Ground Control Station Software FYGCS5.1
Installation Instructions

(Use for GCS 5.1 version and above)

FYGCS 5.1 is the ground control station software for Feiyu autopilot system. The features include (but not limited to): Electronic mapping, Telemetry data monitoring of flight parameters , flight attitude , flight speed , altimeter , location, Recording and playback of telemetry data into Ground Station Computer , Route editing , Map loading ,etc .

The FYGCS5.1 software include Google earth live map, also can support 2D view 3D view at the same time. Support in offline mode display the map which have been browse .

● FY-GCS5.1   Software Operating Requirements

CPU Frequency: 1GHz or more.

Memory Capacity: 1G or more.

Hard Disk Space: At least 200MB free disk space

Operating System: Windows XP system, Vista, Win7system, etc

Monitor Resolution: 1024x768 or above.

Port: Support   Baud rate1920

1. The installation for the GCS software and the USB-TTL Serial cable

First you have to download the FYGCS 5.1 version or above software and USB-TLL serial drive on our official website: www.feiyu-tech.com.   After that, you can install the software. You had better install in the default path, or you can select suitable installation path

FYGCS 5.1 software support the 3D view, but you have to install Google Earth plug-in 6.1 version or above .There are two methods to install the plug-in .

Methods one: Networking installed directly

Methods two: Install the local plug-in provided by us , you can download at our official website: www.feiyu-tech.com.

Two methods for checking whether the Google Earth plug-in have been installed successfully.

Methods one: Enter the following url :

http://www.google.com/earth/explore/products/plugin.html , If the plug-in have been installed successfully, you can see the following 3D map directly .


Methods two: Open the FYGCS 5.1 software   then switch to the 3D view , If the plug-in have been installed successfully , you can see the following 3D map directly .
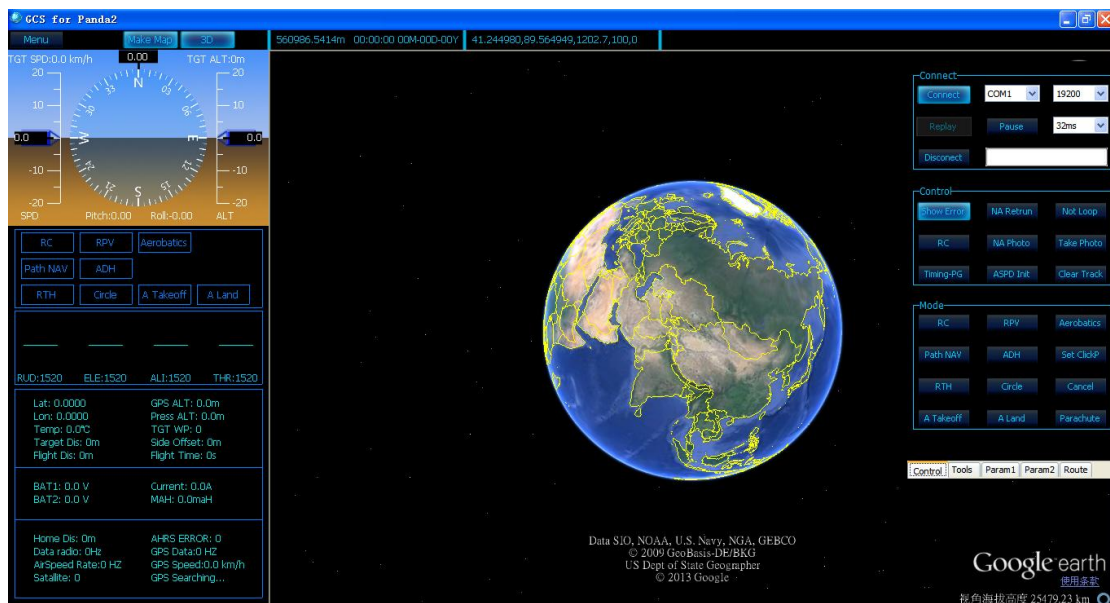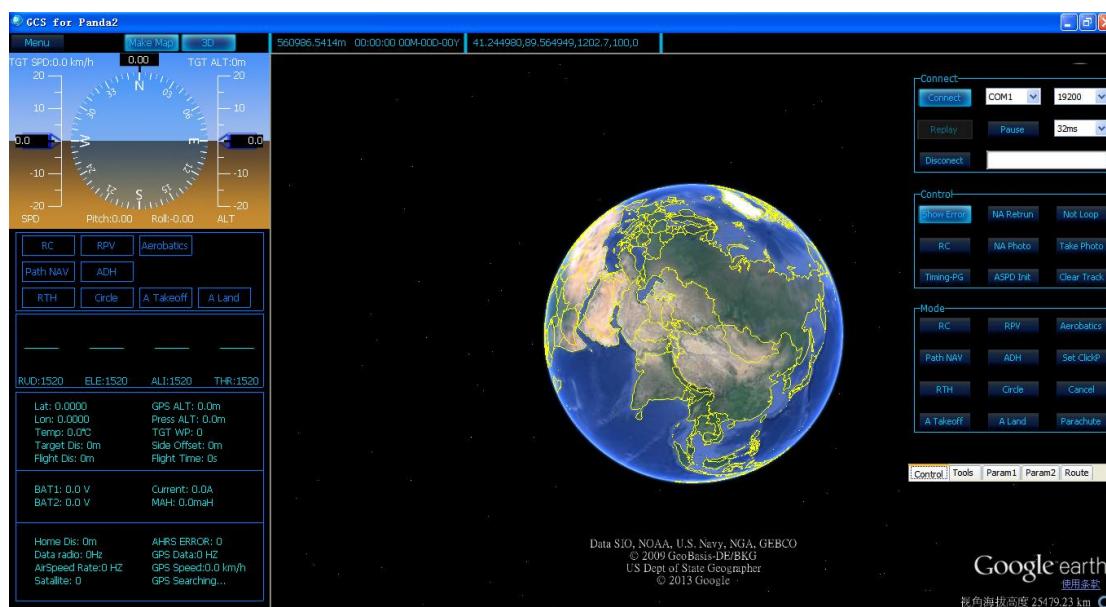
1.1　Installation of FYGCS

