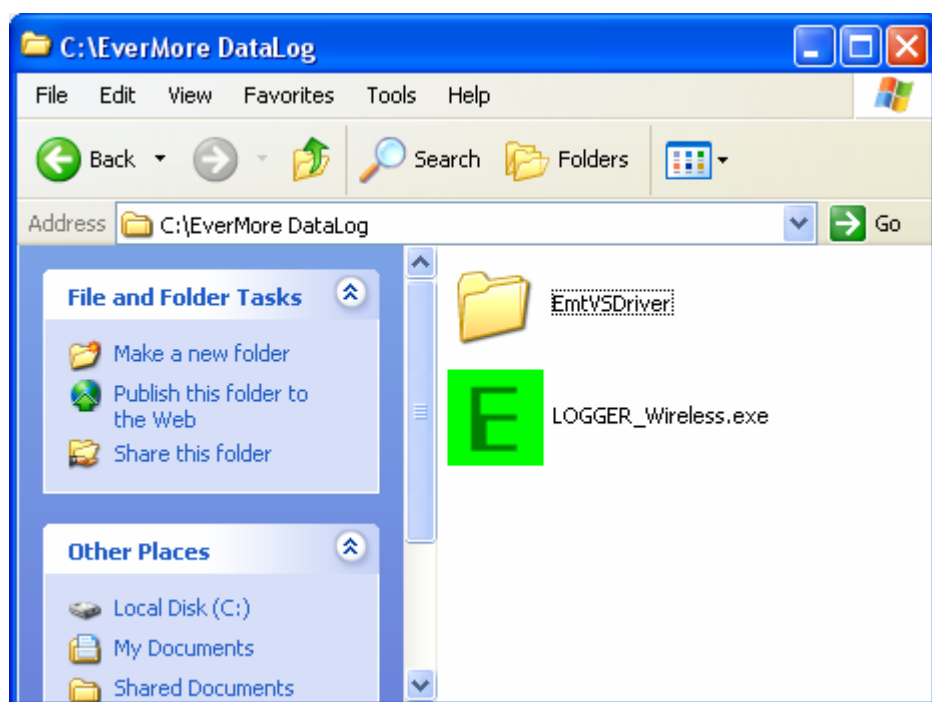
Step 5: To press “Finish” button



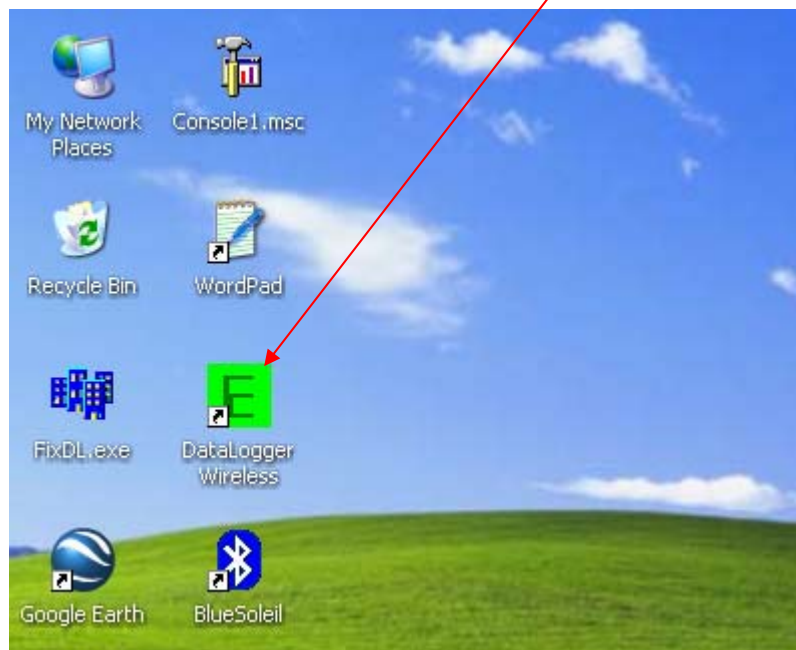
Step 6: To check new create folder



Step 7: To open this folder



Step 8: To check the new create Datalog icon for execution



6. Datalog Utility Operation

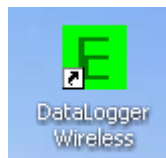
6.0 Install Google Earth

Install Google Earth before use datalog utility.



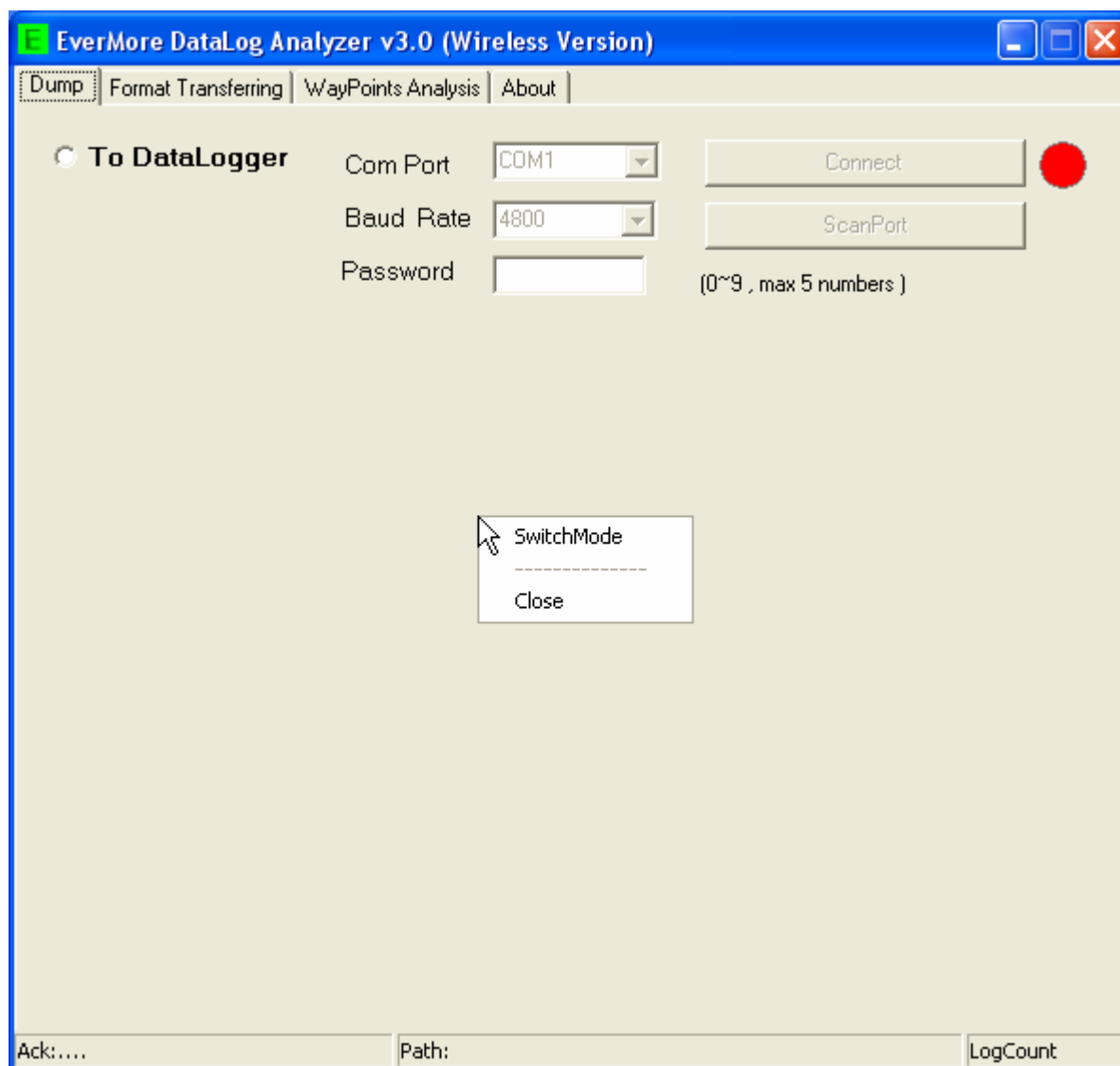
6.1 Switch Mode Change

Step 1: Double click Datalog icon

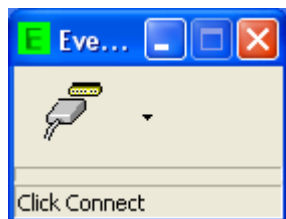


Step 2: To put the mouse cursor in the window then click mouse right button.

It will pop up switch mode window then to select Switch Mode for small mode.



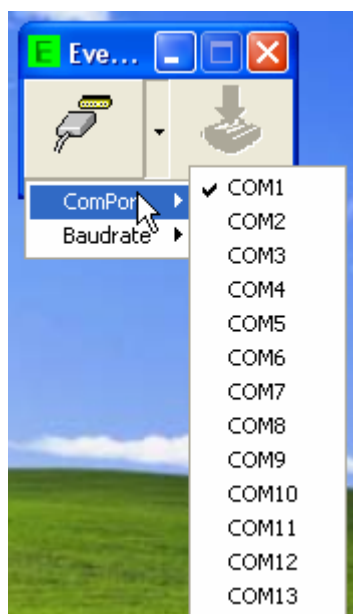
It will from big mode change to small mode



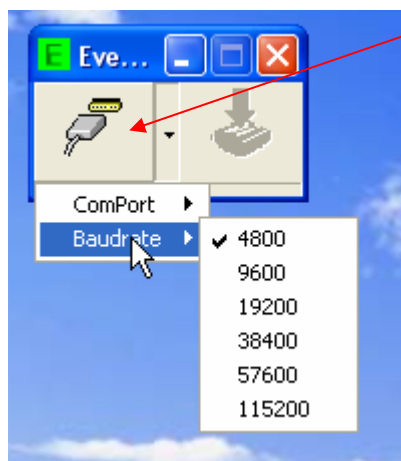
Step 3: To click triangle



Step 4: To select COM Port



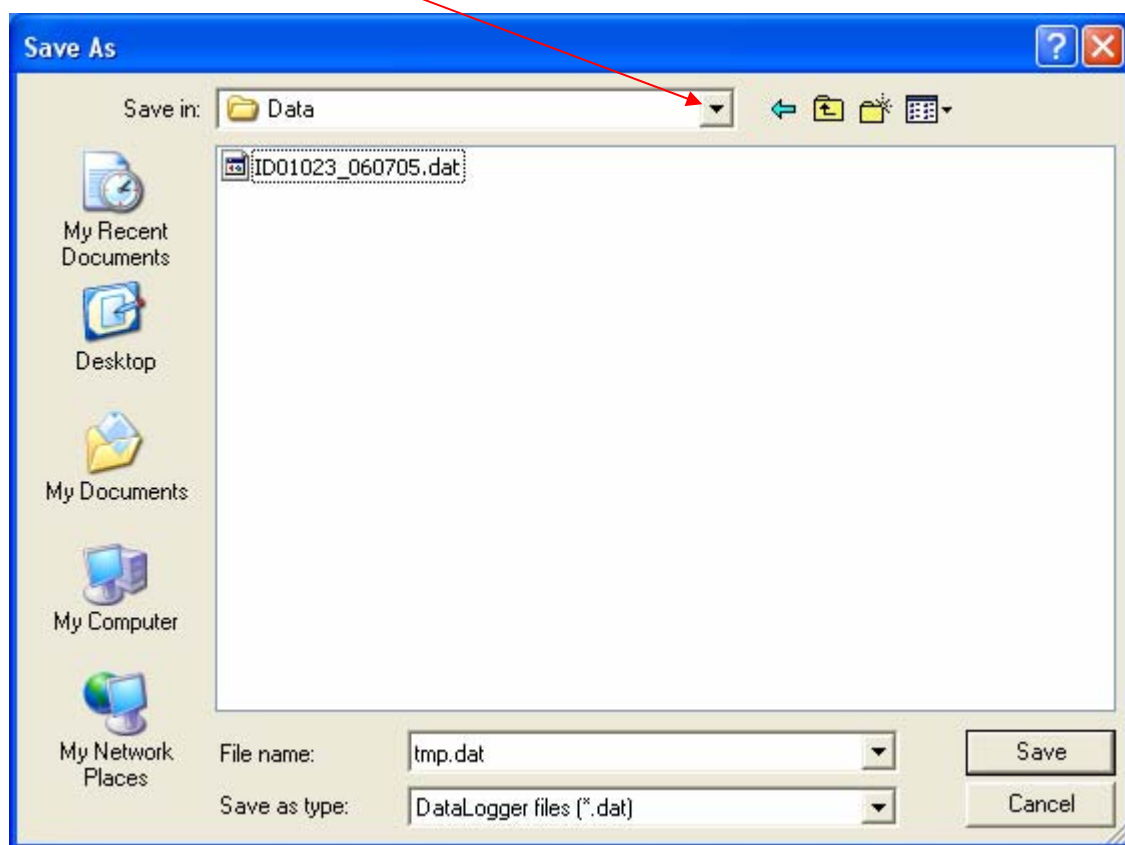
Step 5: To select Baud Rate and to click connect



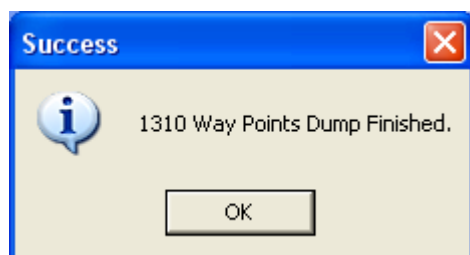
Step 6: It will become connect status and to click dump button



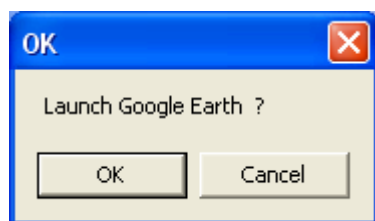
Step 7: To select the dump data folder



Step 8: Dump Finished window



Step 9: If you already install Google Earth then click ok button otherwise click cancel button.



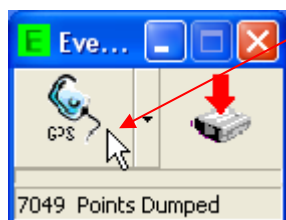
Step 10: It will automatic link with Google Earth and show out the trail.



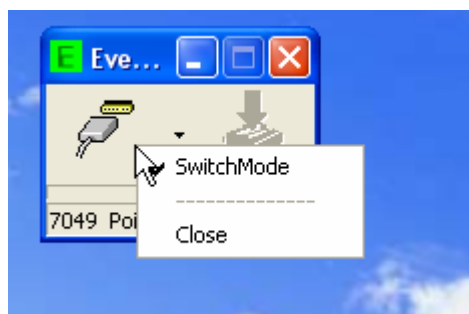
Step 11: To close Google Earth and ready to disconnect datalog



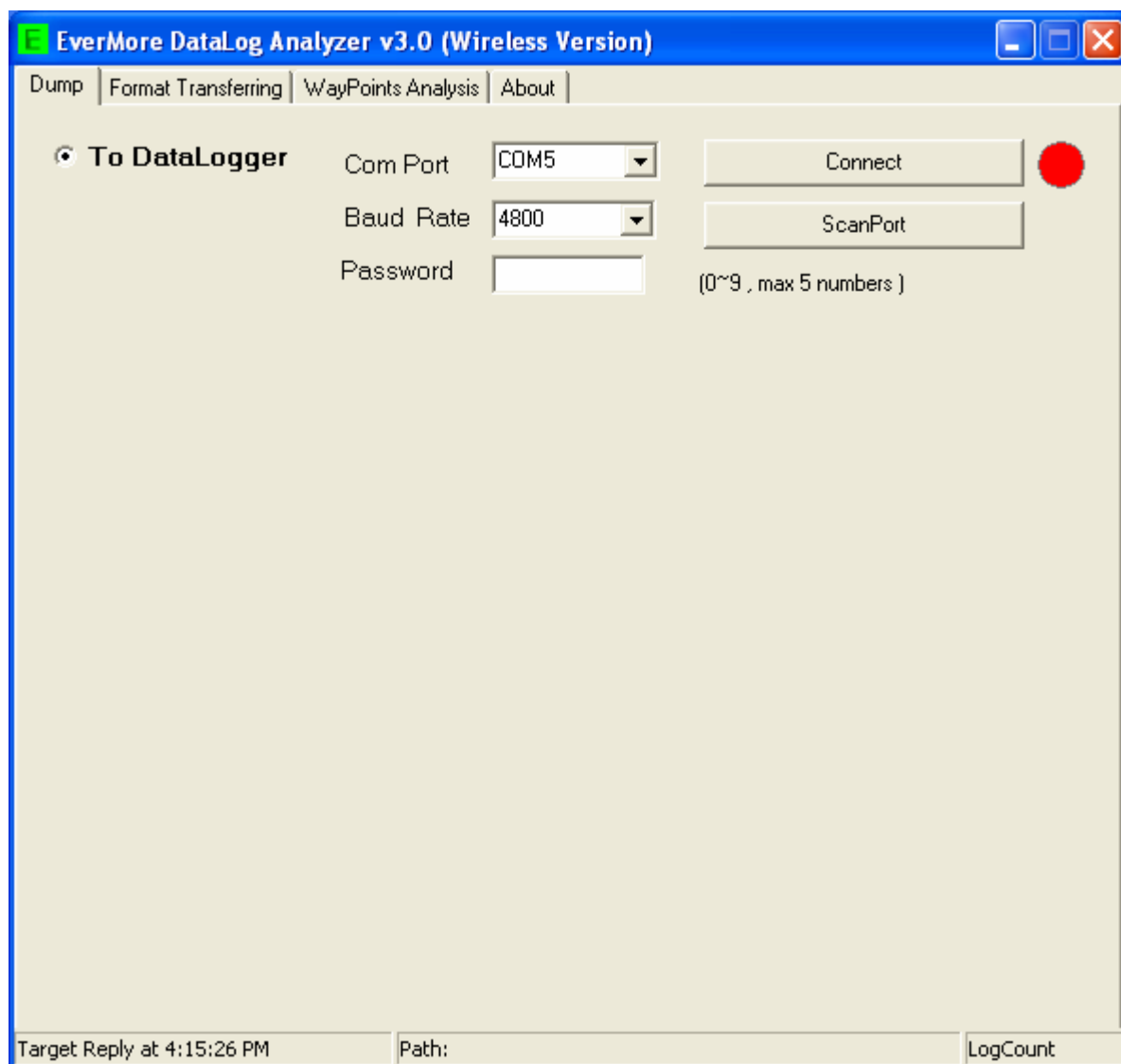
Step 12: To click disconnect button



Step 13: To press mouse right button and select switch mode. It will change to big mode.



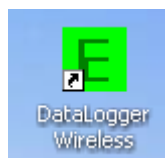
Step 14: The datalog utility change to big mode



