

Short user's guide for the MrGPSViewer utility

This utility is intended to monitor basic signal strength, position, speed, direction, and time information provided by the GPS CFcard. It can also be used to re-initialize an approximate position of the receiver. This function is useful when the initial position is known to be incorrect, for example when the receiver is powered down, put on a plane, flown 5,000 km, and then started again. It can also be used the very first time the GPS CFcard is operated, when a valid almanac has been pre-loaded at manufacturing time, but when the position information is not valid.

First Step: Launch the MrGPSViewer, open the serial communication port with the GPS CFcard

On your Handheld, plug-in the GPS CFcard and then click on the MrGPSViewer icon in the Program folder.

When opened, select the Tab #1: Control. Select the "COM Port" number to which your GPS CFcard device is connected, between 1 and 16 *1. Then select the "Baudrate" to communicate with your GPS CFcard, 4800 or 9600 bits/s. Then click on "Open Port". At this point you should see NMEA character strings popping up in the display area in the middle of the screen

Note *1) To check the serial COM port number assigned to the GPS CF GPS card it is suggested to a utility that run on the Pocket PC platform such as device manager. The following URL address proposes such kind of freeware: <http://www.phm.lu/Products/PocketPC/>

```
$GPGGA,190956.0,4631.00849,N,00634.20190,E,  
1,07,1.16,00387,M,048,M,,*51  
$GPGSA,A,3,02,06,15,17,22,23,25,,,,,2.58,1.16,2.  
31*0B  
$GPRMC,190956.0,A,4631.00849,N,00634.20190,  
E,000.0,143.7,011102,01.9,W*4C
```

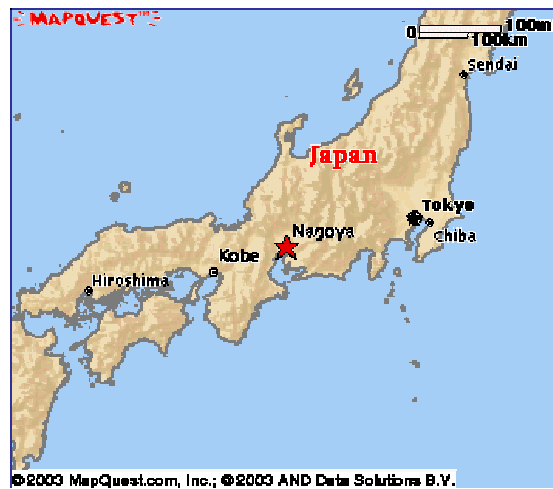
At this point the MrGPSViewer is running and connected to the GPS CFcard. If it is the very first time you operate the GPS card, or if you travel a couple thousands kilometers since the last time you turned your GPS card off, you should set up an approximate position for your receiver. Follow the Steps 2 to 3 below.

Second Step: Set up the very first approximate position or a new approximate position

When the COM port is opened (refer to Step 1 above) and the GPS CFcard is running, select the Tab #3: New Position. Select the zone / continent where you are located among those listed under "Zone". Example: Asia.

Then select the country or island where you are located among those listed under "Country". Example: Japan.

Then select the city or the closest city where you are located among those listed under "City or closest location". Example: if you are in Nagoya, select Tokyo. Do not worry if the proposed location is 500 km from where you are, since the system can accept inaccuracy of up to 2000 km.



Finally, click on “Apply” and confirm the selection.

Third Step: Verify you can have a position fix

When the new position is entered, select the Tab #2: Status. You will see the following information:

- “UTC time”: the UTC time as it is derived from the satellite(s) you have in view. This time information is accurate and does not depend on the real time clock system on your handheld
- “Latitude”, “Longitude”, and “Altitude” indicate your calculated current position
- “Direction” and “Speed” are valid when the GPS receiver is moving. Direction is displayed in degree, 0 being North, while the velocity is expressed in km per hour.
- “Acquiring” can be “No Fix” (no position fix), “2D” (position fix in 2D mode – Latitude, Longitude), or “3D” (2D and calculated altitude)
- “Total Sat” indicated the number of satellites in view
- “DOP” and “PDOP” show the Dilution Of Precision and Position DOP

Below this, the user will see a graphical representation of the satellites in view, and their carrier to noise ratio (a signal strength indicator).

After you set up a new position, as described under Step 2 above, the GPS receiver will store its new position in non volatile memory when it does its first position fix.

Important Note: Be sure you wait until the GPS receiver does a position fix after you set up a new location. Otherwise this new position will not be stored in non-volatile memory.

Additional features

Warm Reset, Cold Reset, Power Save and Recorder

Under the Tab #1: Control, you will see a couple of additional button for features that can be activated when the GPS CFcard is connected and running.

Click on “Warm Reset” if you would like to restart the GPS receiver, but keeping the Almanac, last position and time data valid

Click on “Cold Reset” if you would like to erase the Almanac, last position and time data and restart the GPS receiver. Important Note: By doing this, you will erase the almanac data in your GPS CFcard and it will take at least 12.5 minutes to collect them again with a clear sky view. It is strongly recommended to use this feature only when needed.

Click on "Power Save" if you would like to turn off the GPS receiver, but keep its power supply, so it does not lose data. The display will change to "Wake up". Click on it to restart the GPS receiver. Note that the serial COM port stays open when in Power Save mode, so you don't have to open it when going back in the Power up mode.

"Recorder": if you select this item, the NMEA characters string that is received and displayed will be stored in the GPSRecord.txt file in the MrGPSViewer directory on your Handheld. This is a text file.

Almanac Status

Under the Tab #2: Status, you will see at the bottom of the display area 2 additional lines: "Almanac" and "Version". When you click on the "Query" button, the status of the almanac will be displayed on the almanac line, while the firmware version on your GPS receiver will be displayed on the version line. The almanac status can be "unknown", "complete and valid", or "not valid".