1) Double-click "　　　　　GCS 5.1 Setup.msi　　" installed by default
Windows Installe...
14,900 KB

2）After installation, double-click "GCS5.1.exe" ,open the FYGCS5.1 software ,you can see the following interface.
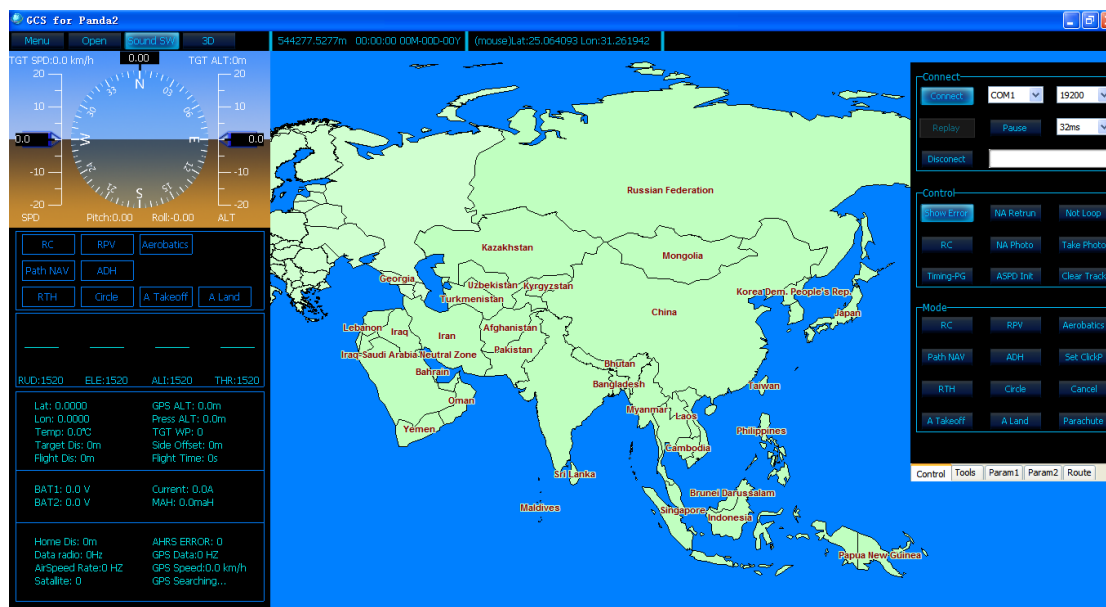
2D view