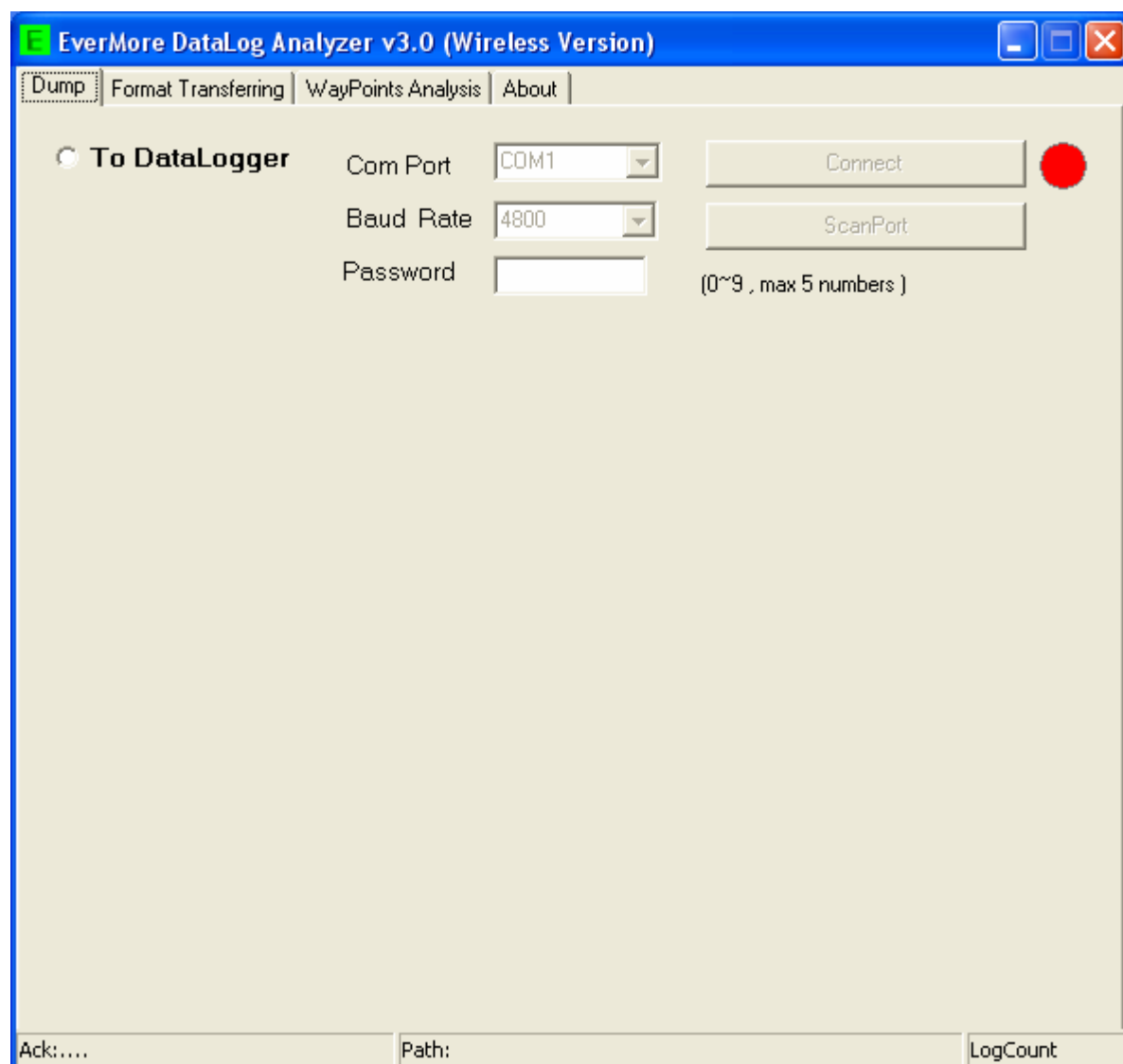
6.2 Dump

6.2.1 Data Dump and Erase

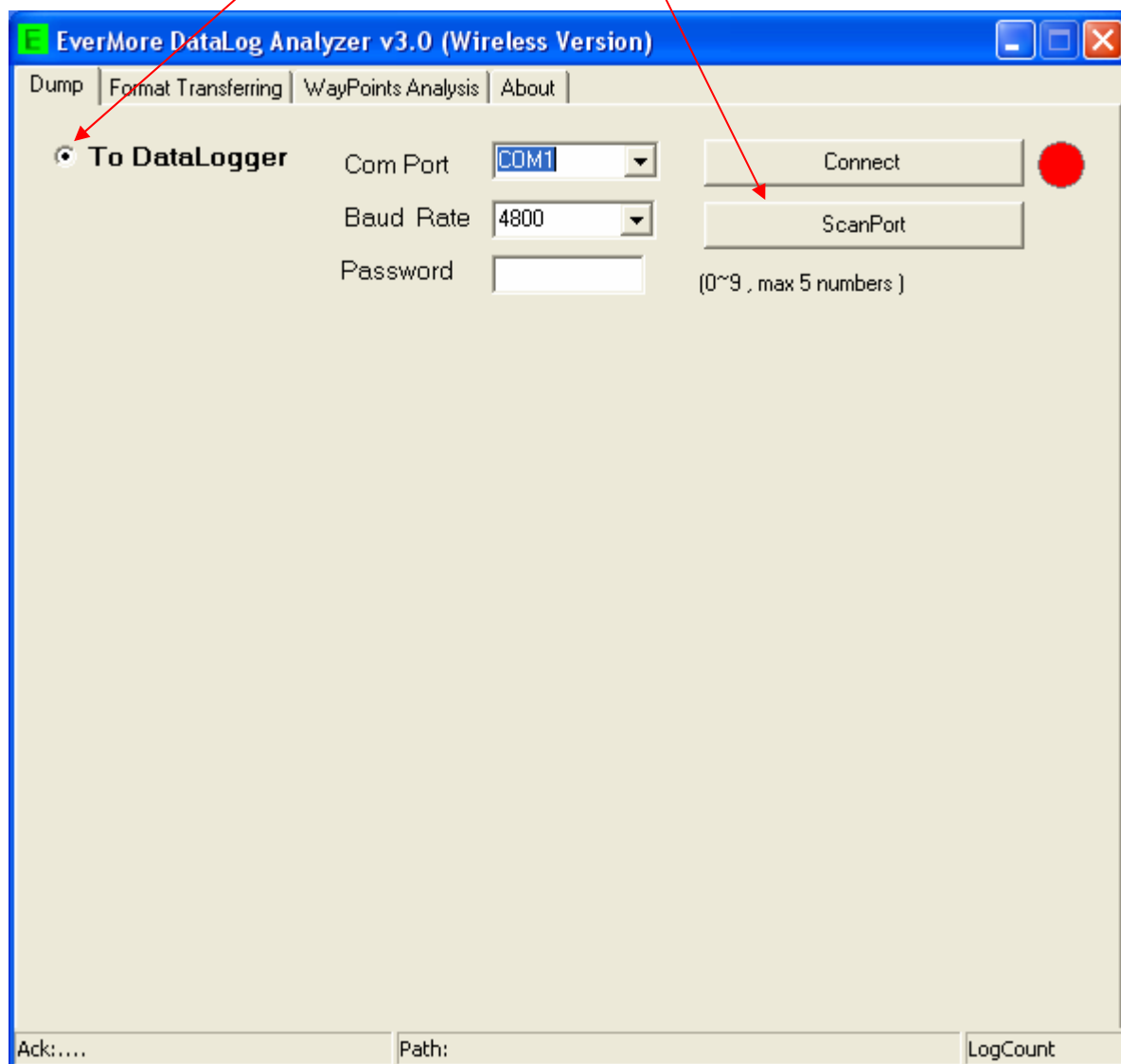
Step 1: Double click datalog icon



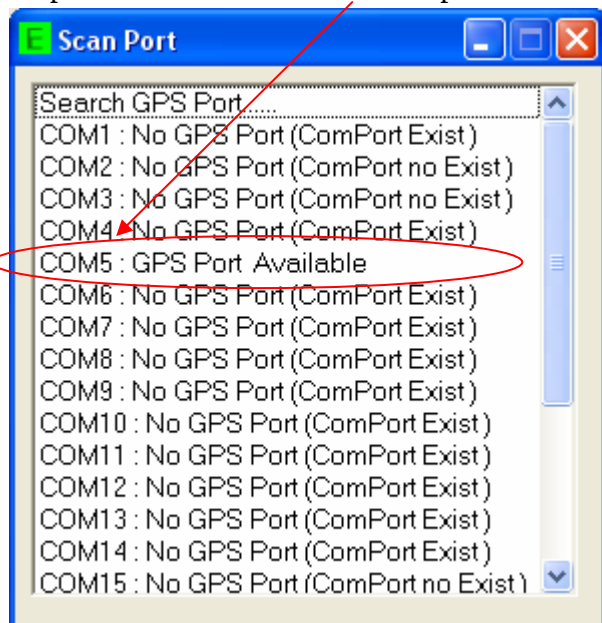
Step 2: It will pop up a window



Step 3: To select “To DataLogger” and to press “ScanPort” button

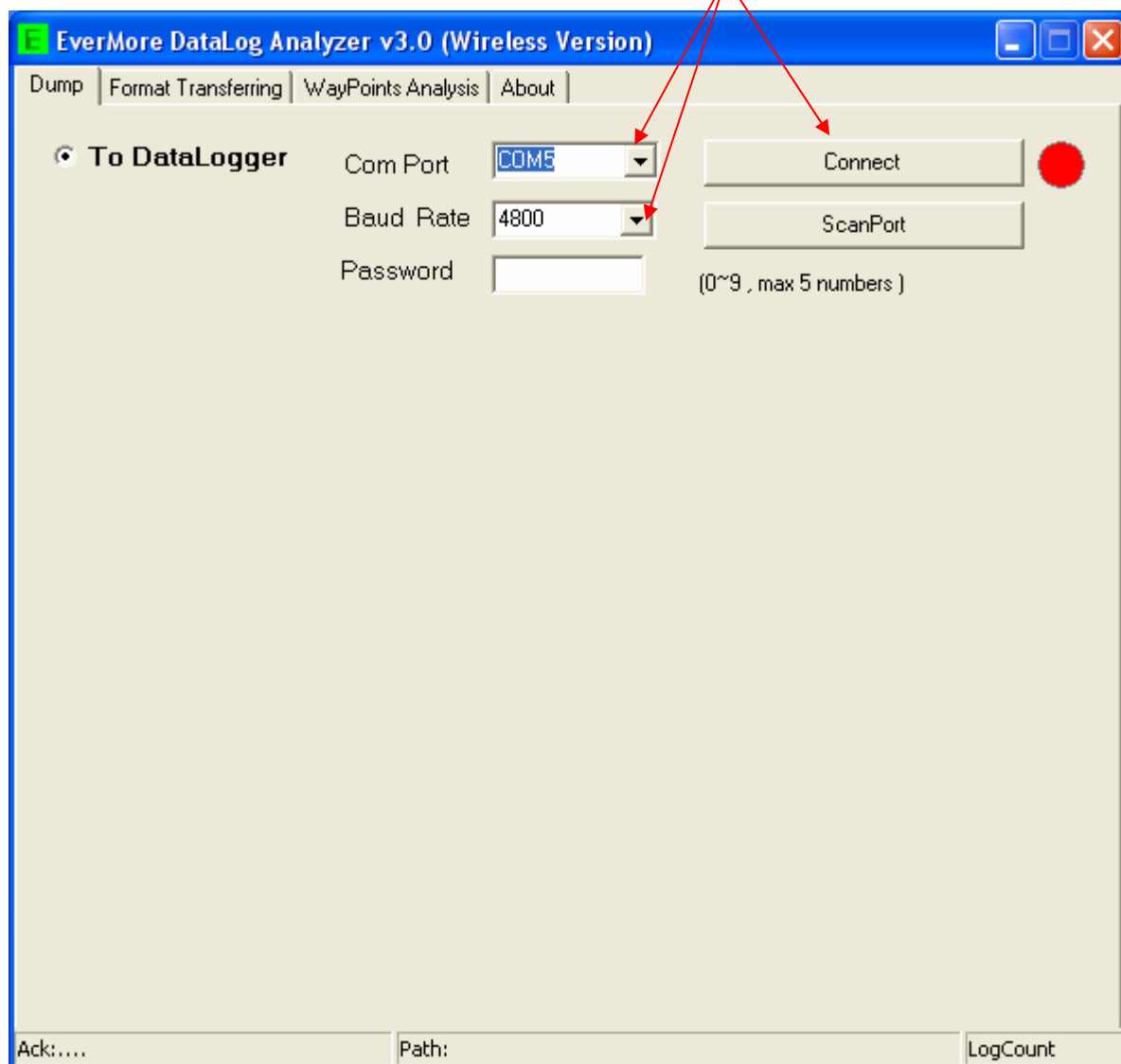


Step 4: It will show out available ports.

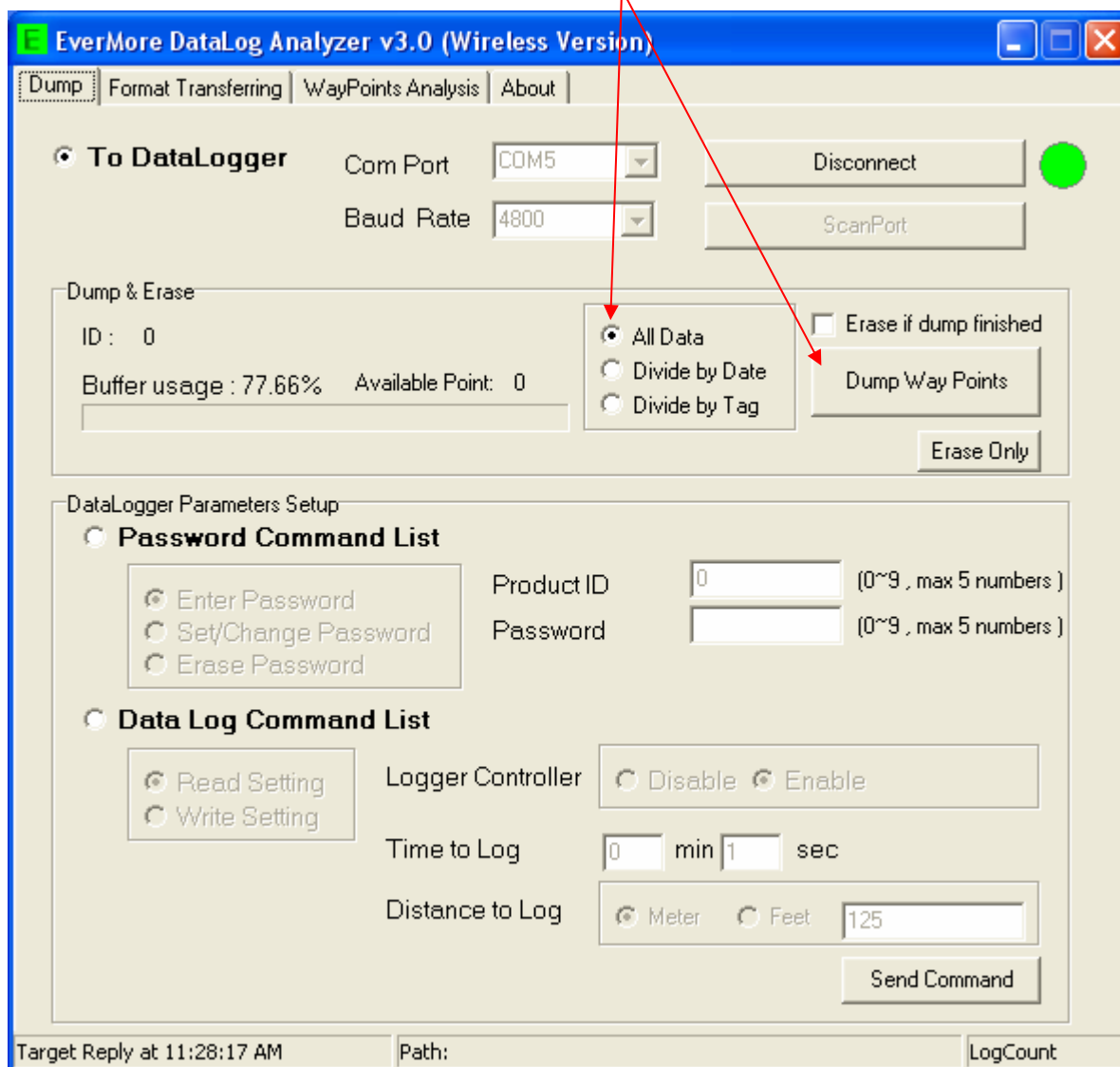


Step 5: DL-200BT does not care Baud Rate. We can select any Baud Rate to Connect.

To select COM port and Baud Rate and to press “Connect” button



Step 6: Connecting success window. Dumping all data into a file.



EverMore DataLog Analyzer v3.0 (Wireless Version)

Dump | Format Transferring | WayPoints Analysis | About

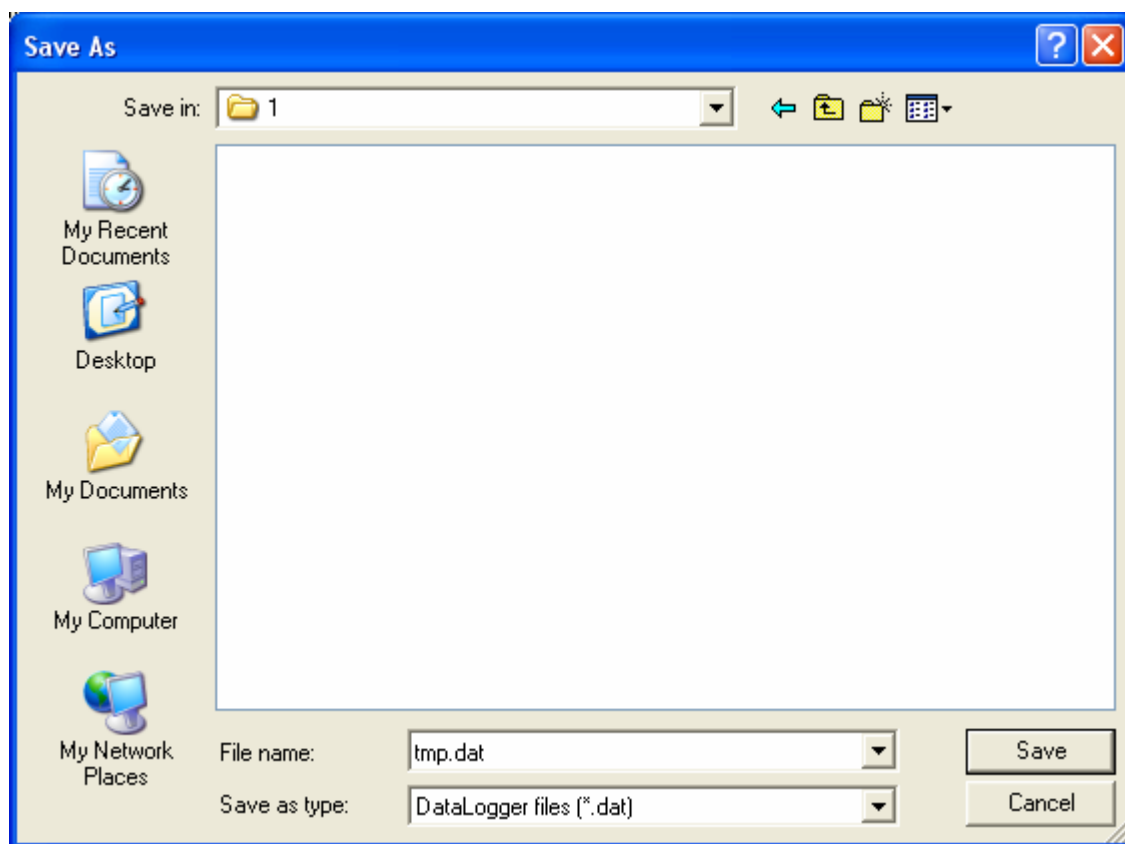
To DataLogger Com Port: COM5 Baud Rate: 4800 Disconnect ScanPort

Dump & Erase
 ID: 0
 Buffer usage: 77.66% Available Point: 0
☒ All Data ☐ Divide by Date ☐ Divide by Tag
☐ Erase if dump finished
 Dump Way Points
 Erase Only

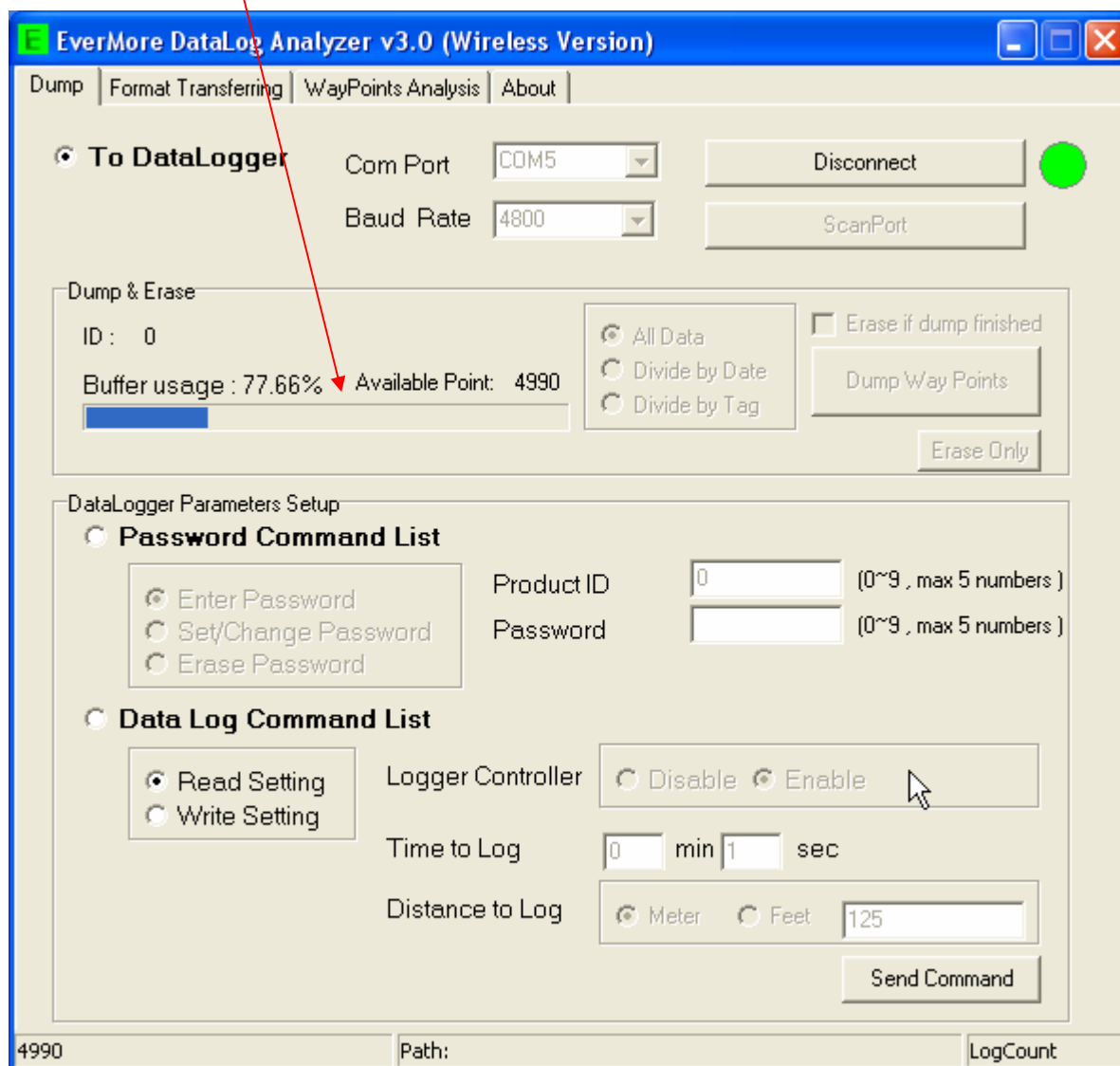
DataLogger Parameters Setup
☒ **Password Command List**
☒ Enter Password ☐ Set/Change Password ☐ Erase Password
 Product ID: 0 (0~9, max 5 numbers)
 Password: (0~9, max 5 numbers)
☒ **Data Log Command List**
☒ Read Setting ☐ Write Setting
 Logger Controller: ☐ Disable ☒ Enable
 Time to Log: 0 min 1 sec
 Distance to Log: ☒ Meter ☐ Feet 125
 Send Command

Target Reply at 11:28:17 AM Path: LogCount

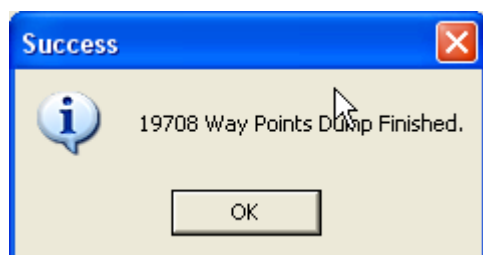
Step 7: To select a data folder.