3D view

If you can't open FYGCS5.1 successfully in Vista or Wind7 operating system . Please find out executable file and run as administrator

1.2   Installation for USB-TTL cable

Step One: Install the USB-TTL serial drive:

Double-click the serial drive, installed by default. Restart the computer and make the drive be activated. If it can't be used, please uninstall the original drive and reinstall this one, or search its PL2303 chip to the latest version on the Internet.

**Step Two:** confirm the USB-TTL Virtual serial port number (take Win XP for example)

Insert the USB---TTL interface cable into computer USB COM port(don't connect TTL port to any other devices) , after the correct recognition to the USB--- TTL cable ,you will find there is new port in Port equipment(COM and LPT), the port "COM2" in the "Prolific USB-to-Serial Com Port (COM2)" exactly is the Virtual serial number.
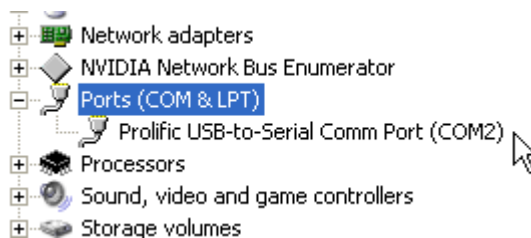
Inserter a few times for confirmation . Modify the serial number if necessary.

2. Main function of FYGCS5.1 3D view

Click "3D" button you can switch to the 3D view
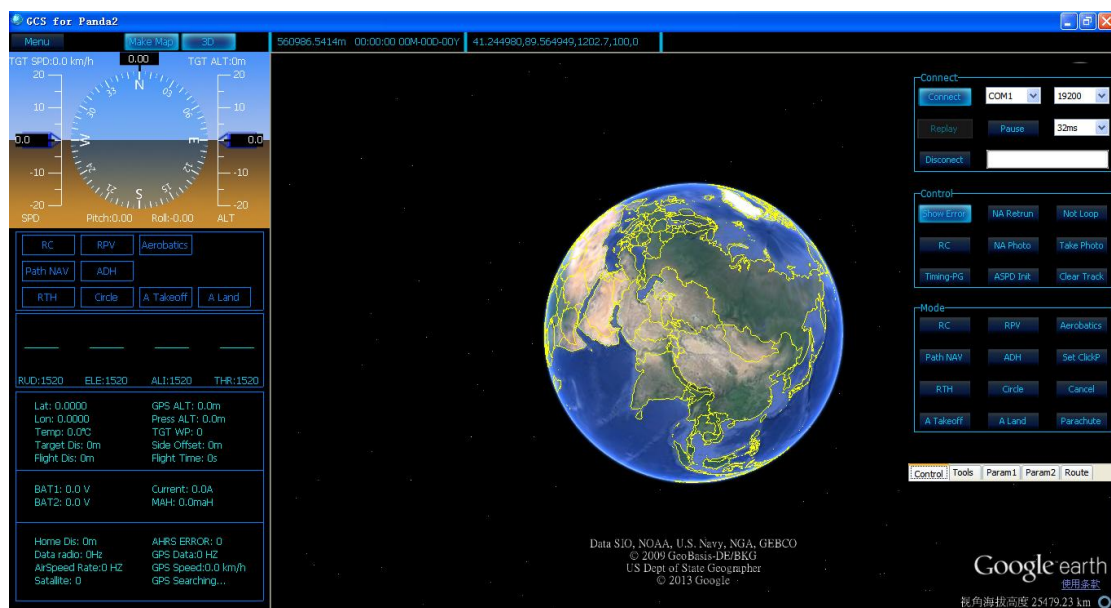
FYGCS5.1 Software supporting operation in 3D view: display the flight path in 3D effect ,making map for FYGCS 2D version software .