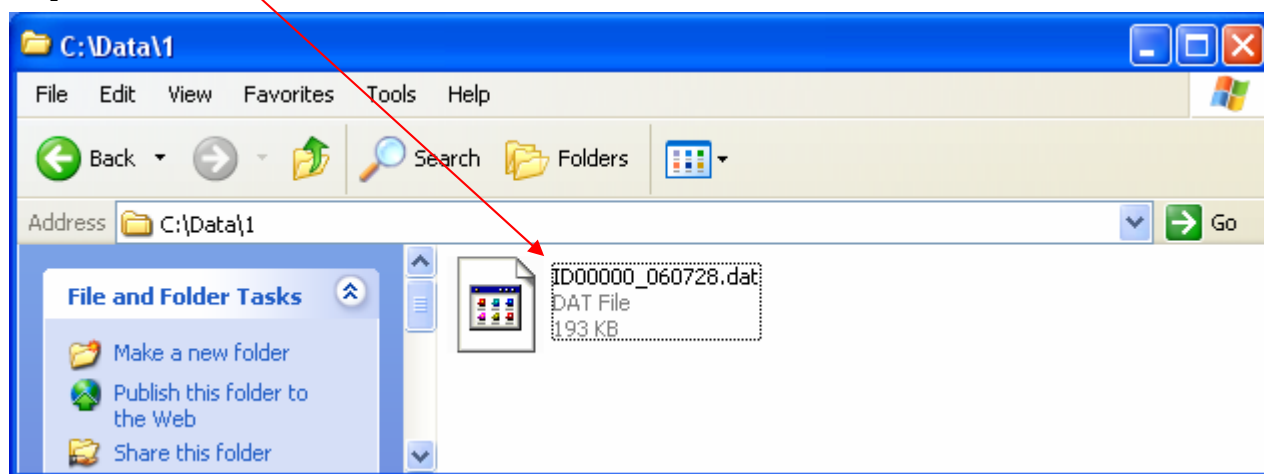
Step 8: Dumping window



Step 9: Dump finished window

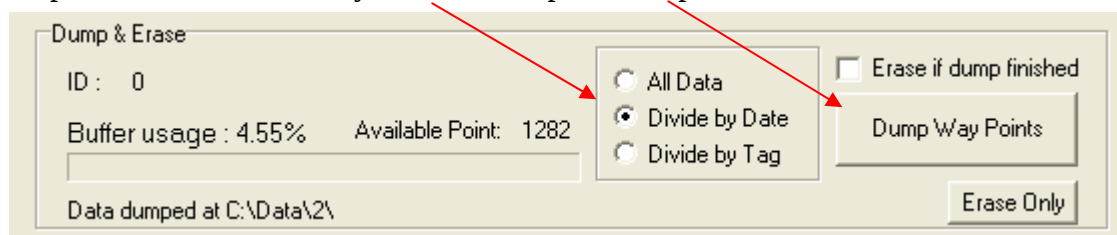


Step 10: To check the data file.

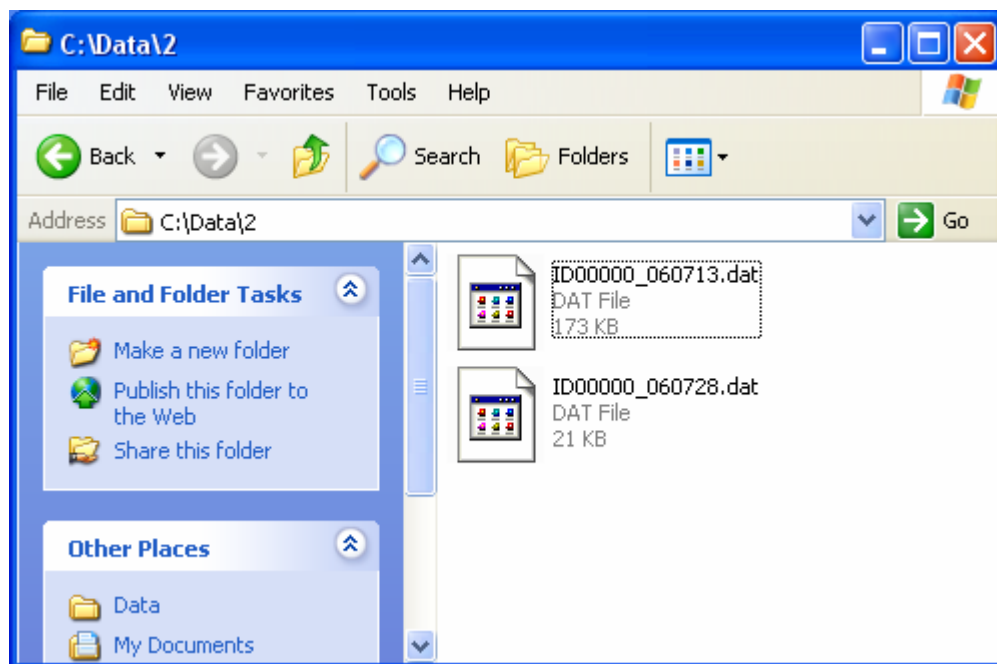


Dumping data by date

Step 1: To select “Divide by Date” and to press dump button

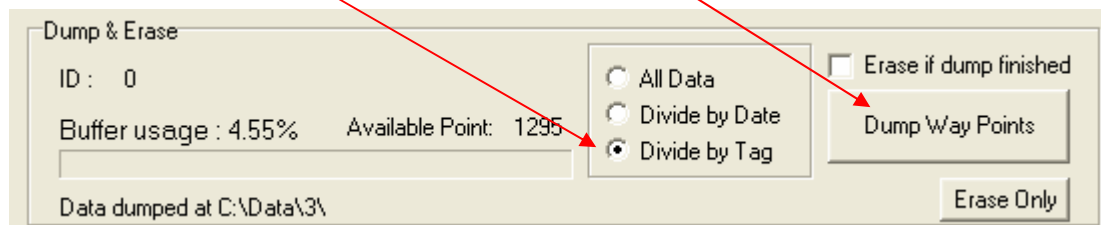


Step 2: To check the data files

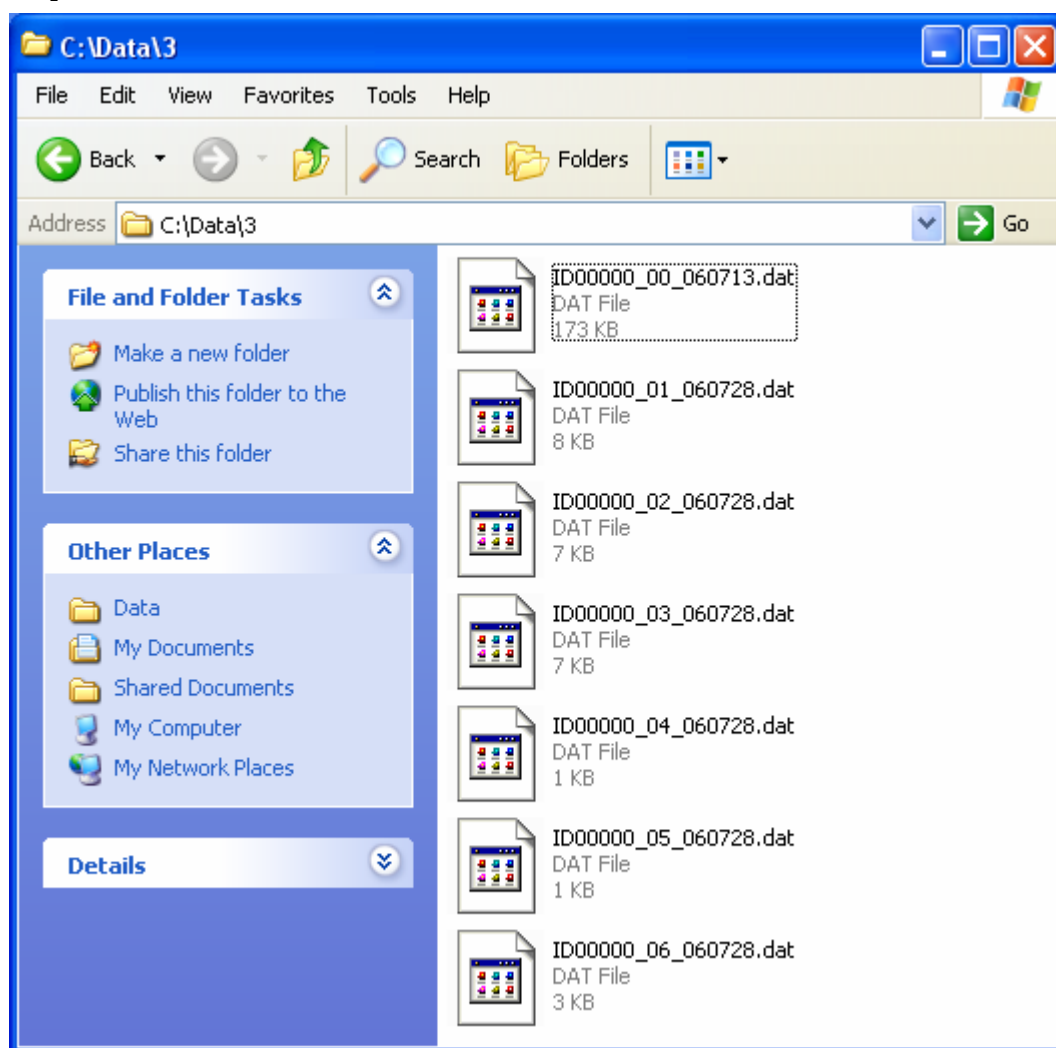


Dumping data by each On/Off datalog power

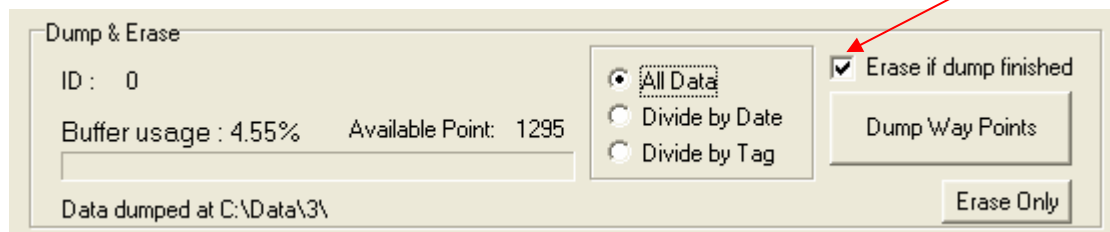
Step 1: To select “Divide by Tag” and to press dump button



Step 2: To check the data files

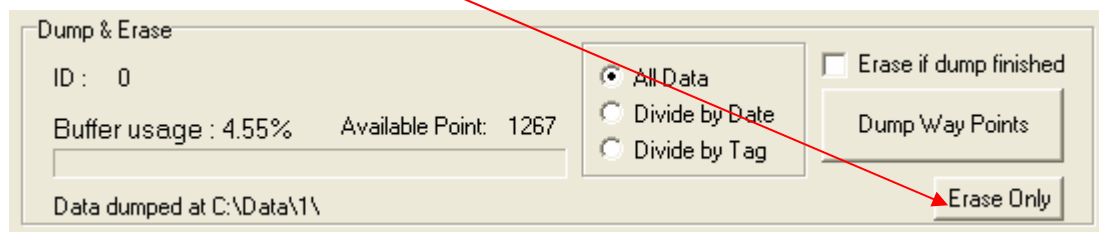


“Erase if dump finished” meaning is it would automatic erase data when had finished dump.

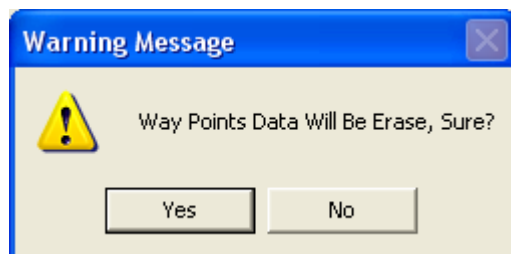


How to erase SRAM data

Step 1: To press “Erase Only” button



Step 2: To press “Yes” button for make sure



6.2.2 Product ID and Password Setting

How to enter password

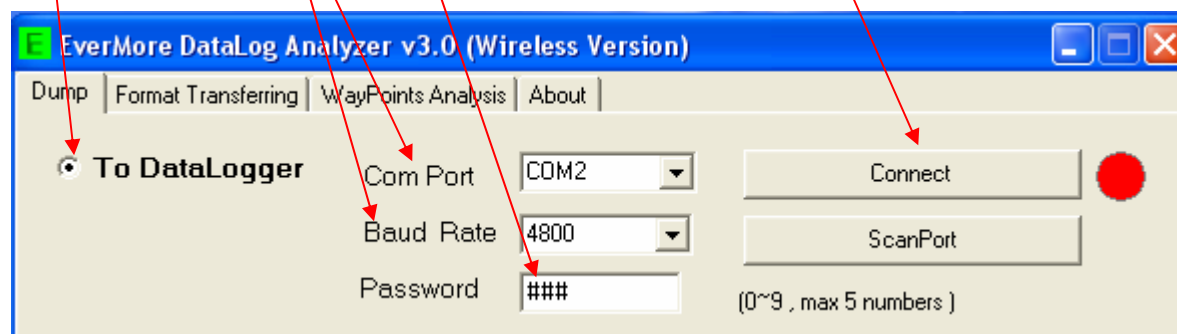
If user already key-in password in DL-200BT

Step 1: To select "Password Command List"

Step 2: To select Com Port and Baud Rate

Step 3: To key-in password

Step 4: To press "Connect" button



This "Enter Password" item does not have function only default value

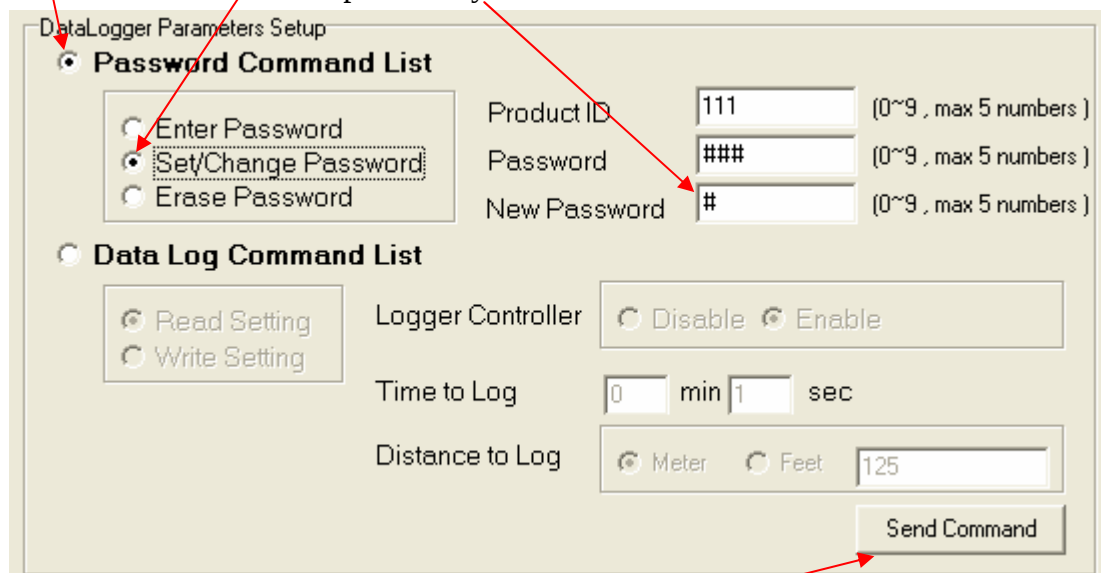


How to set/change password

Step 1: To select "Password Command List"

Step 2: To select "Set/Change Password"

Step 3: To key-in new Password



DataLogger Parameters Setup

• Password Command List

☐ Enter Password

☒ Set/Change Password

☐ Erase Password

Product ID: 111 (0~9 , max 5 numbers)

Password: ### (0~9 , max 5 numbers)

New Password: # (0~9 , max 5 numbers)

• Data Log Command List

☒ Read Setting

☐ Write Setting

Logger Controller: ☐ Disable ☒ Enable

Time to Log: 0 min 1 sec

Distance to Log: ☒ Meter ☐ Feet 125

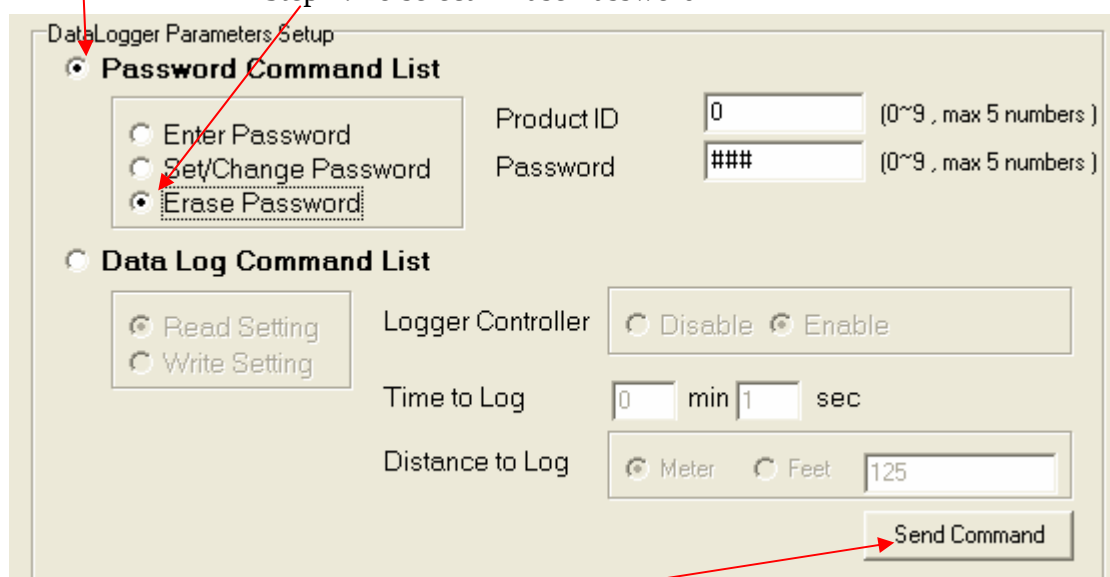
Send Command

Step 4: To press "Send Command"

How to erase password

Step 1: To select "Password Command List"

Step 2: To select "Erase Password"



DataLogger Parameters Setup

• Password Command List

☐ Enter Password

☐ Set/Change Password

☒ Erase Password

Product ID: 0 (0~9 , max 5 numbers)

Password: ### (0~9 , max 5 numbers)

• Data Log Command List

☒ Read Setting

☐ Write Setting

Logger Controller: ☐ Disable ☒ Enable

Time to Log: 0 min 1 sec

Distance to Log: ☒ Meter ☐ Feet 125

Send Command

Step 3: To press "Send Command"

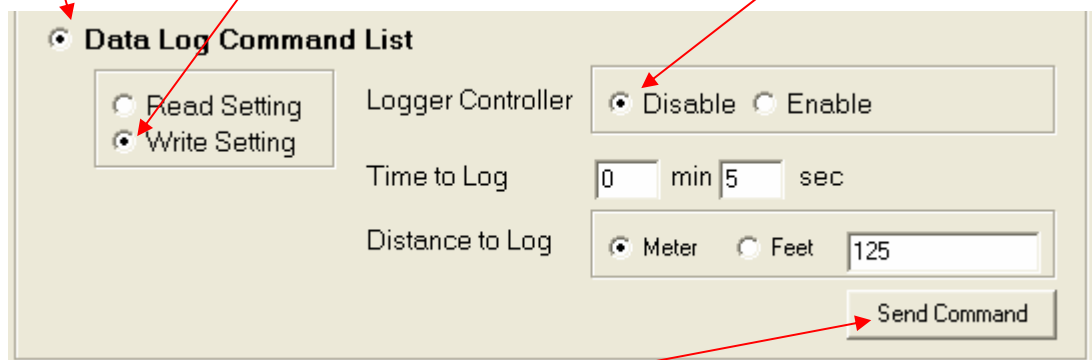
6.2.3 Log Time and Log Distance setting

How to disable data log function

Step 1: To select "Data Log Command List"

Step 3: To select "Write Setting"

Step 2: To select "Disable"



Data Log Command List

☐ Read Setting ☒ Write Setting

Logger Controller ☒ Disable ☐ Enable

Time to Log 0 min 5 sec

Distance to Log ☒ Meter ☐ Feet 125

Send Command

Step 4: To press "Send Command"

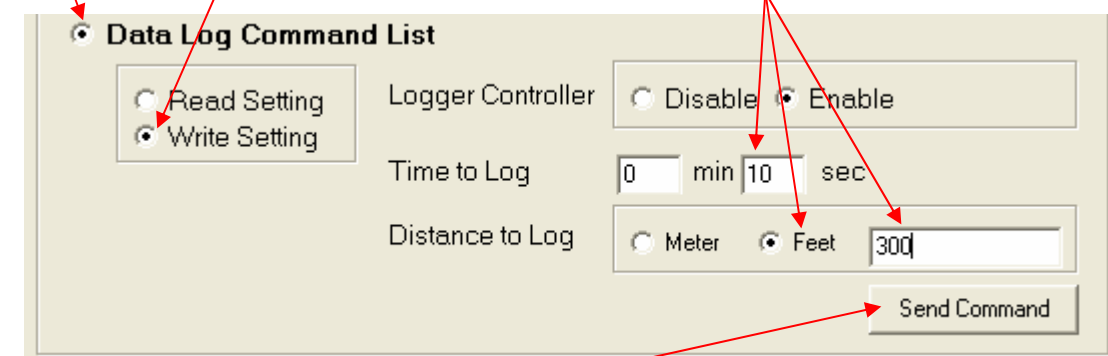
How to setup log time and distance

To select "recycle" function it would let SRAM can be overwrite log when SRAM log is full.