Provisional does not support: setting waypoint, editing route, click mouse flight etc

2.1   Altitude Initialization

Operation of altitude initialization: select
"Menu---Google earth setting---initial   altitude "
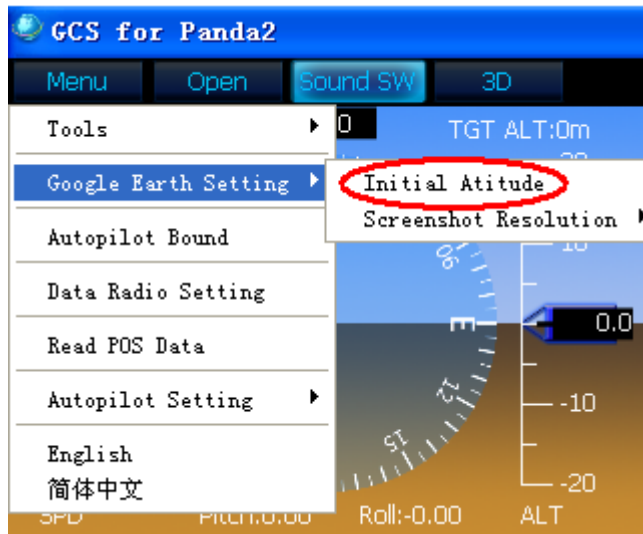
2.1.1 Purpose of altitude initialization

Initialize the altitude, in order to pick up the altitude of your position , and will be used in the 3D path setting, if not get the local altitude it may be caused that the waypoint path or flight path won't be displayed(they are covered).

After the GPS position, FYGCS software will initialize the altitude automatically, if the FYGCS software can't initialize the altitude well , it need initialize the altitude   manually .

2.1.2 Methods of altitude initialization

Method one：auto   init
The first time the GPS position is the initial altitude
Method two：manual   init
Select " Initial Altitude", the mouse change into Gripper type ,press on the "AIT" key on the keyboard , select   the initial point and make a   click, it will pop-up a dialog box then click the "confirm " to finishes the altitude initialization.

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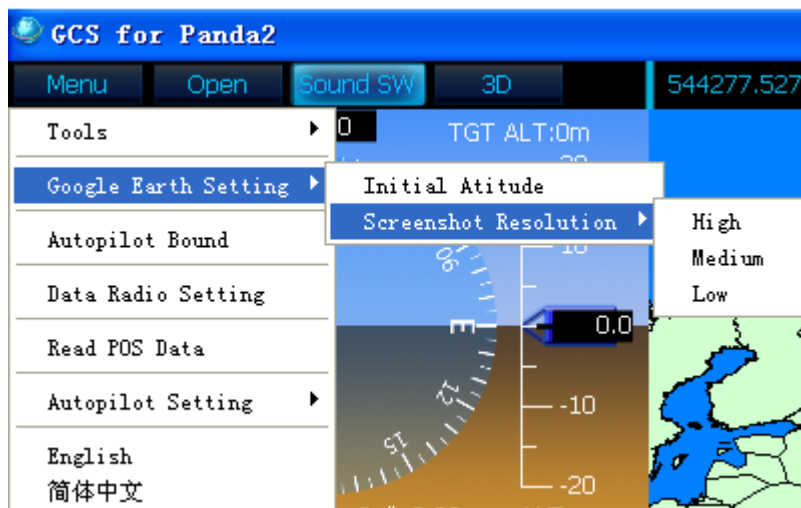## 2.2 FYGCS5.1 software display flight path in 3D view
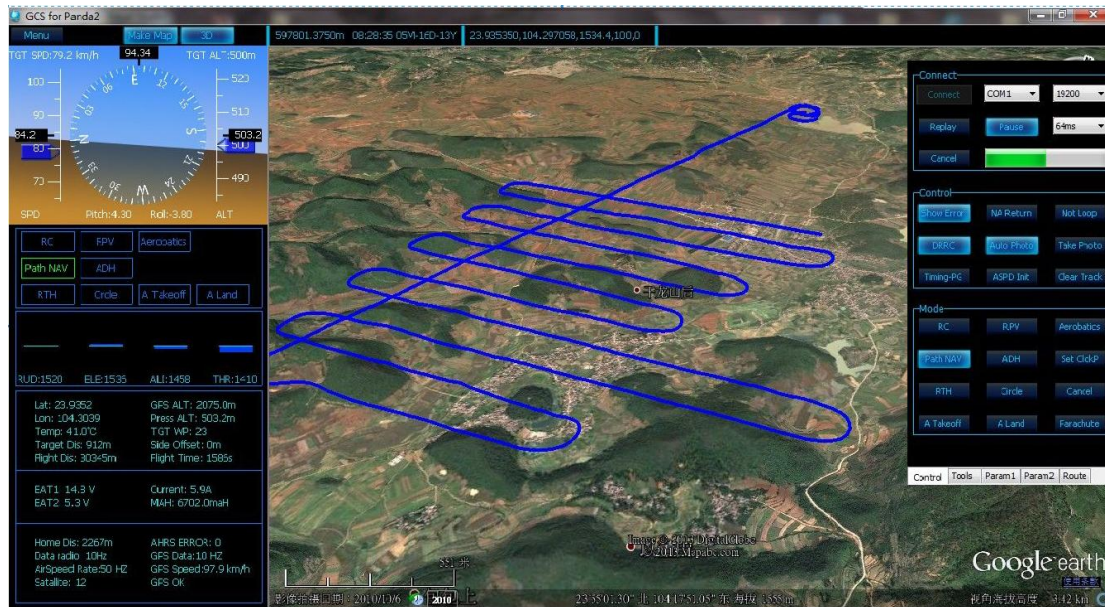
2.3 Map making in 3D view