Step 1: To select "Data Log Command List"

Step 3: To select "Write Setting"

Step 2: To key-in time and distance



Data Log Command List

☐ Read Setting ☒ Write Setting

Logger Controller ☐ Disable ☒ Enable

Time to Log 0 min 10 sec

Distance to Log ☐ Meter ☒ Feet 300

Send Command

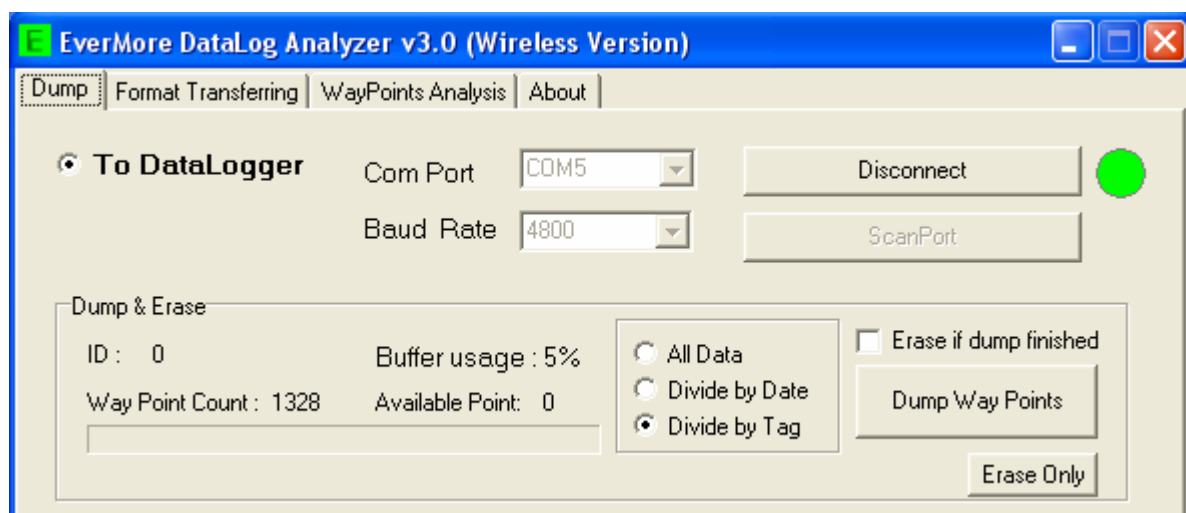
Step 4: To press "Send Command"

6.3 Format Transferring

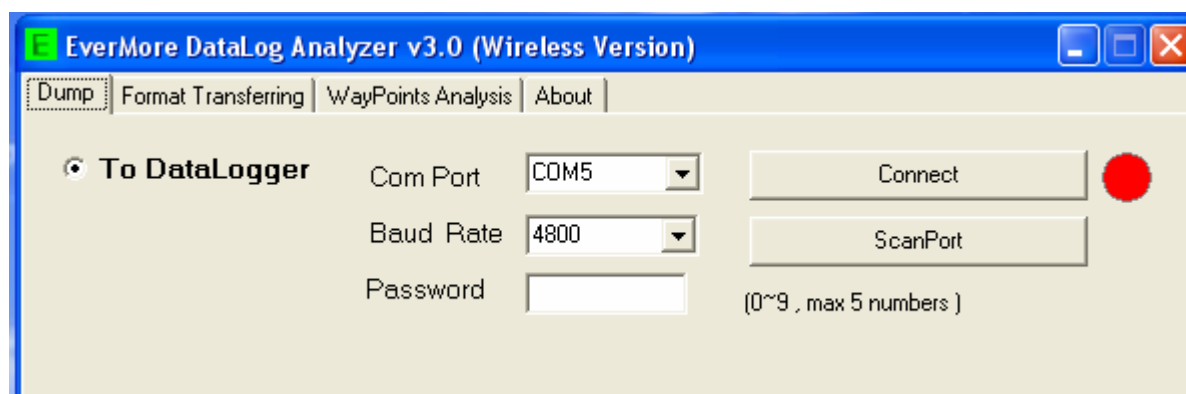
6.3.1 Show trace file on E-map

This example will show datalog link with Microsoft Streets and Trips map

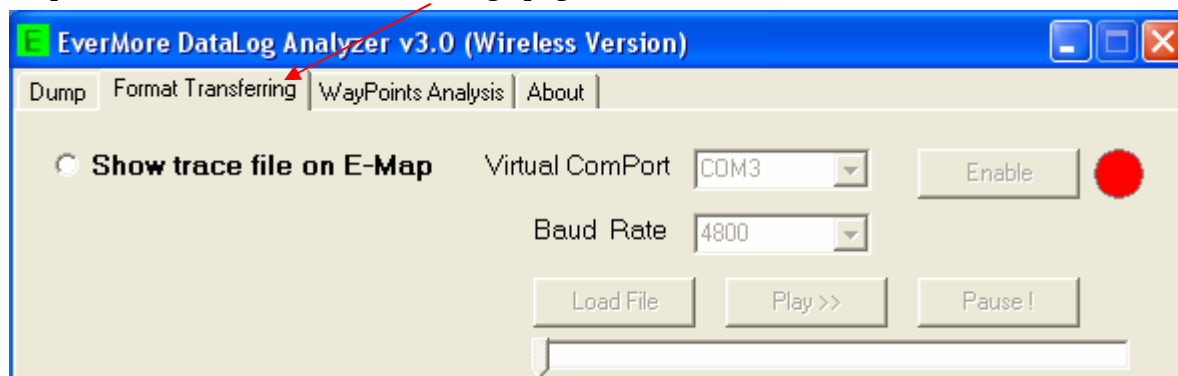
Step 1: To press “Disconnect” button



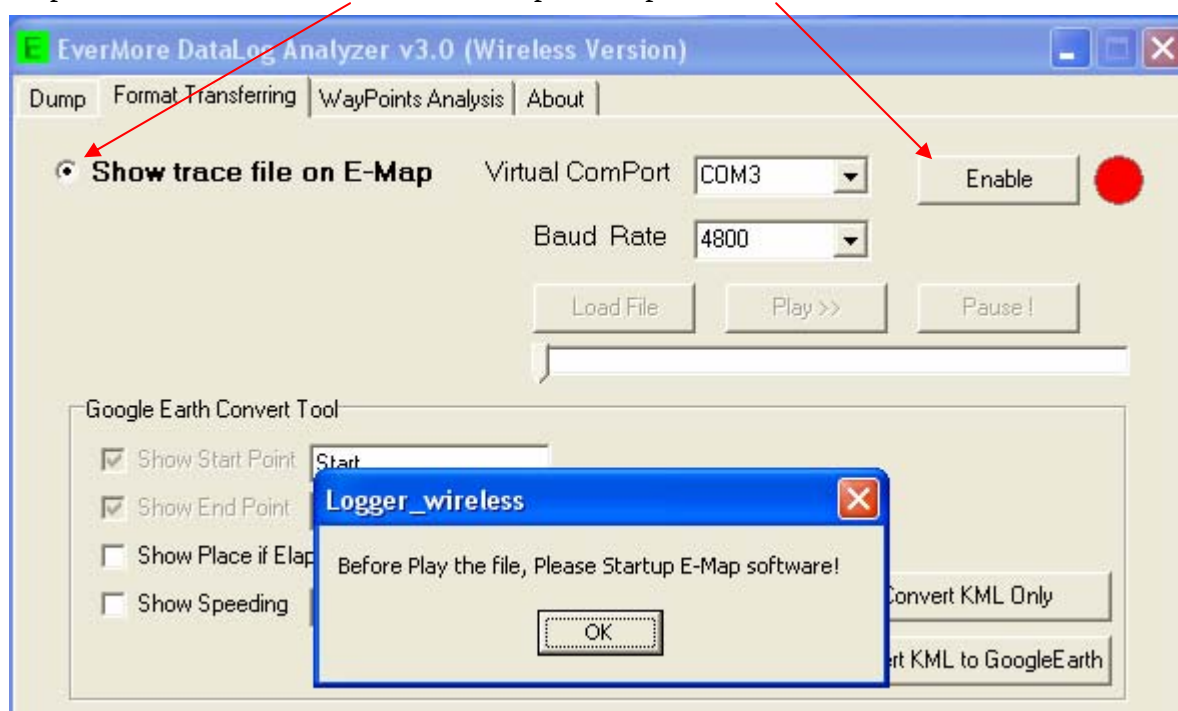
Step 2: The disconnect window



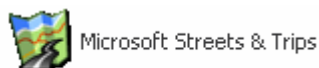
Step 3: To select “Format Transferring” page



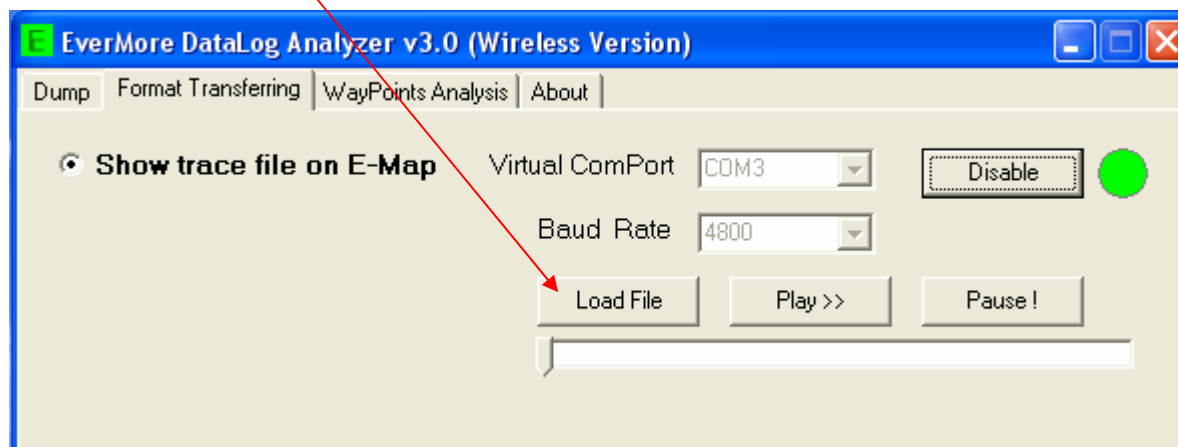
Step 4: To select show trace file on E-map and to press “Enable” button



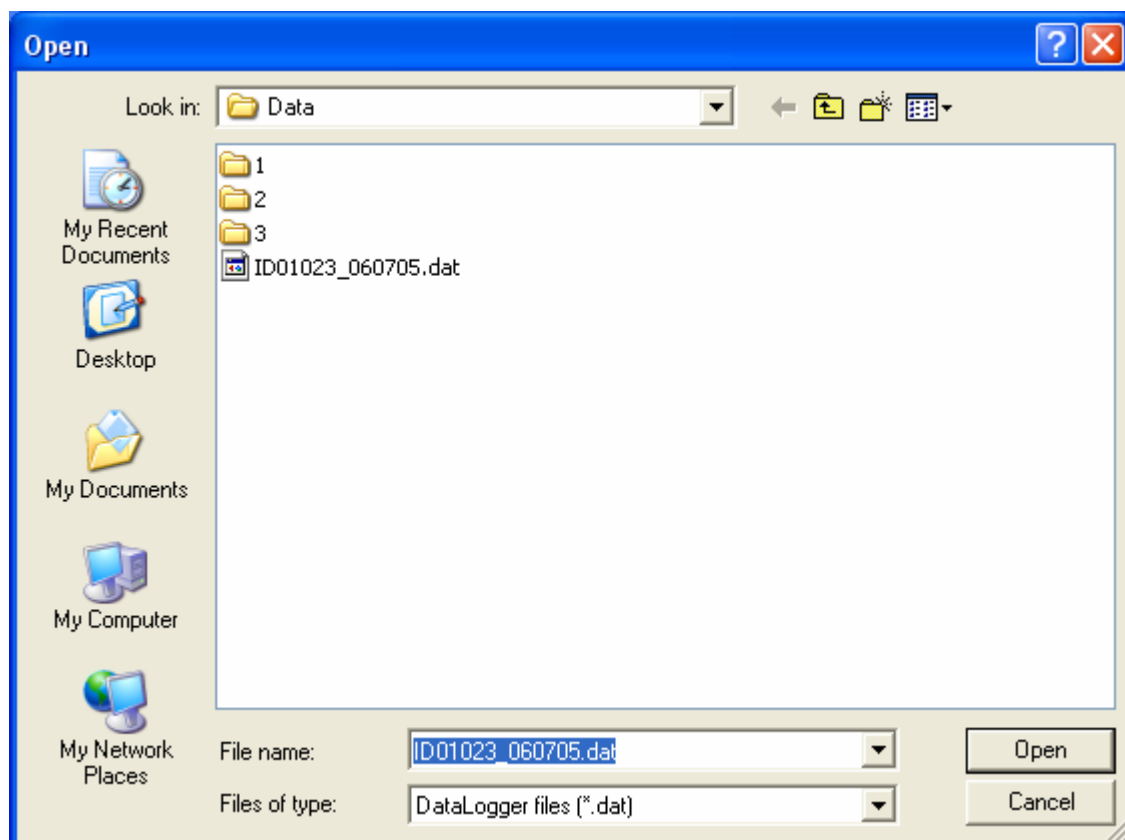
Step 5: Double click Streets & Trips icon



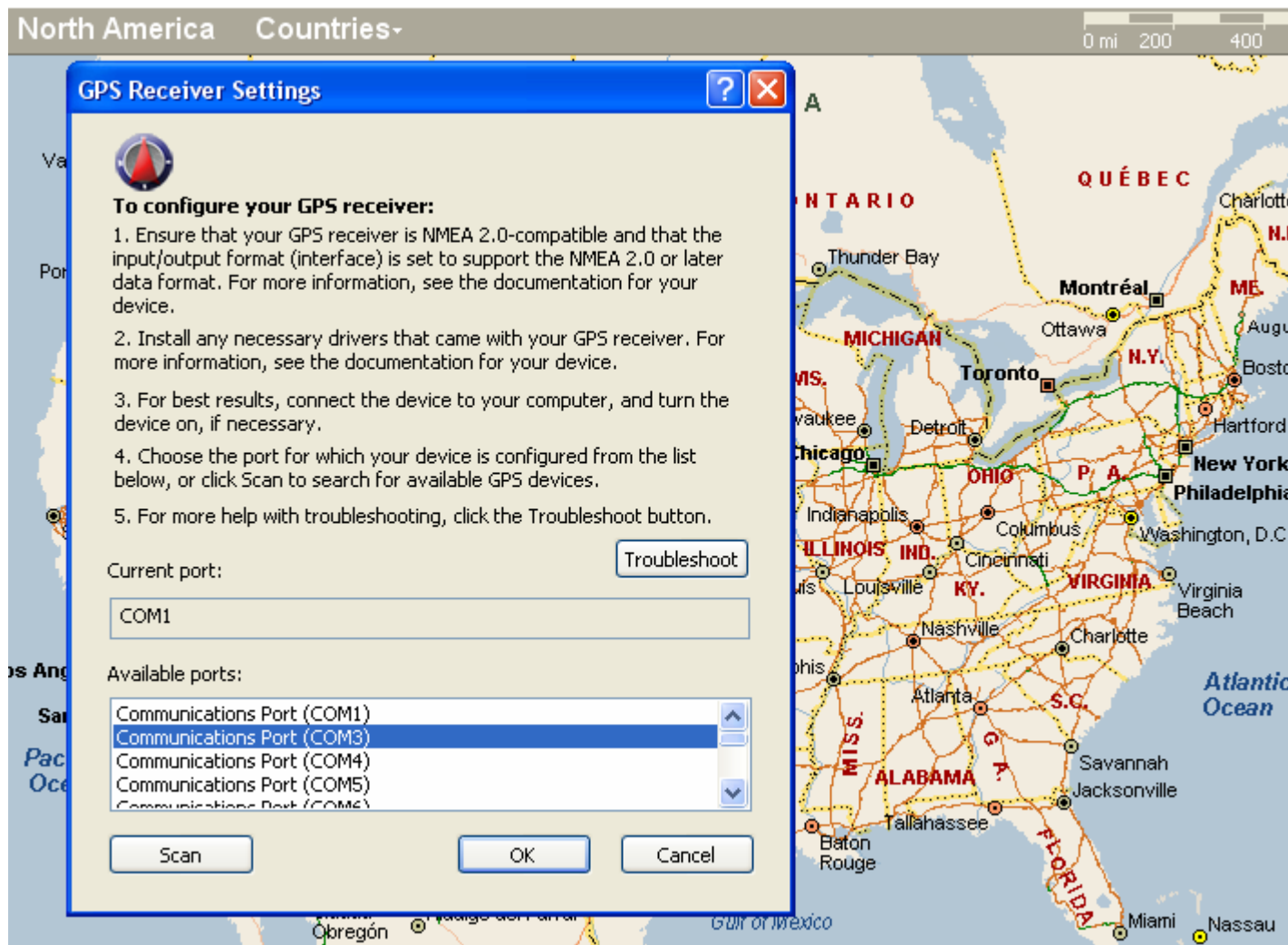
Step 6: To press “Load file” button



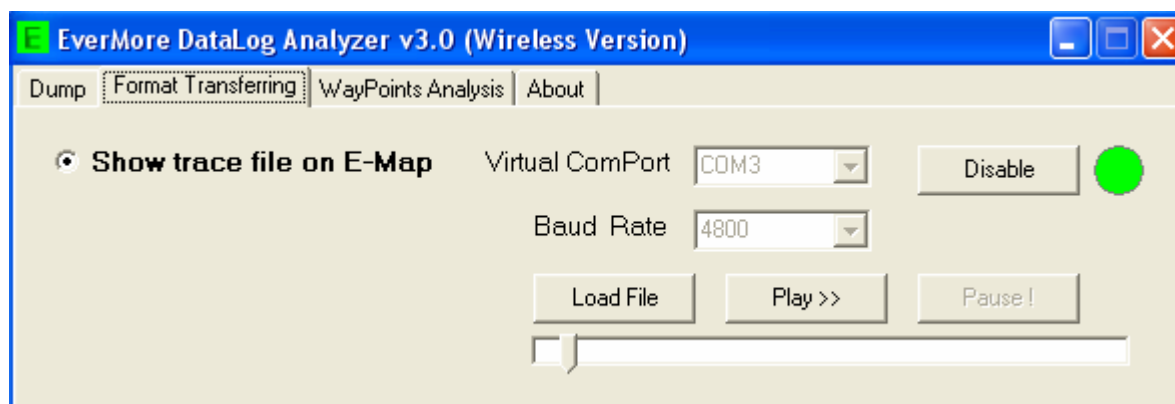
Step 7: To open a data file



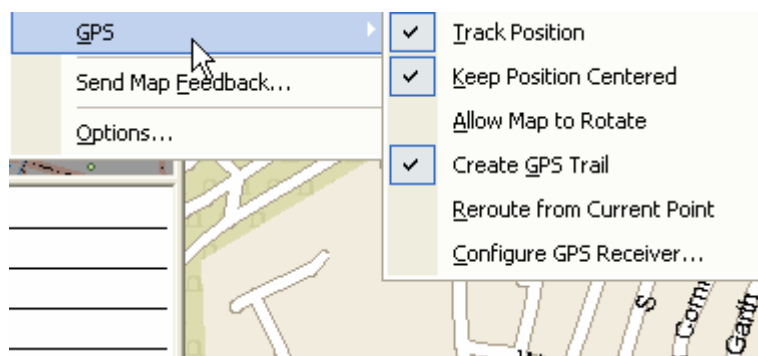
Step 8: To setup streets & trips COM port it needs same as datalog Virtual ComPort number



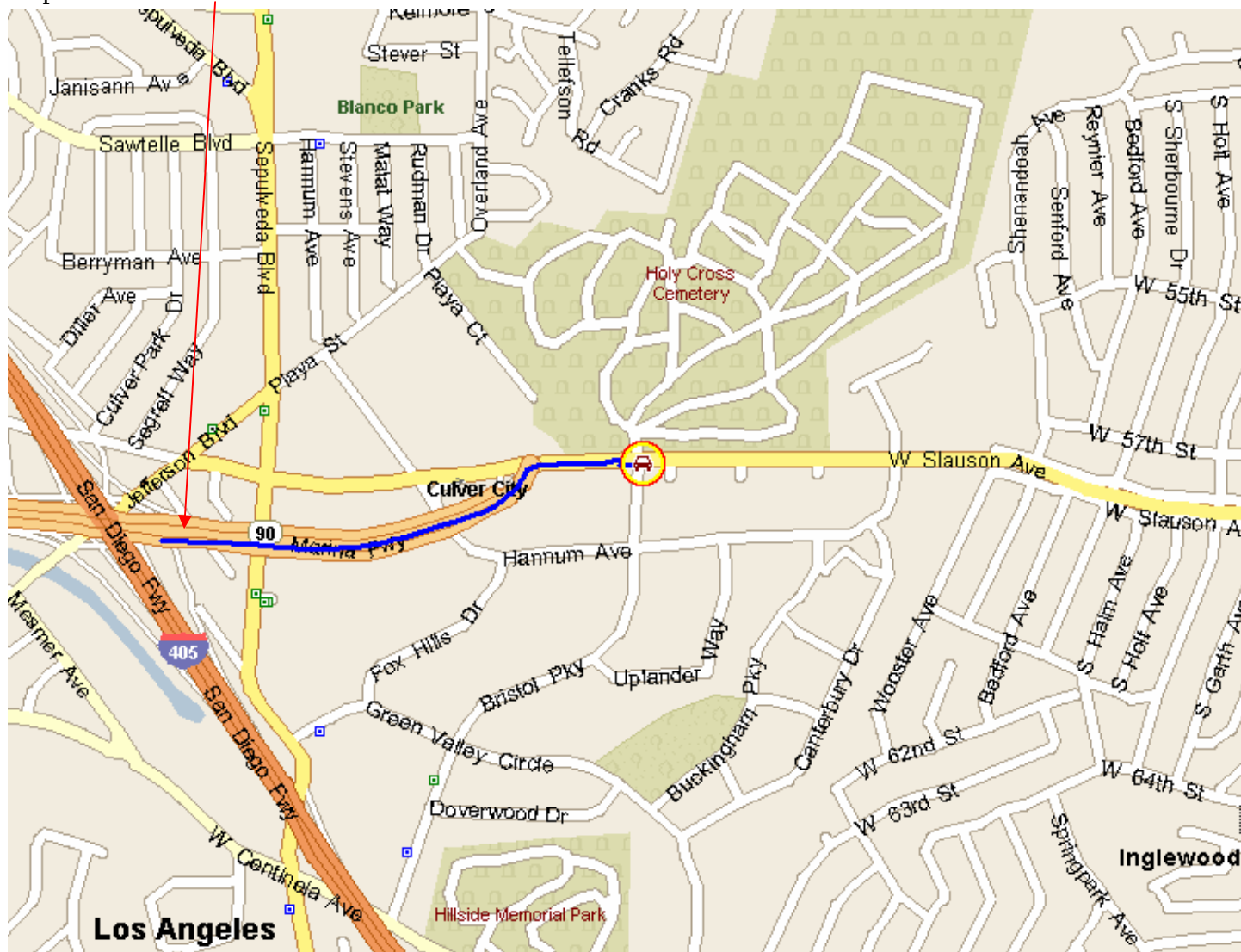
Step 9: To press “Play” button



Step 10: To select “Create GPS Trail” and “Track Position”



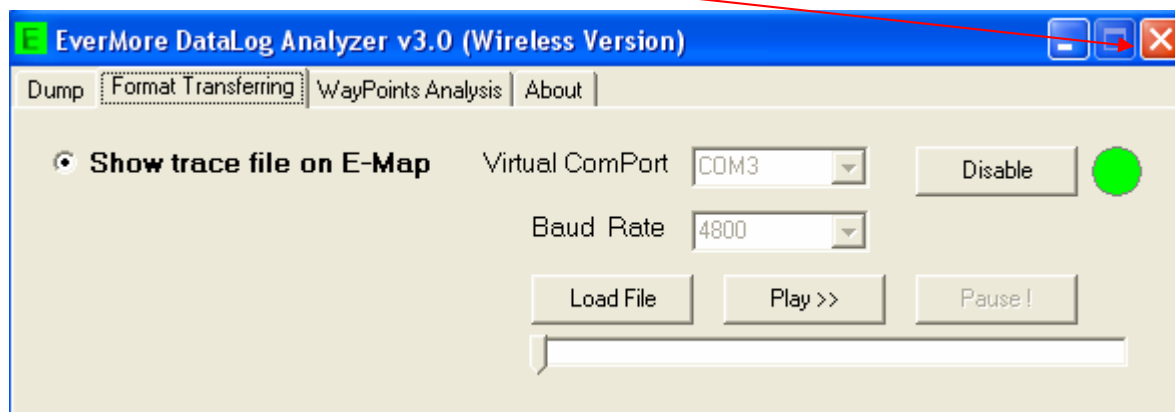
Step 11: The car trail



Step 12: To close streets & trips



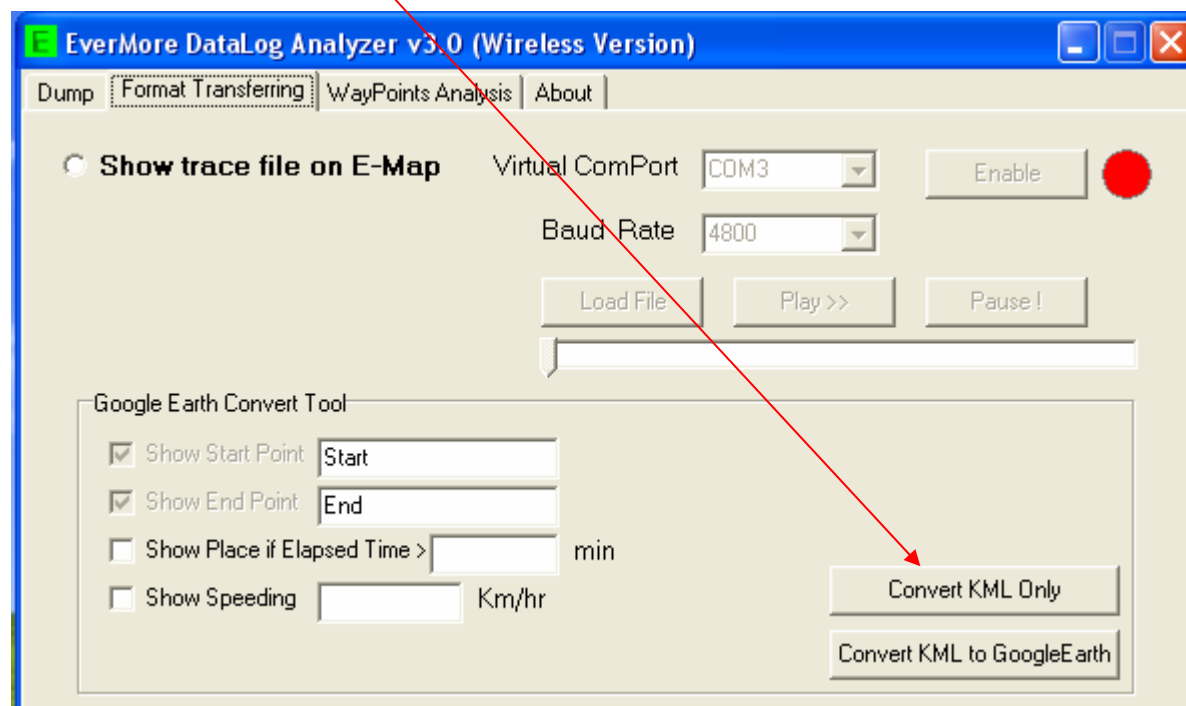
Step 13: To close datalog utility



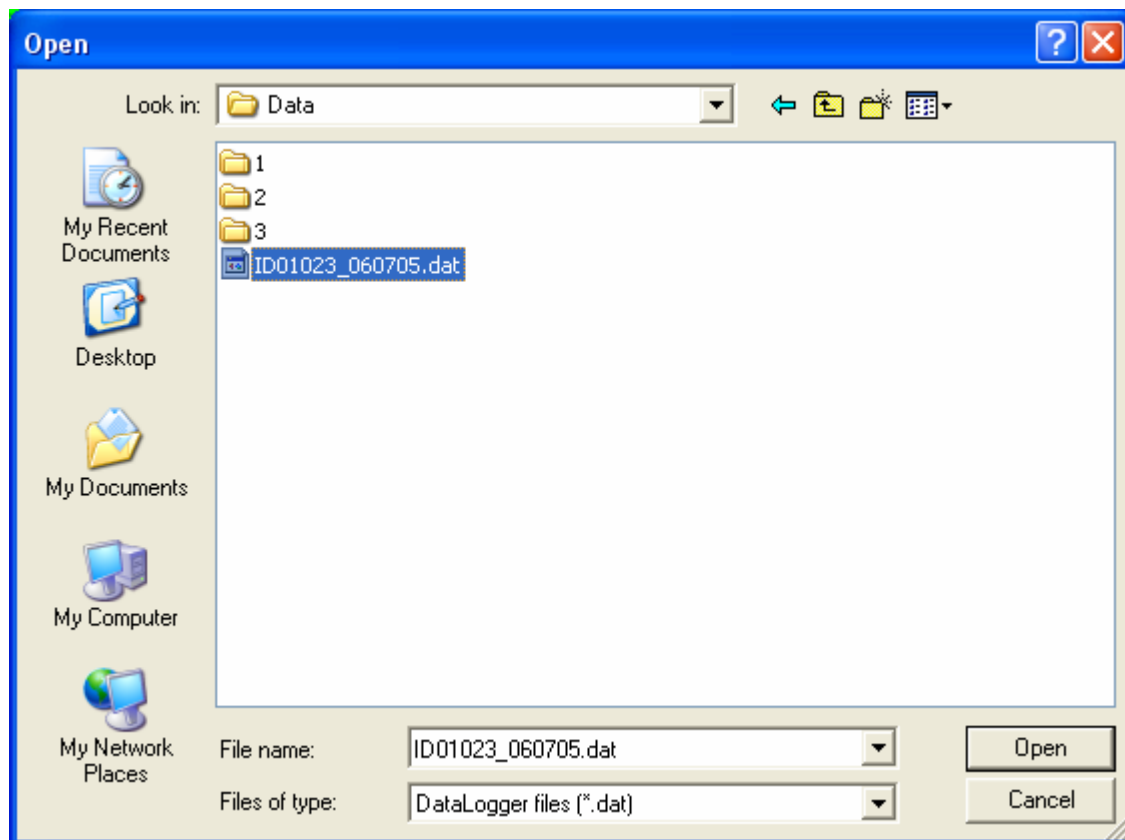
6.3.2 Google Earth Convert tool

How to setup Convert KML Only

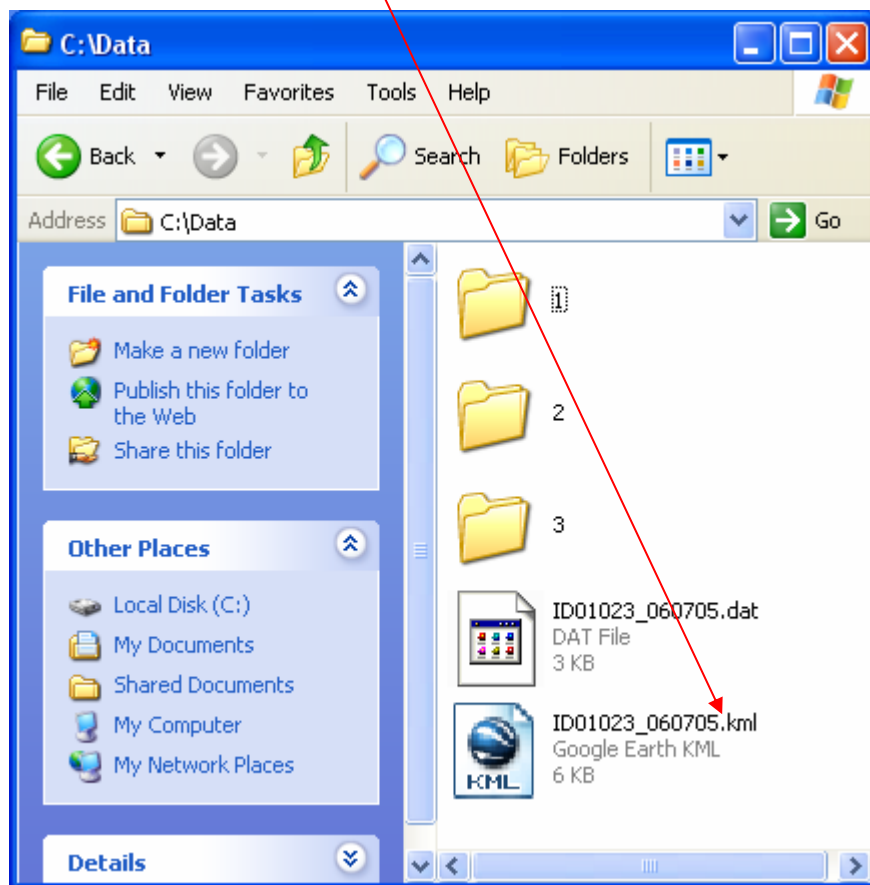
Step 1: To press “Convert KML Only” button



Step 2: To open a file

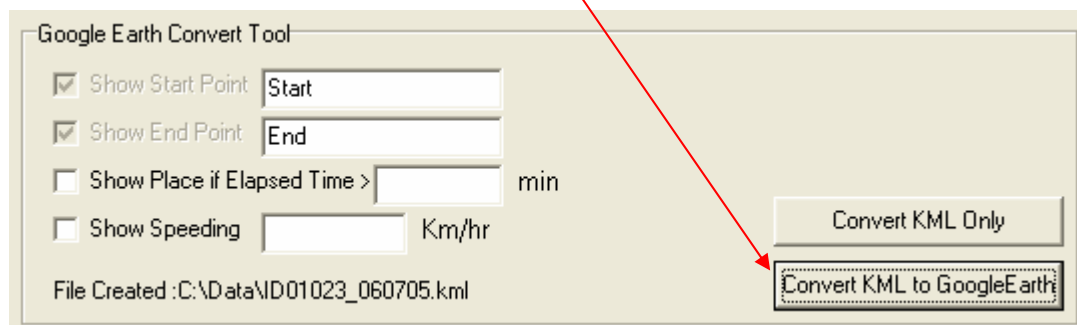


Step 3: To check a produce KML file

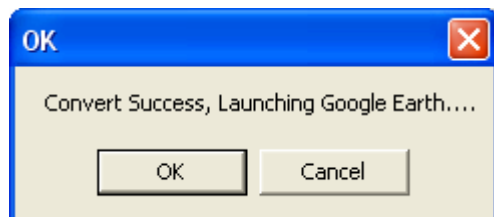


How to setup Convert KML to Google Earth

Step 1: To press “Convert KML to Google Earth” button



Step 2: To press “OK” button

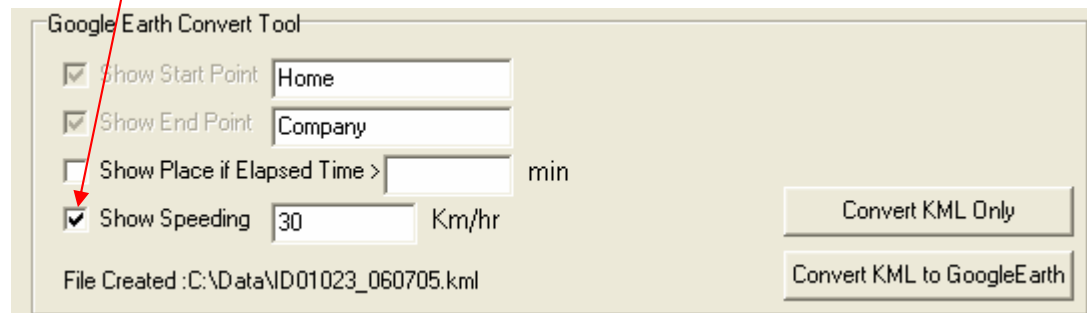


Step 3: Google Earth will pop up

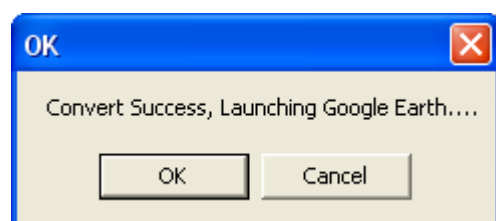


How to setup Convert KML to Google Earth and show speeding

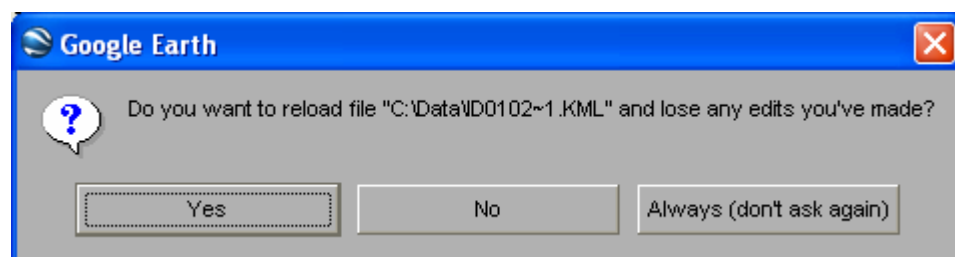
Step 1: To press “Convert KML to Google Earth” button