2.3.1 steps of making map

（1）You can set the screenshot resolution before making map. The default value is "high" .

Screenshot resolution setting: select

"Menu---Google Earth Setting---Screenshot resolution "


（2） Selecting region for screenshot

Fined the region where you need on Google earth live map in 3D view , press on the "AIT" key on the keyboard, mouse change into Gripper type , click the first point and the last point, the FYGCS 5.1 software will generate the screenshot region

automatically.
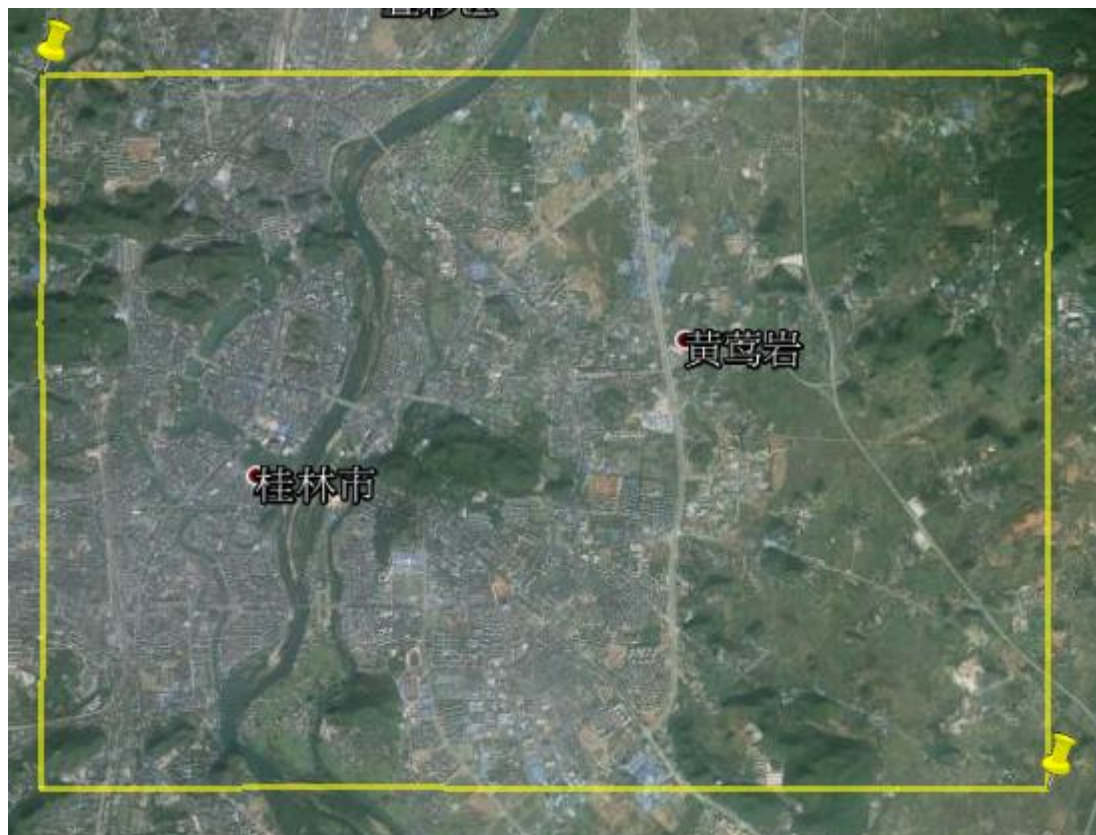
（3）Begin making map

After selected the area, click the "Make Map" to grab the map . According to the size of the region and the desired picture definition the larger area, the lower height, then the picture size is larger, and the map loading is more slower.
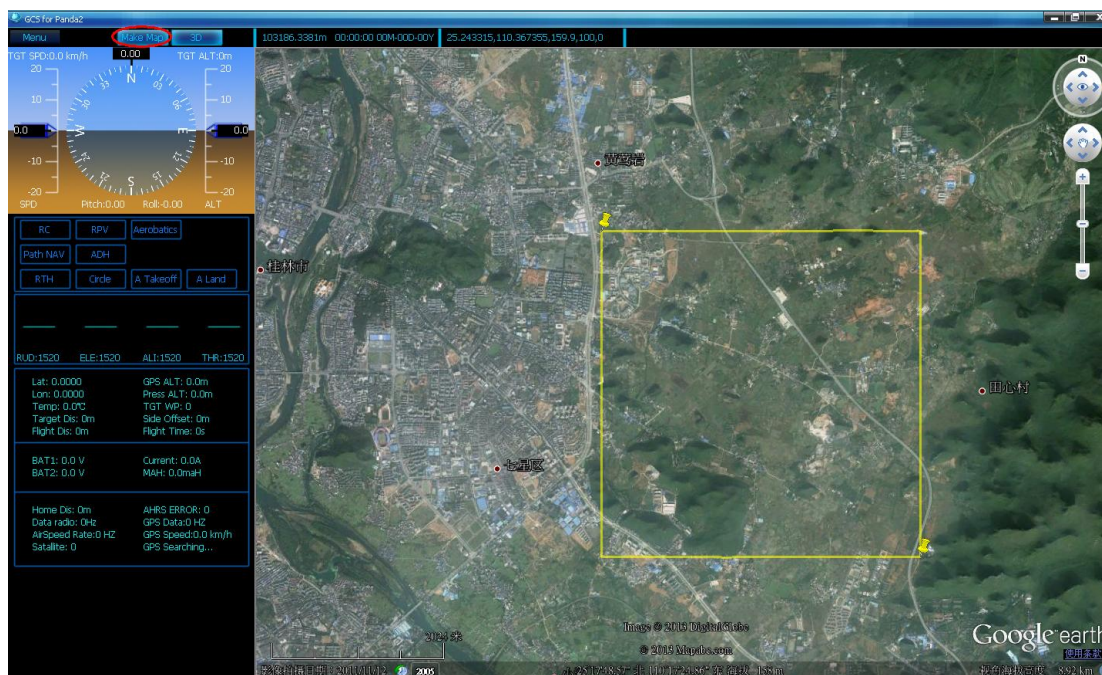
In the process of map making , the information tips will show you some information .The total number of the pictures, the serial number of the pictures Which grab at present .Total number of map making should be controlled less than 512 pictures.
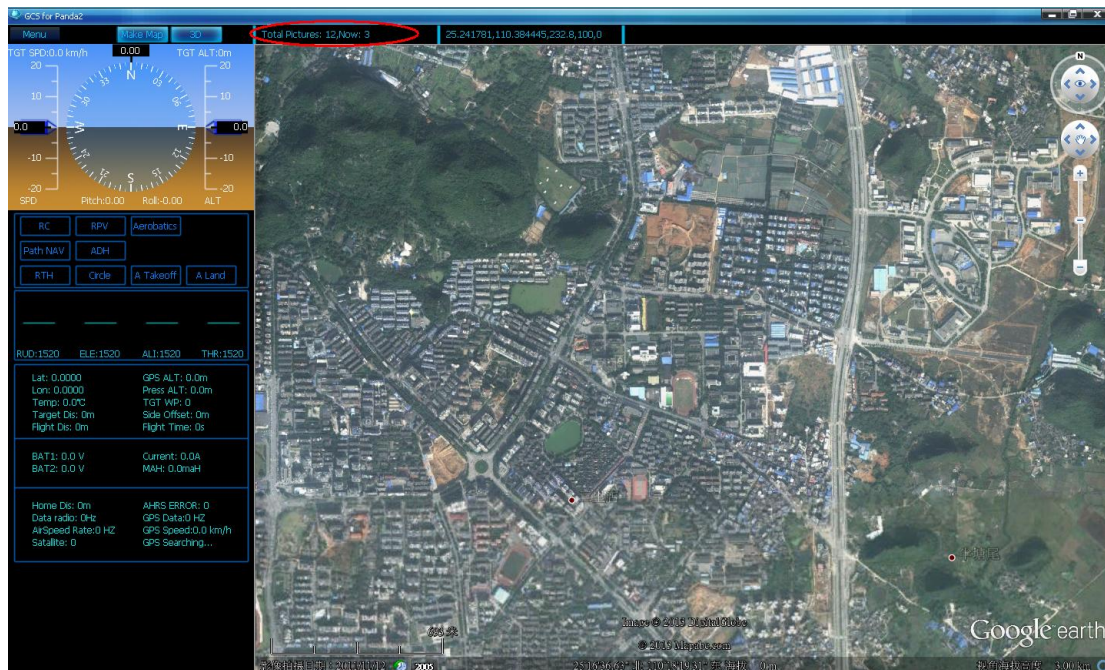