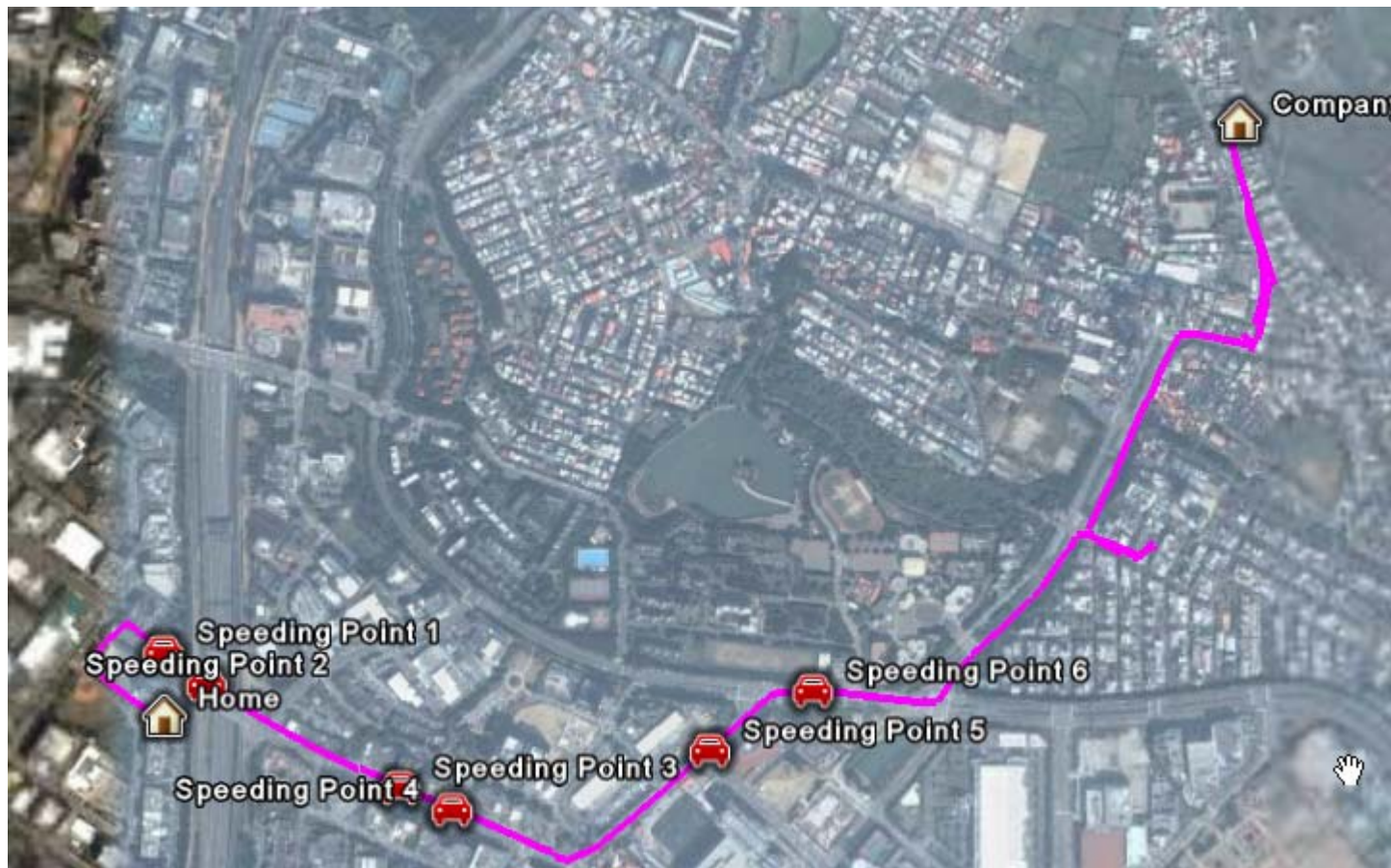
Step 2: To press “OK” button



Step 3: To press “Yes” button



Step 4: Google Earth will pop up



How to setup Convert KML to Google Earth and show stay time

Step 1: To press “Convert KML to Google Earth” button

Google Earth Convert Tool

☒ Show Start Point

Home

☒ Show End Point

Company

☒ Show Place if Elapsed Time > 1 min

☐ Show Speeding

30

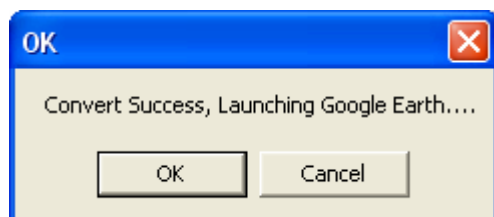
 Km/hr

Convert KML Only

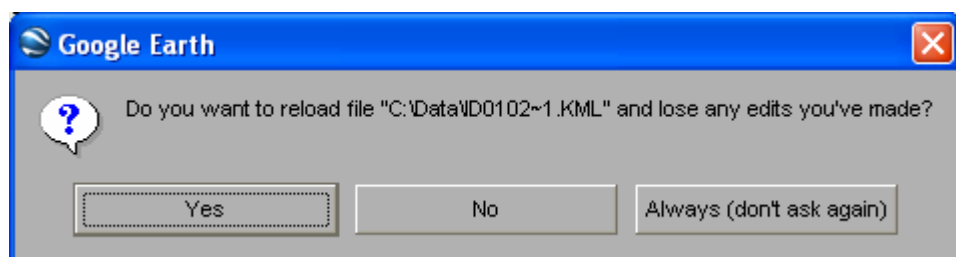
Convert KML to GoogleEarth

File Created : C:\Data\ID01023_060705.kml

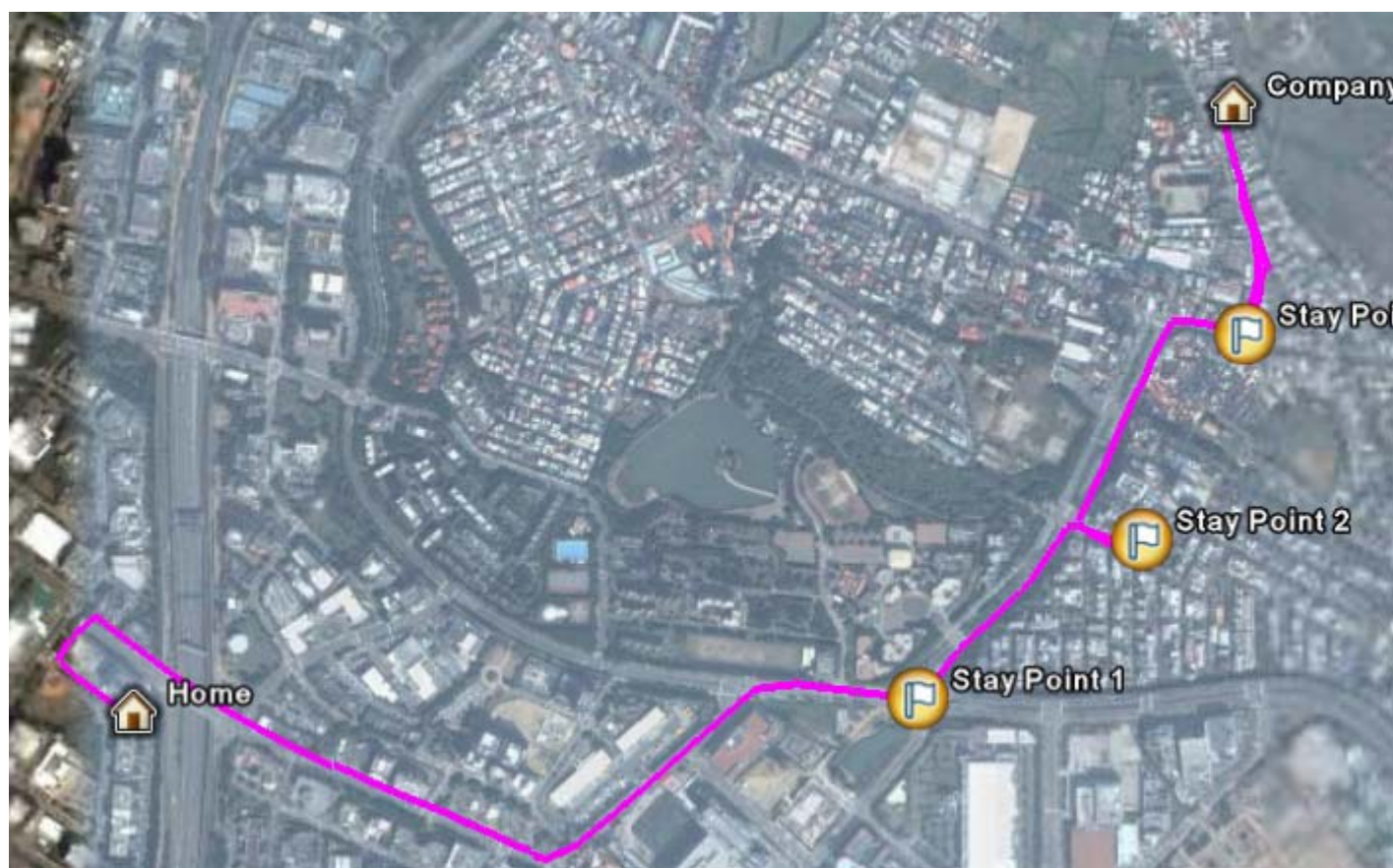
Step 2: To press “OK” button



Step 3: To press “Yes” button



Step 4: Google Earth will pop up

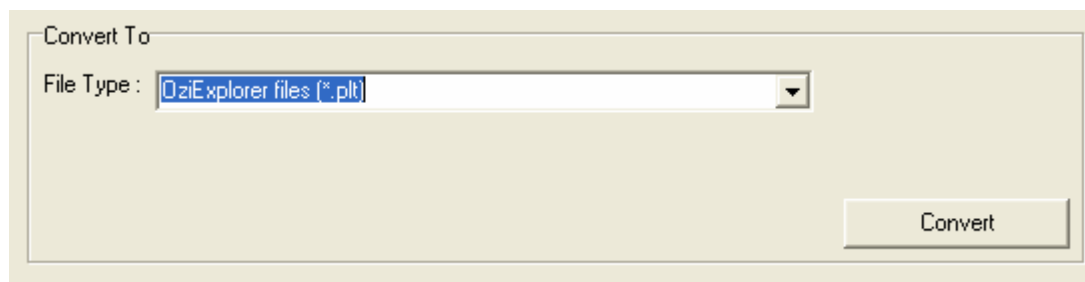


6.3.3 Converting files

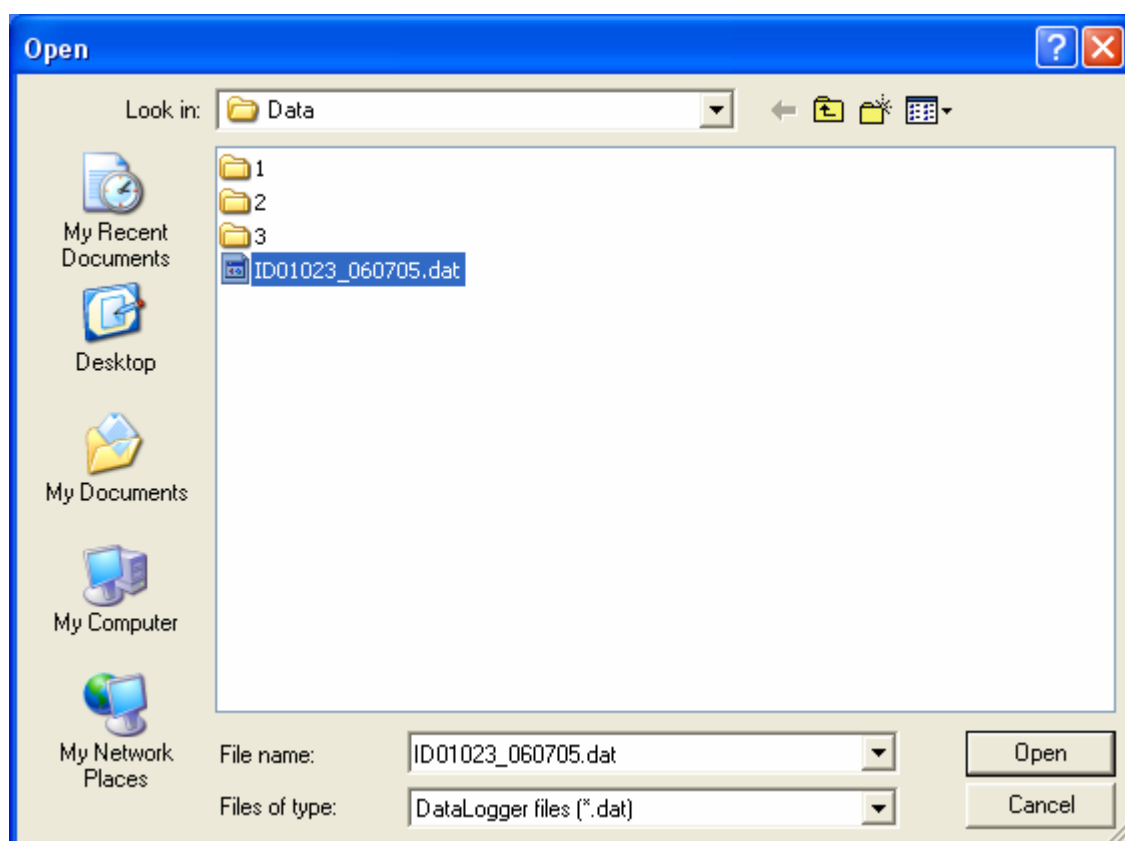
How to Convert OziExplorer files

This *.plt format can fit “OziExplorer” software

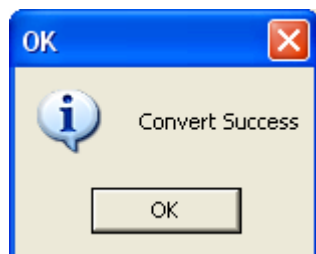
Step 1: To select *.plt and to press “Convert” button



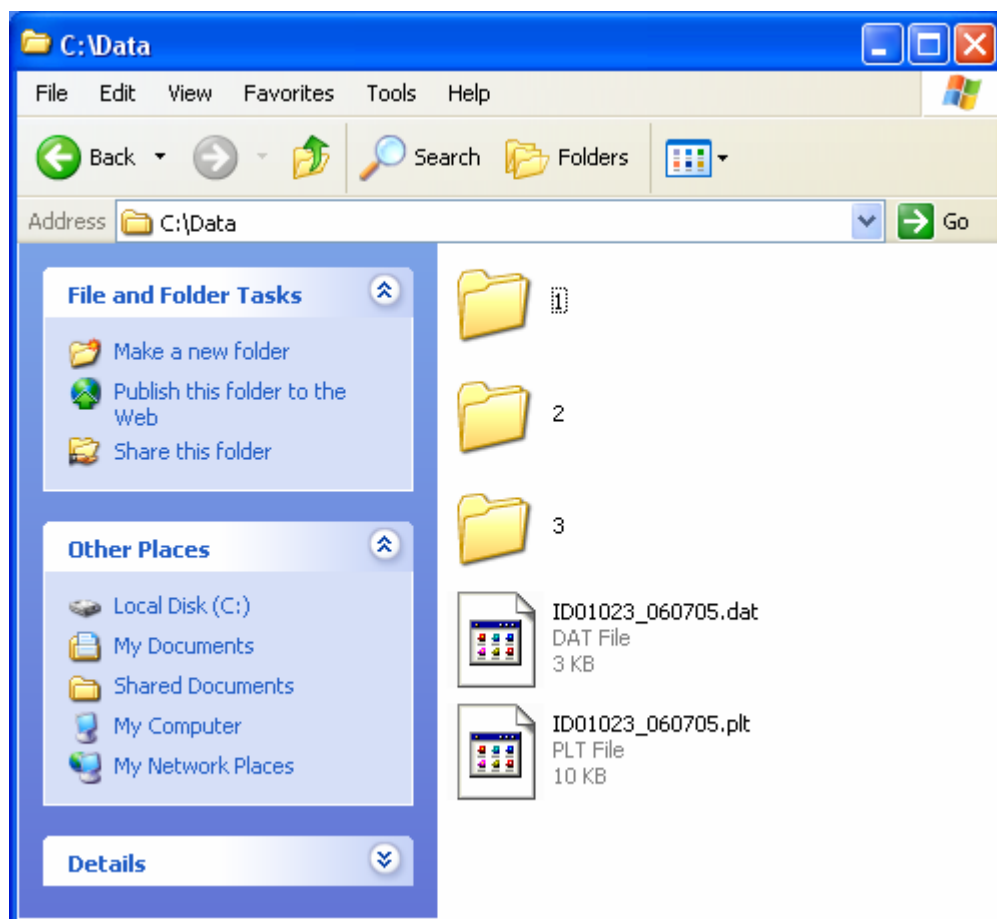
Step 2: To open a file



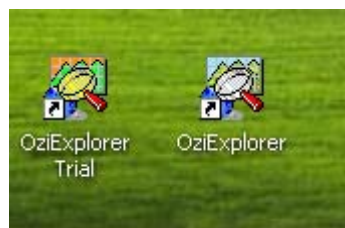
Step 3: To press “OK” button



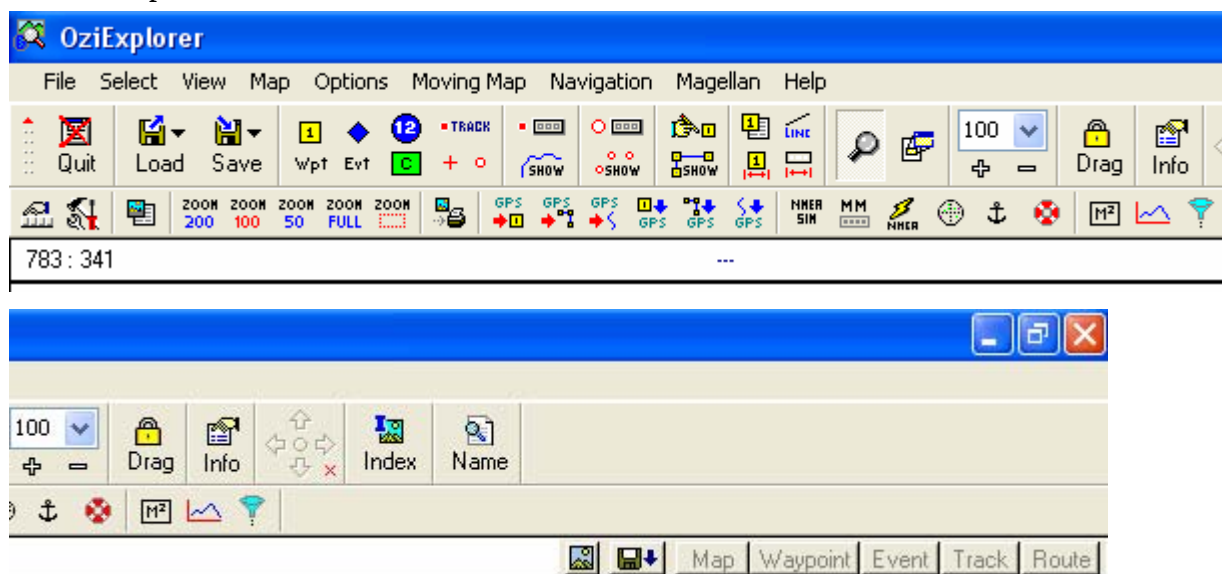
Step 4: To check *.plt file



The OziExplor icons

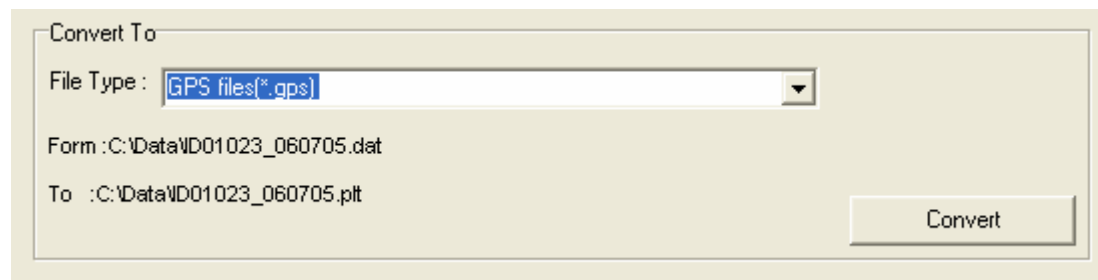


The OziExplor contents

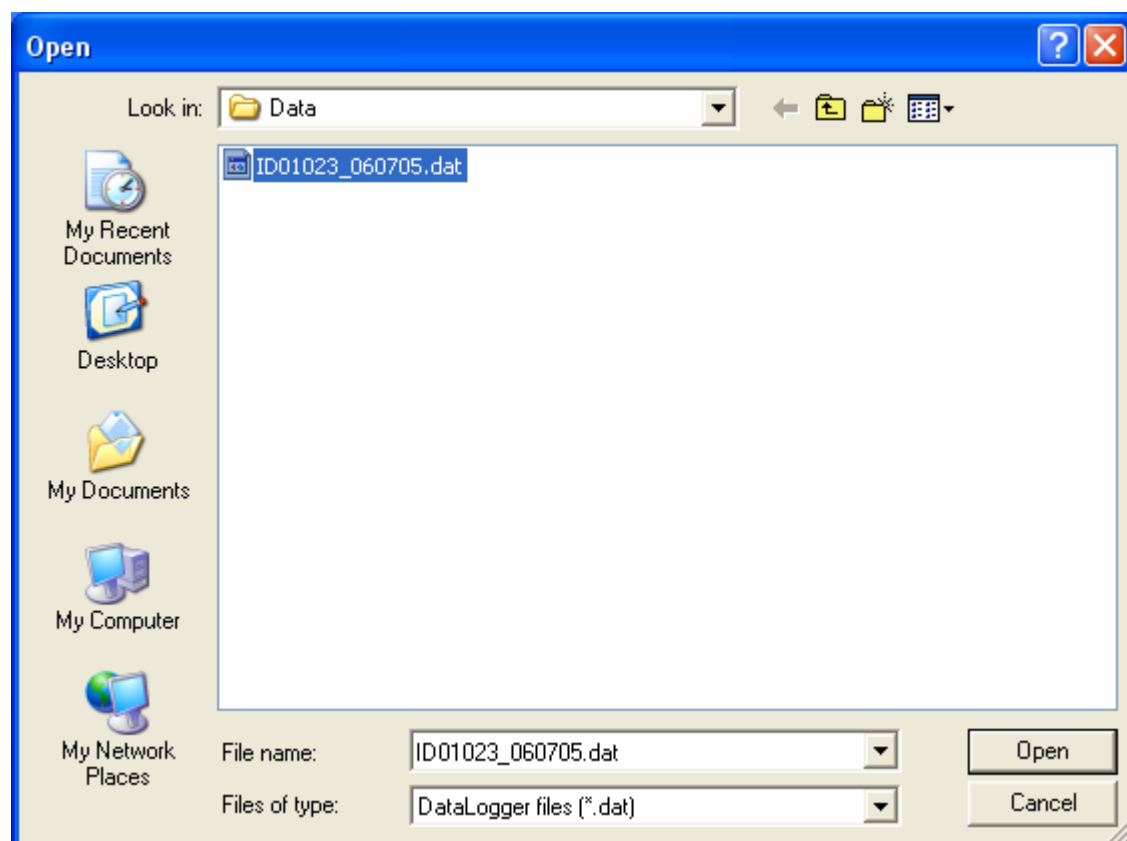


How to Convert GPS files

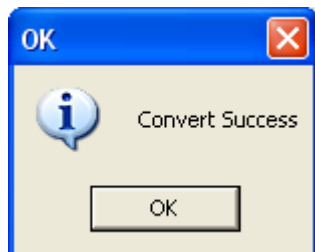
Step 1: To select *.gps and to press “Convert” button



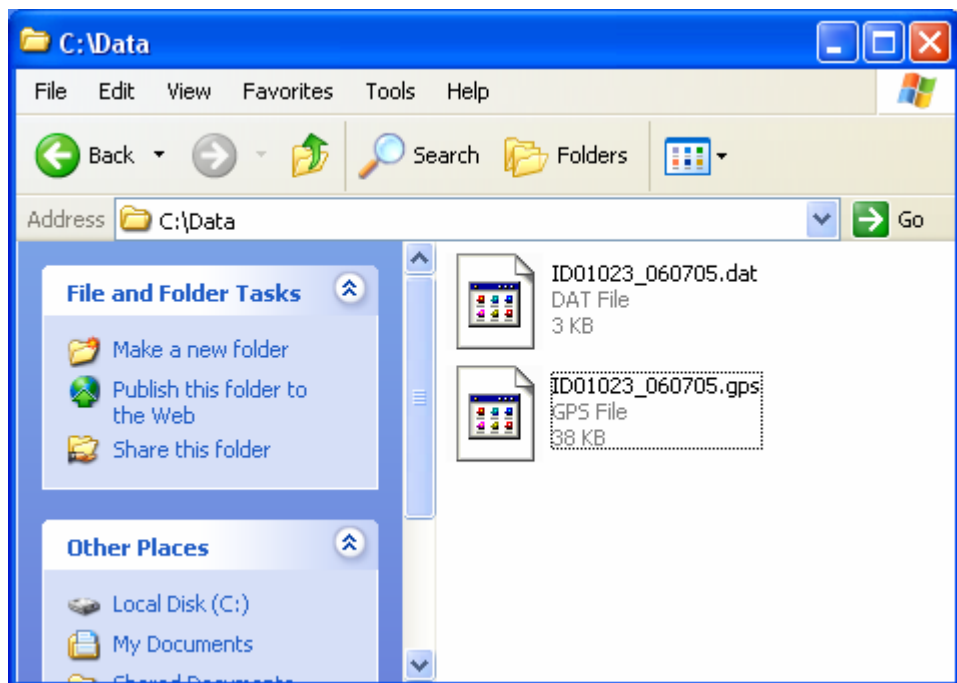
Step 2: To open a file



Step 3: To press “OK” button



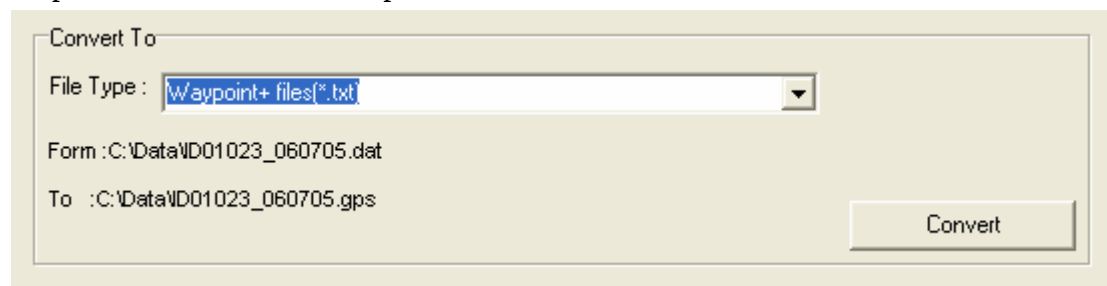
Step 4: To check *.gps file



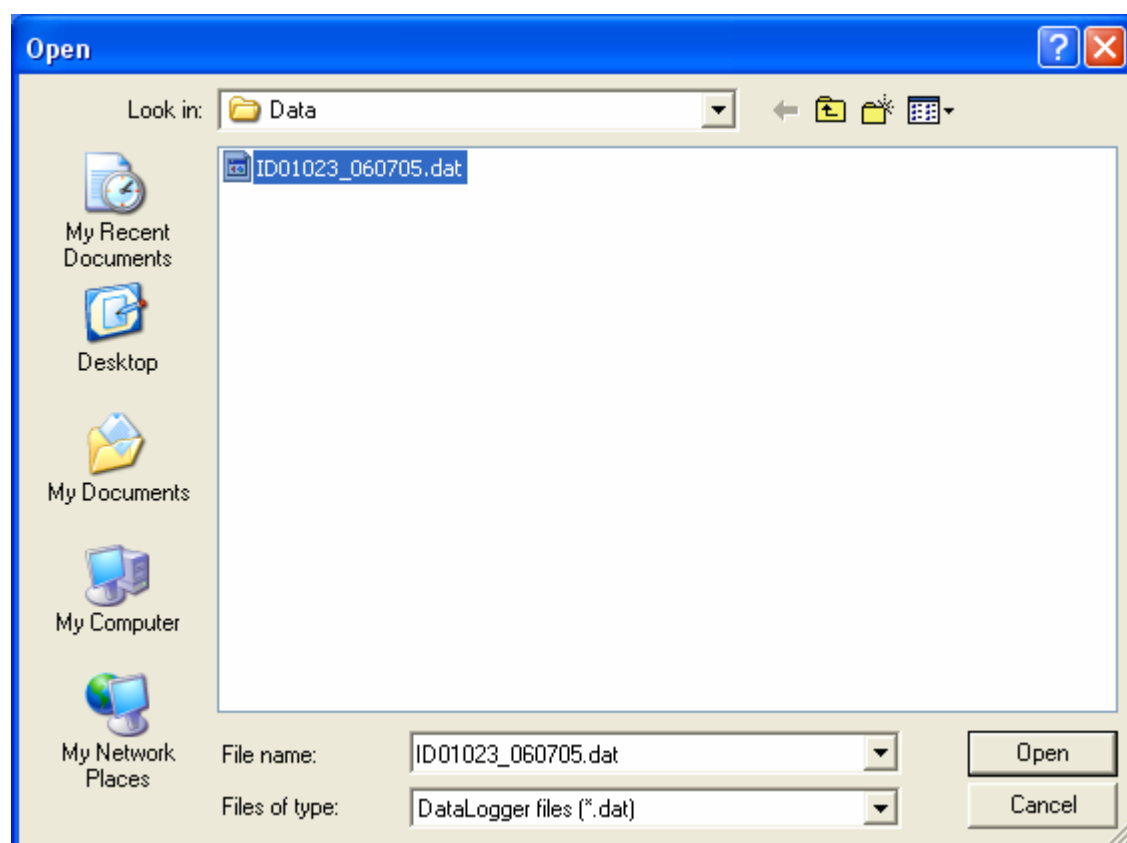
How to Convert Waypoint files

This *.txt format can fit “Pa Pa Go” e-map

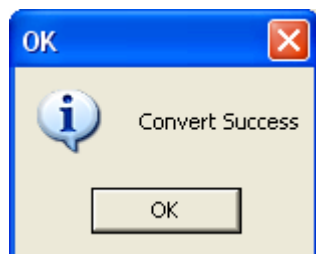
Step 1: To select *.txt and to press “Convert” button



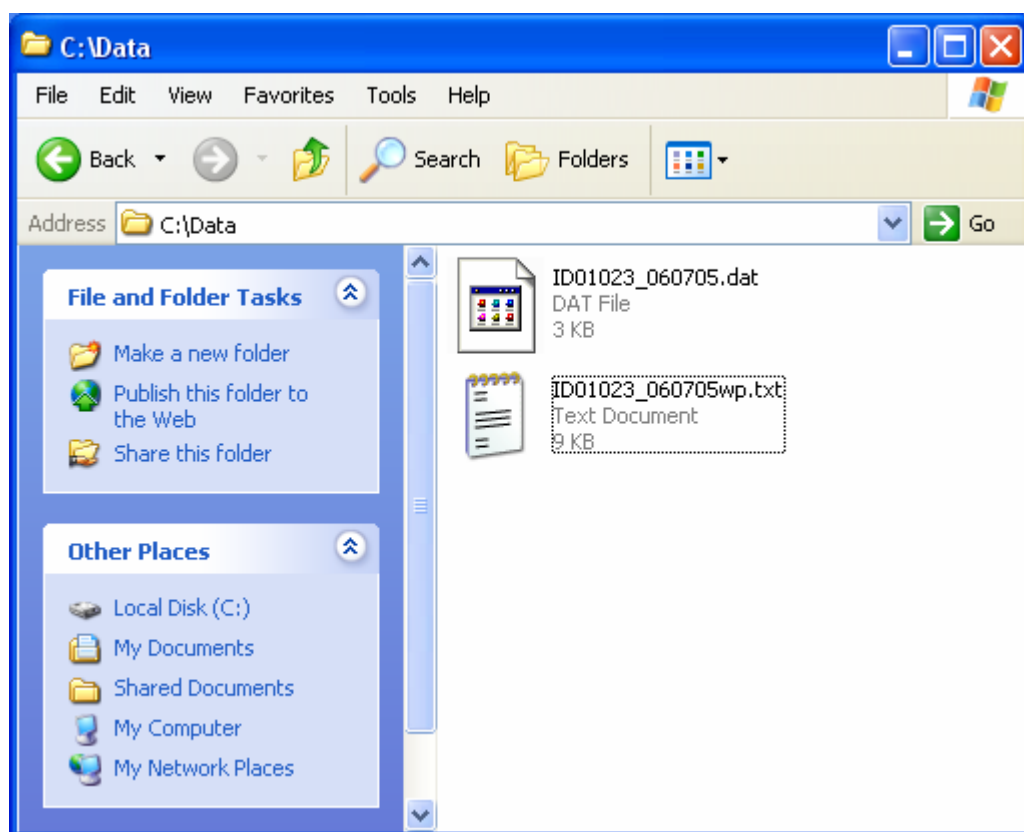
Step 2: To open a file



Step 3: To press “OK” button



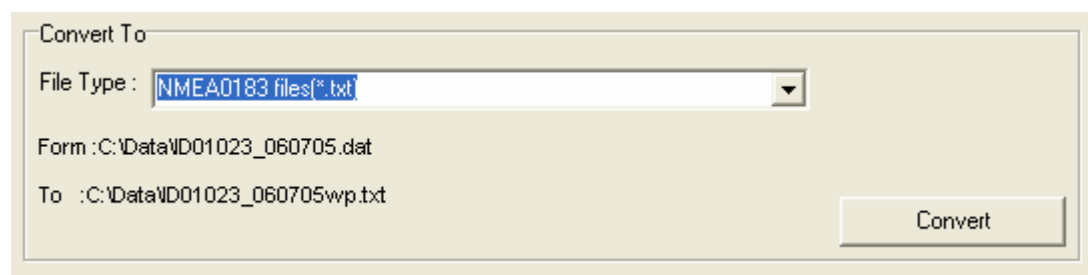
Step 4: To check *.txt file



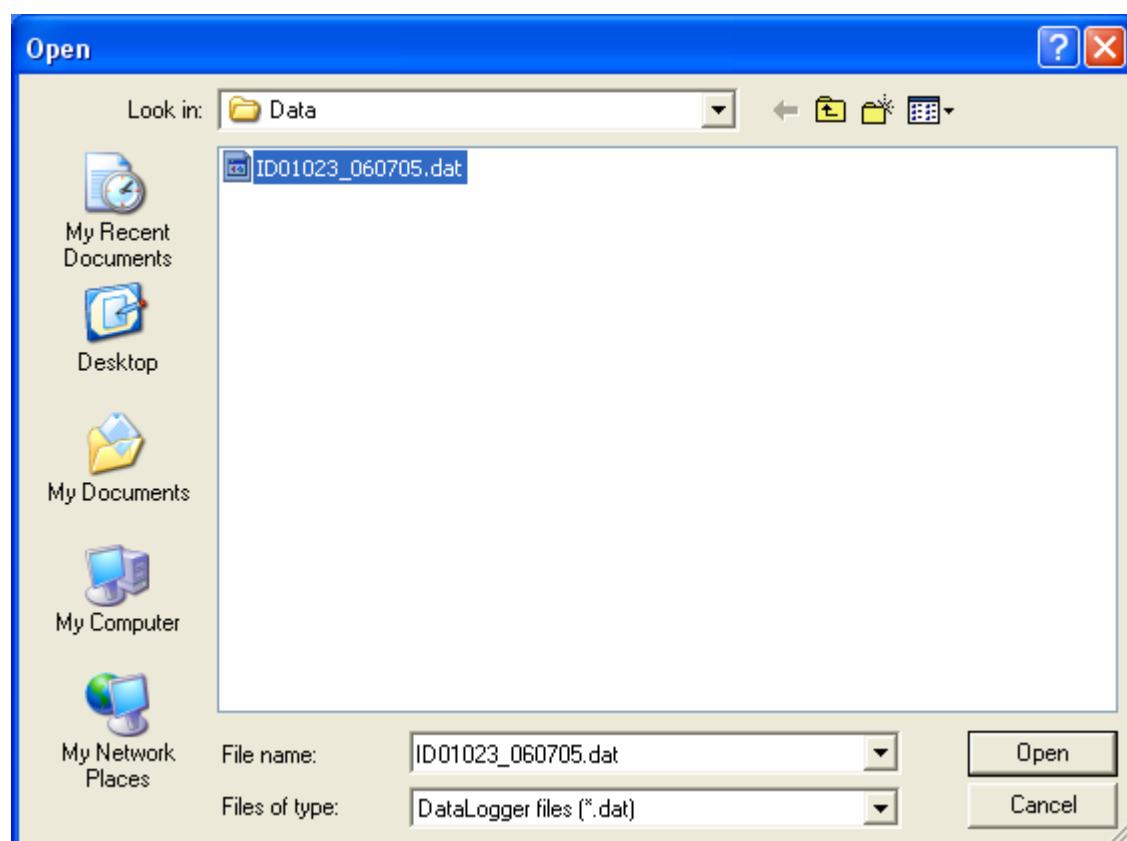
How to Convert NMEA0183 files

This *.txt format can fit “GPSView” test tool.

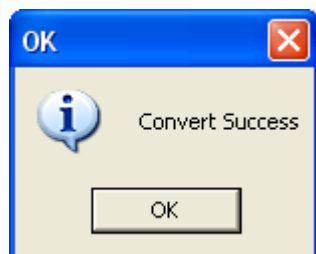
Step 1: To select *.txt and to press “Convert” button



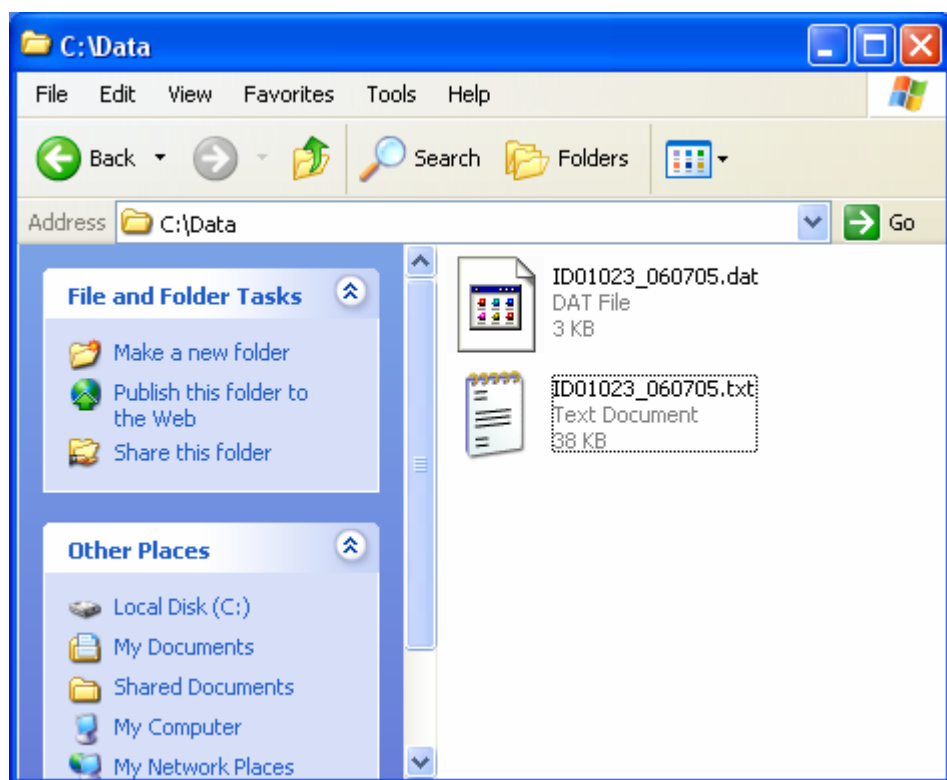
Step 2: To open a file



Step 3: To press “OK” button



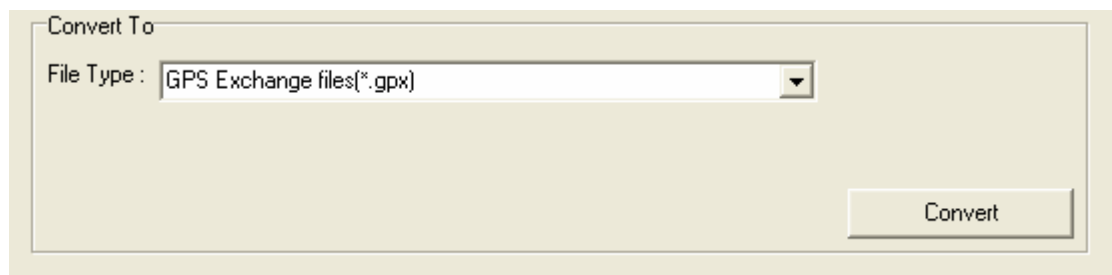
Step 4: To check *.txt file



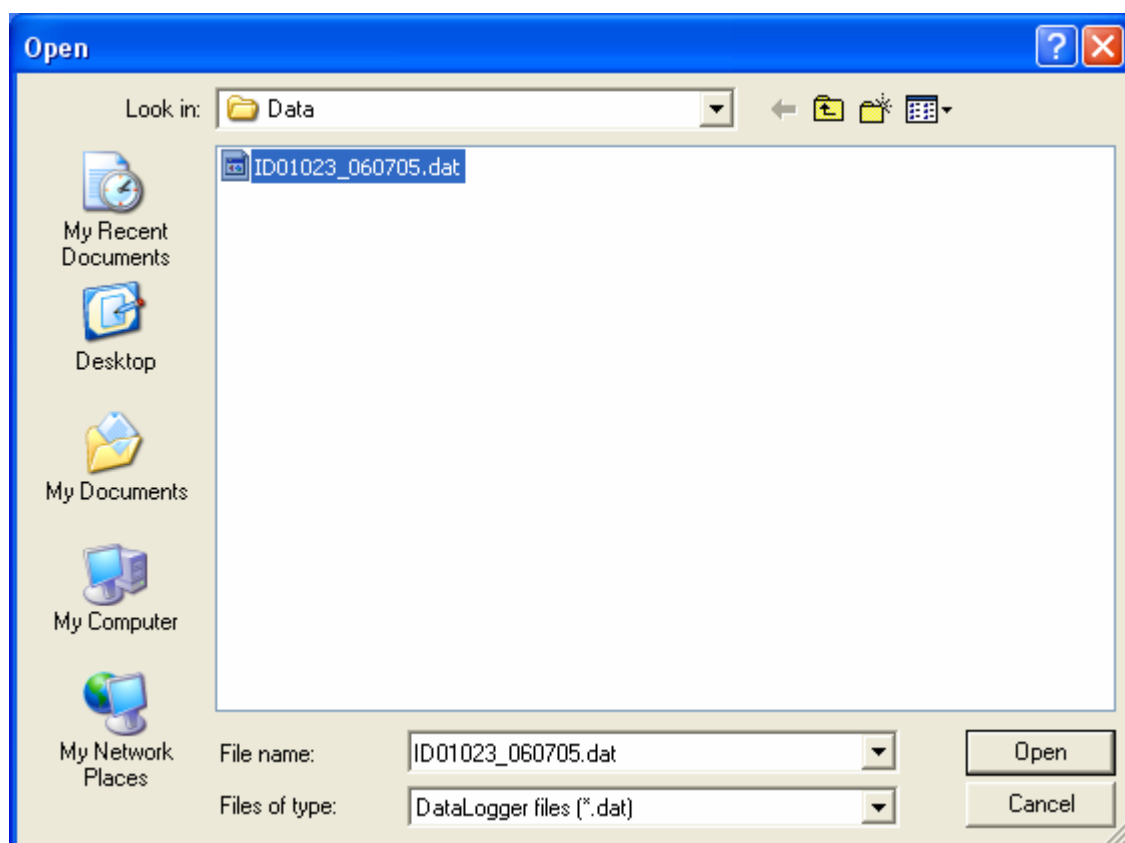
How to Convert GPS Exchanges files

This *.gpx format can fit “Microsoft Streets & Trips” e-map

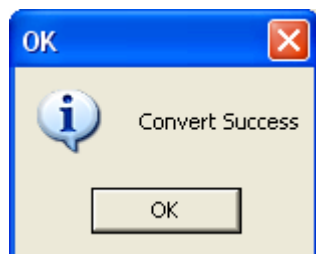
Step 1: To select *.gpx and to press “Convert” button



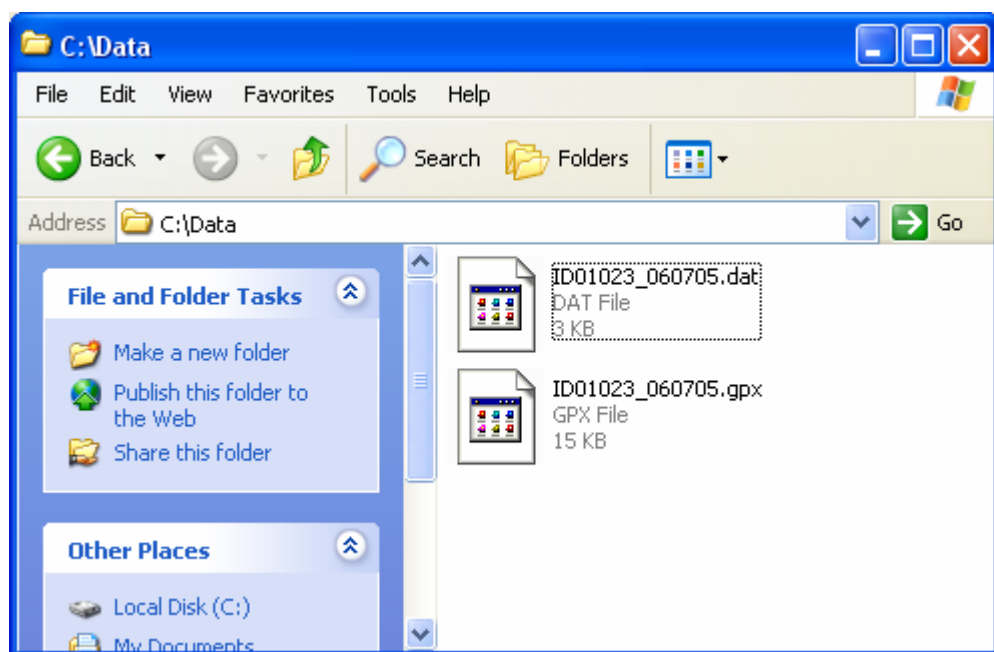
Step 2: To open a file



Step 3: To press “OK” button

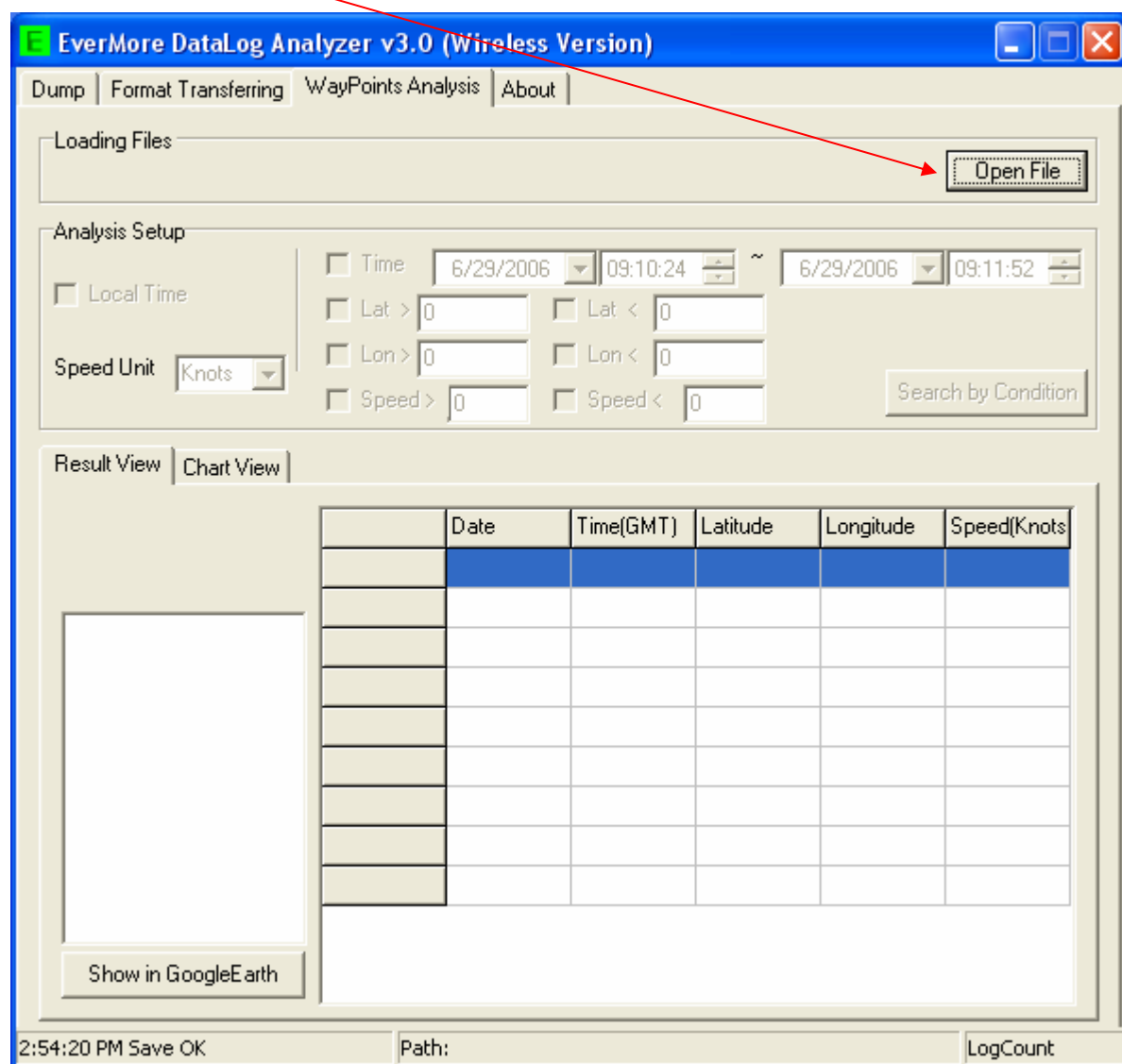


Step 4: To check *.gpx file

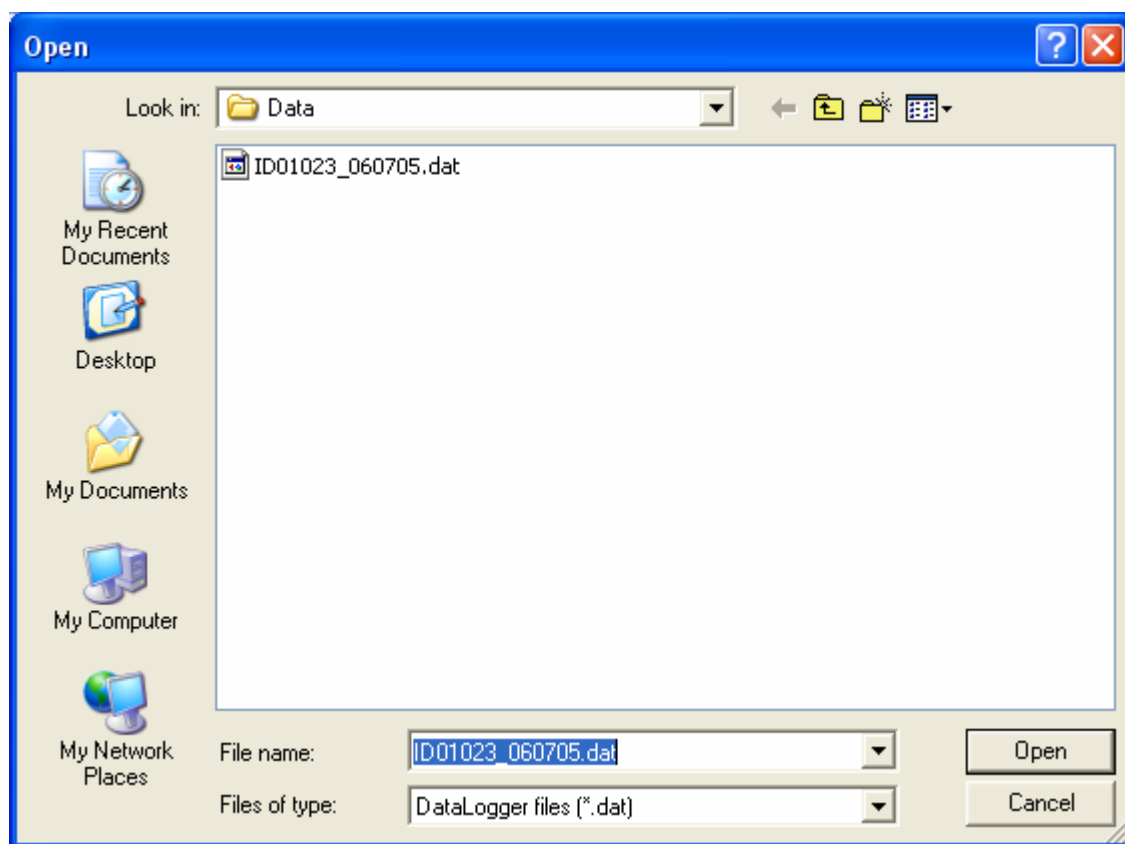


6.4 WayPoints Analysis

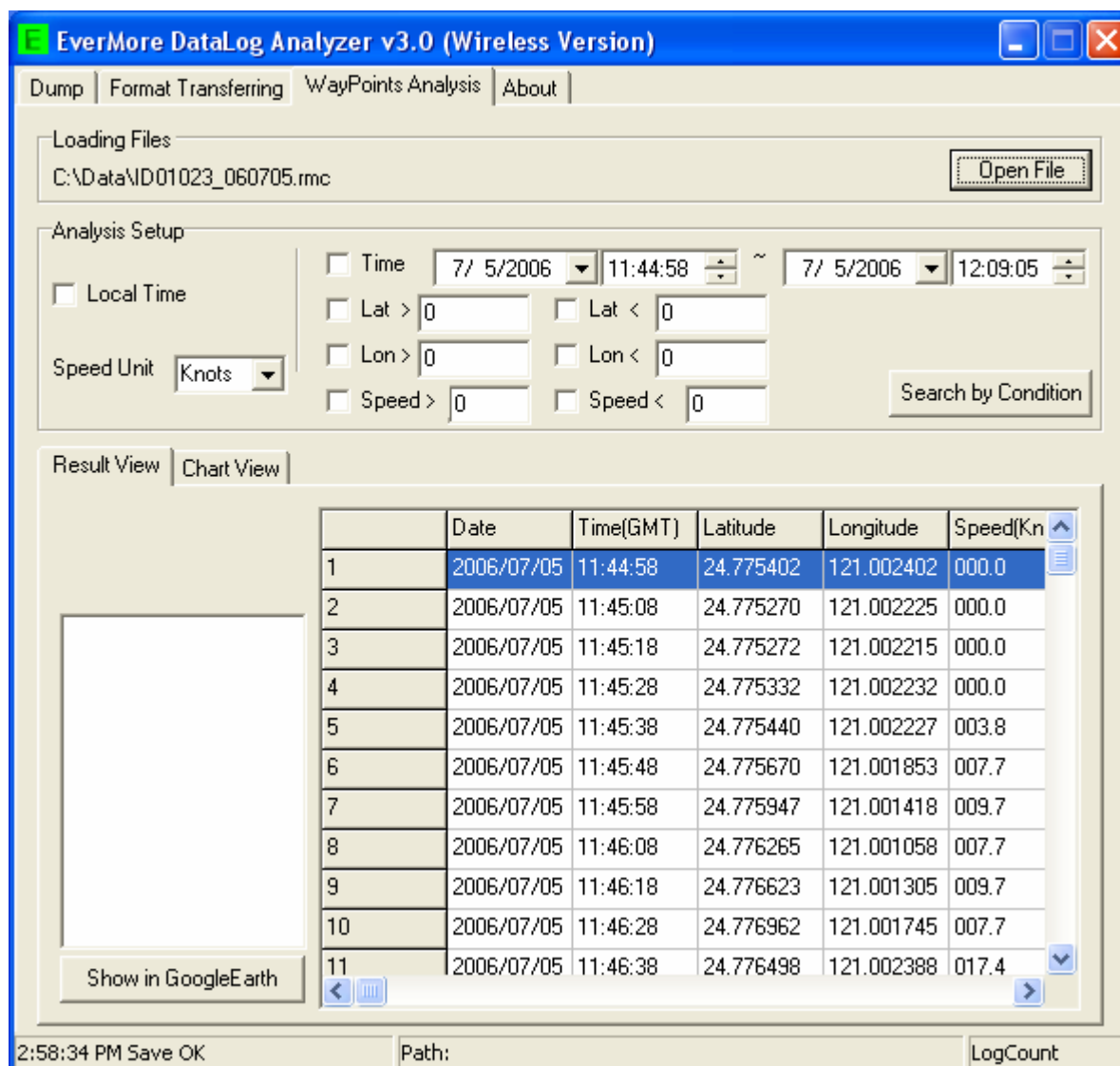
Step 1: To press “Open File” button



Step 2: To open a file



Step 3: To load data into table



EverMore DataLog Analyzer v3.0 (Wireless Version)

Dump | Format Transferring | **WayPoints Analysis** | About

Loading Files
C:\Data\ID01023_060705.rmc Open File

Analysis Setup

☐ Time 7/ 5/2006 11:44:58 ~ 7/ 5/2006 12:09:05

☐ Local Time

Speed Unit Knots

☐ Lat > 0 ☐ Lat < 0

☐ Lon > 0 ☐ Lon < 0

☐ Speed > 0 ☐ Speed < 0 Search by Condition

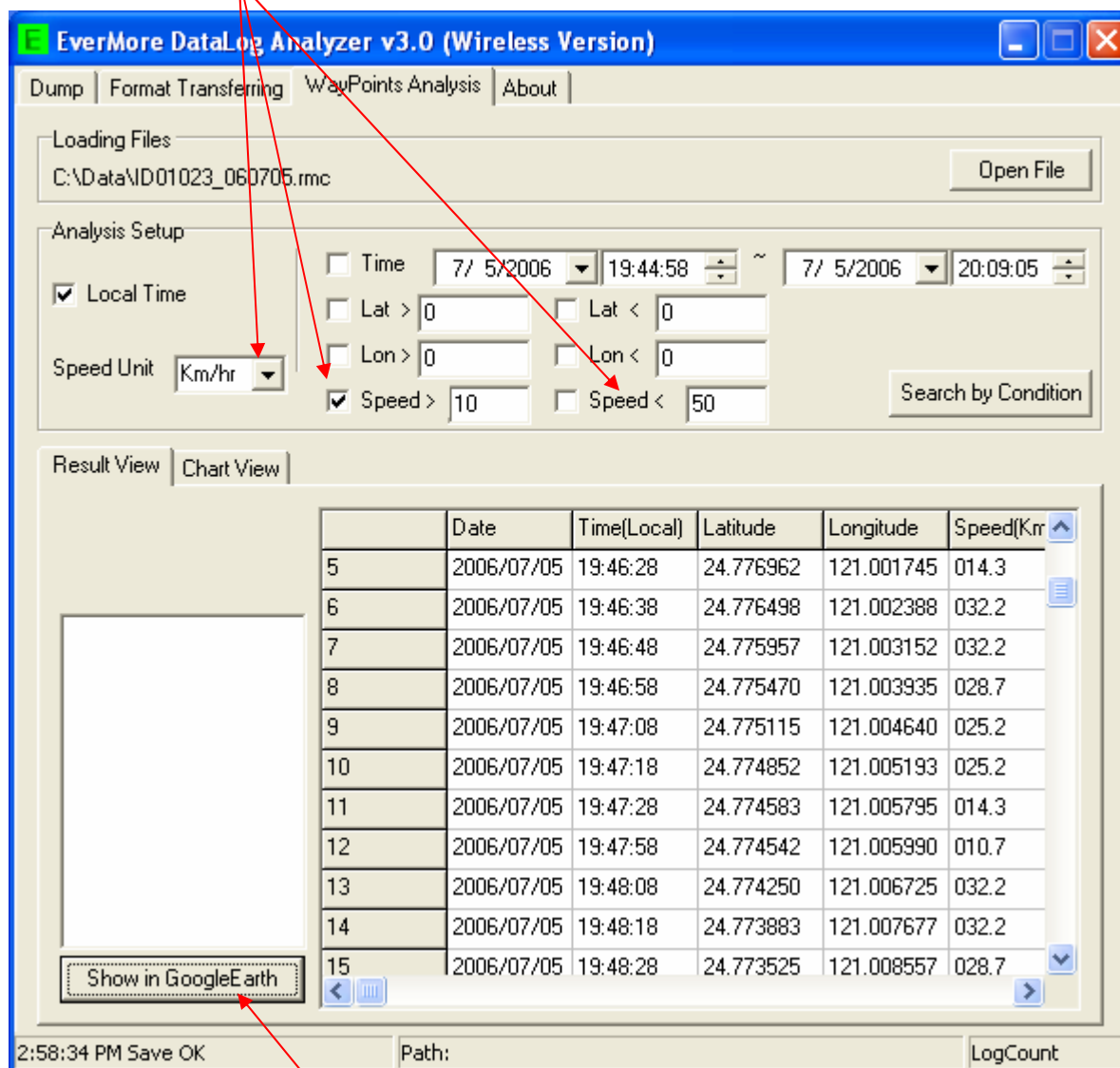
Result View | Chart View

	Date	Time(GMT)	Latitude	Longitude	Speed(Kn)
1	2006/07/05	11:44:58	24.775402	121.002402	000.0
2	2006/07/05	11:45:08	24.775270	121.002225	000.0
3	2006/07/05	11:45:18	24.775272	121.002215	000.0
4	2006/07/05	11:45:28	24.775332	121.002232	000.0
5	2006/07/05	11:45:38	24.775440	121.002227	003.8
6	2006/07/05	11:45:48	24.775670	121.001853	007.7
7	2006/07/05	11:45:58	24.775947	121.001418	009.7
8	2006/07/05	11:46:08	24.776265	121.001058	007.7
9	2006/07/05	11:46:18	24.776623	121.001305	009.7
10	2006/07/05	11:46:28	24.776962	121.001745	007.7
11	2006/07/05	11:46:38	24.776498	121.002388	017.4

Show in GoogleEarth

2:58:34 PM Save OK Path: LogCount

Step 4: To set condition

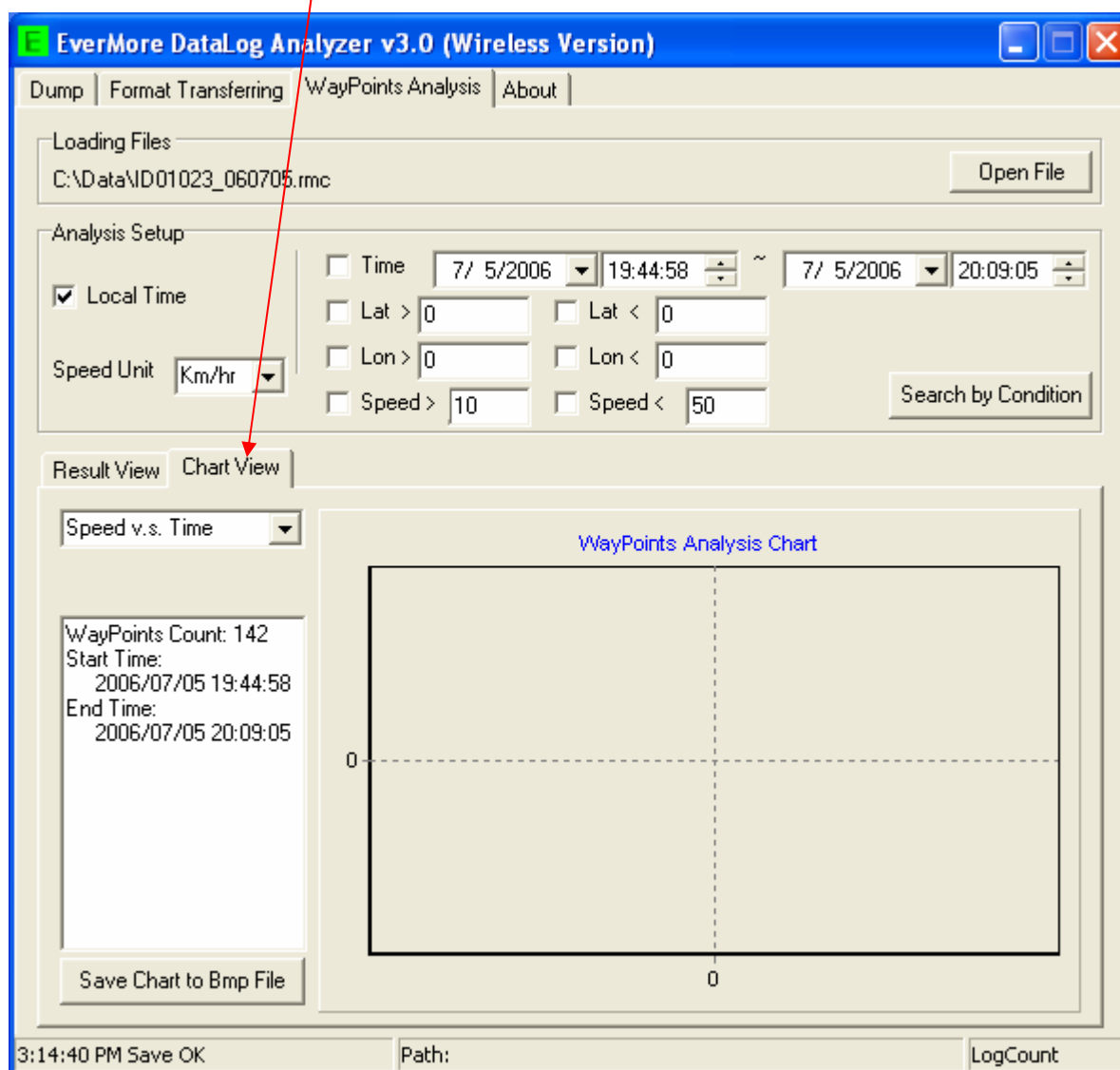


Step 5: To press “Show in Google Earth” button

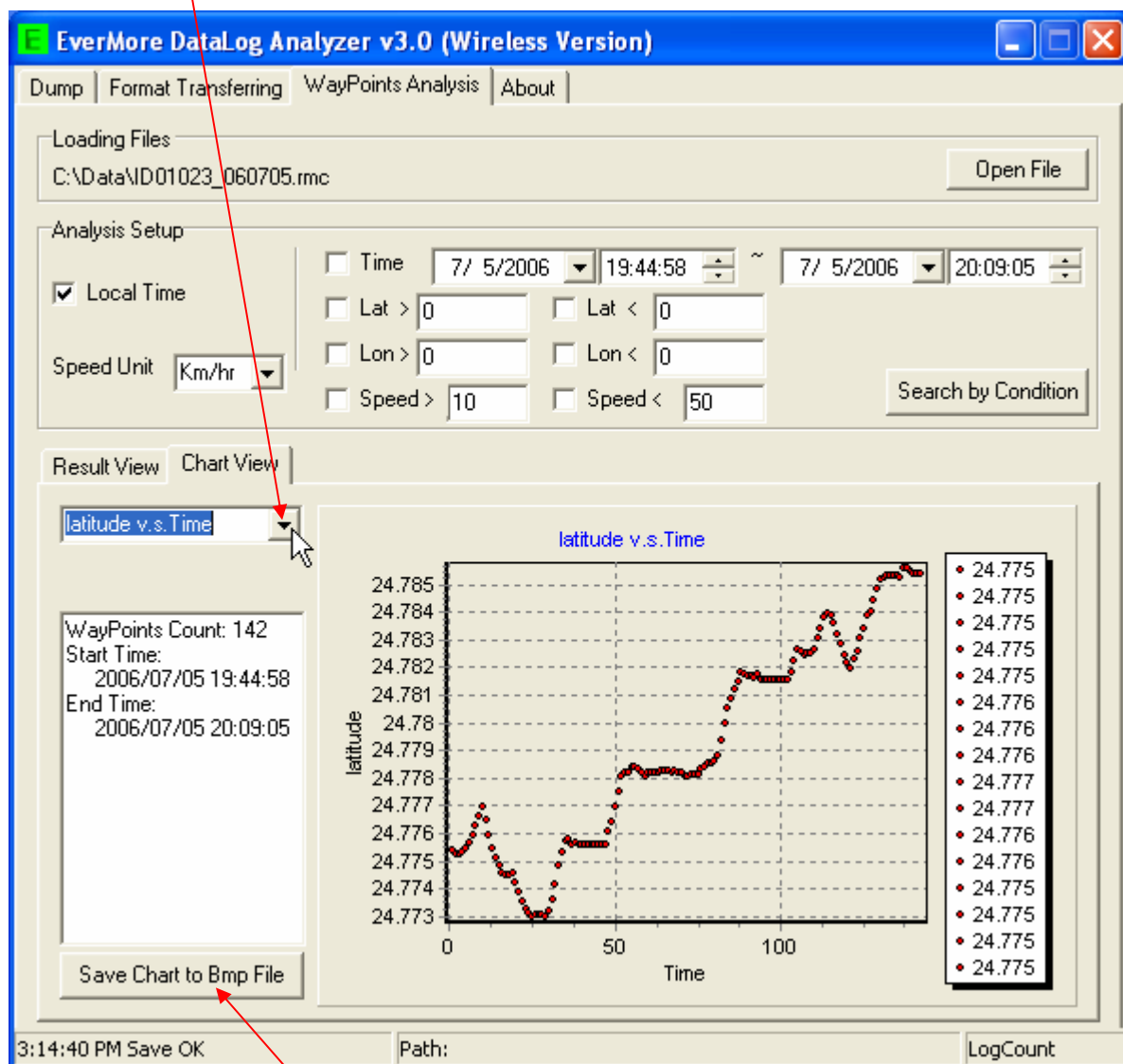
Step 6: The Google Earth will pop up



Step 7: To select "Chart View"

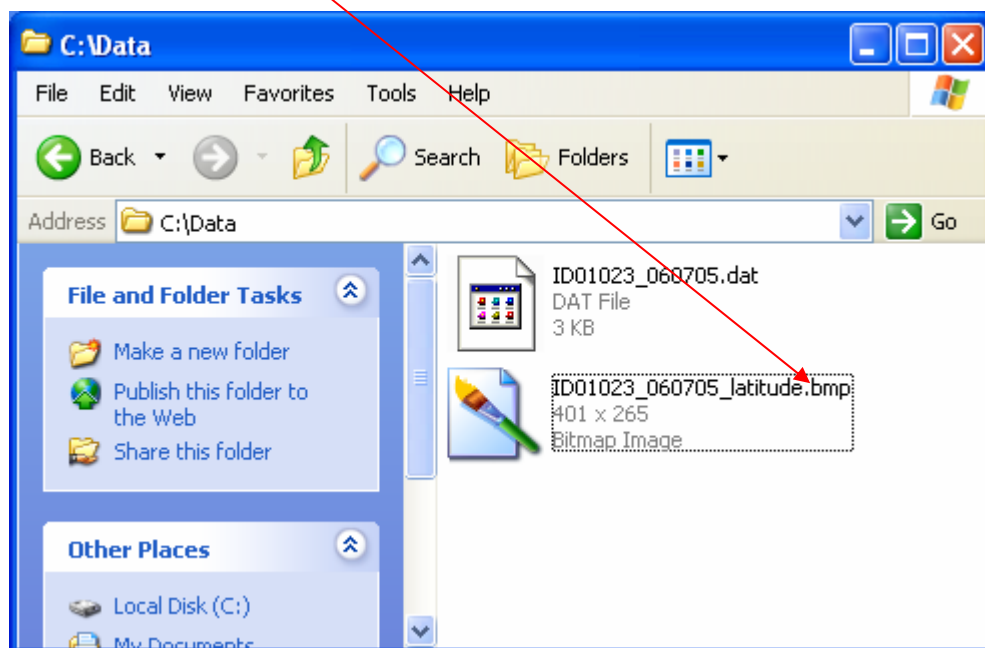


Step 8: To select X, Y parameters



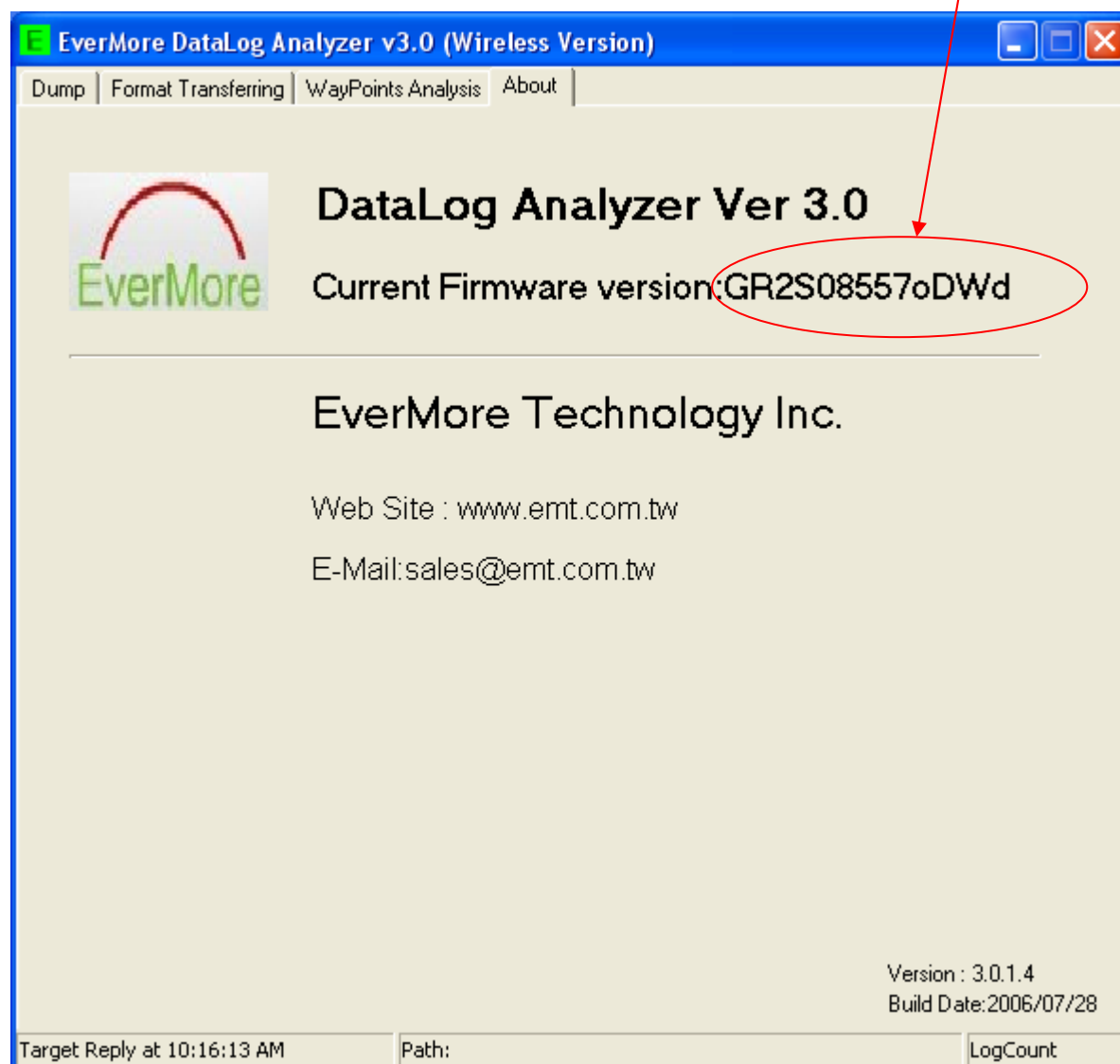
Step 9: To press “Save Chart Bmp File” button

Step 10: To check a BMP file



6.5 About

It shows out firmware version



7. Limited Warranty

The DL-200BT is warranted to be free from defects in material and functions for one year from the date of purchase. Any failure of this product within this period under normal conditions will be replaced at no charge to the customers

8. Appendix

EverMore Website

Welcome to EverMore website at <http://www.emt.com.tw> or <http://www.globalsources.com/gpsevermore.co> for updated product information and drivers download.

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