Finish grab the picture, pop-up a dialog box to remind you that getting picture is OK.
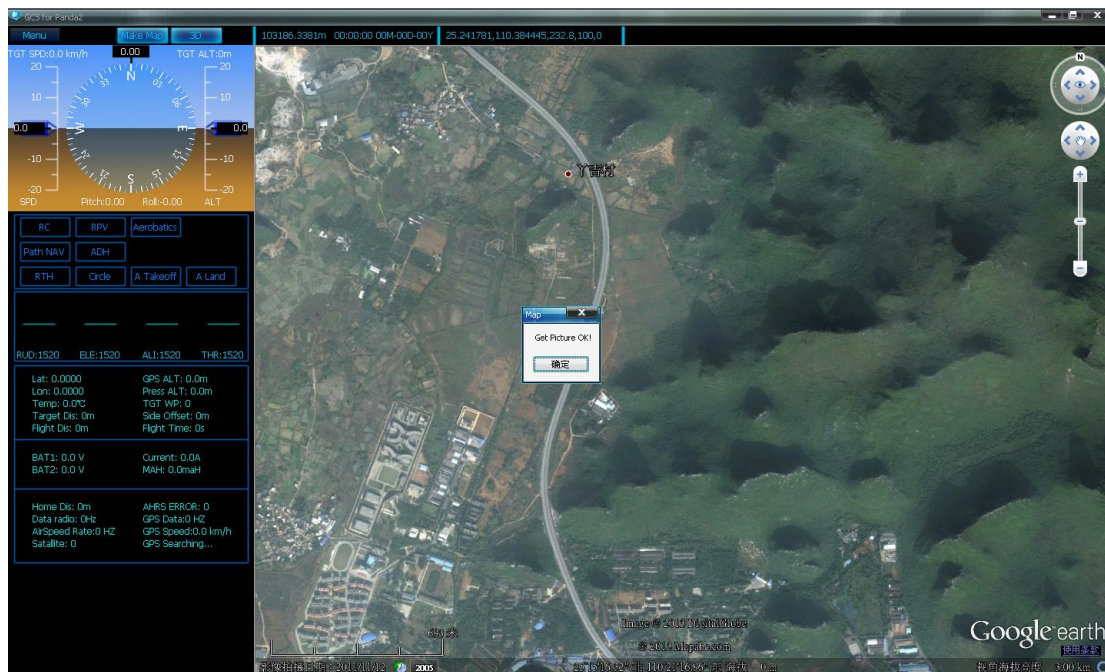
Click "confirm", choose the save path　in the pop-up dialog box, you can change the file name ,but please don't change the file format. Click "save"
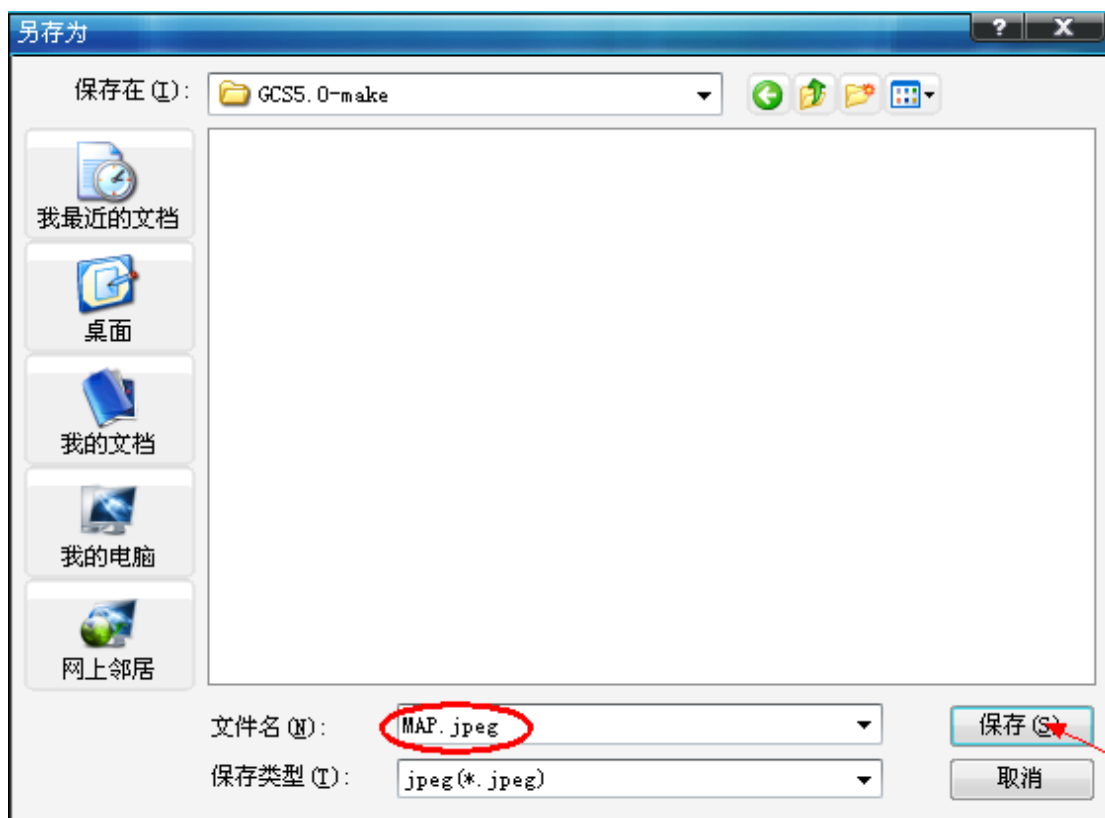
All the steps finished successfully, it will generate 3 format files with the same name, respectively ".GST", ".Tab", ".Jpeg" files. The Generating ".GST" file is the map file format that the 2D version GCS can support, after loading it you can do the route planning.
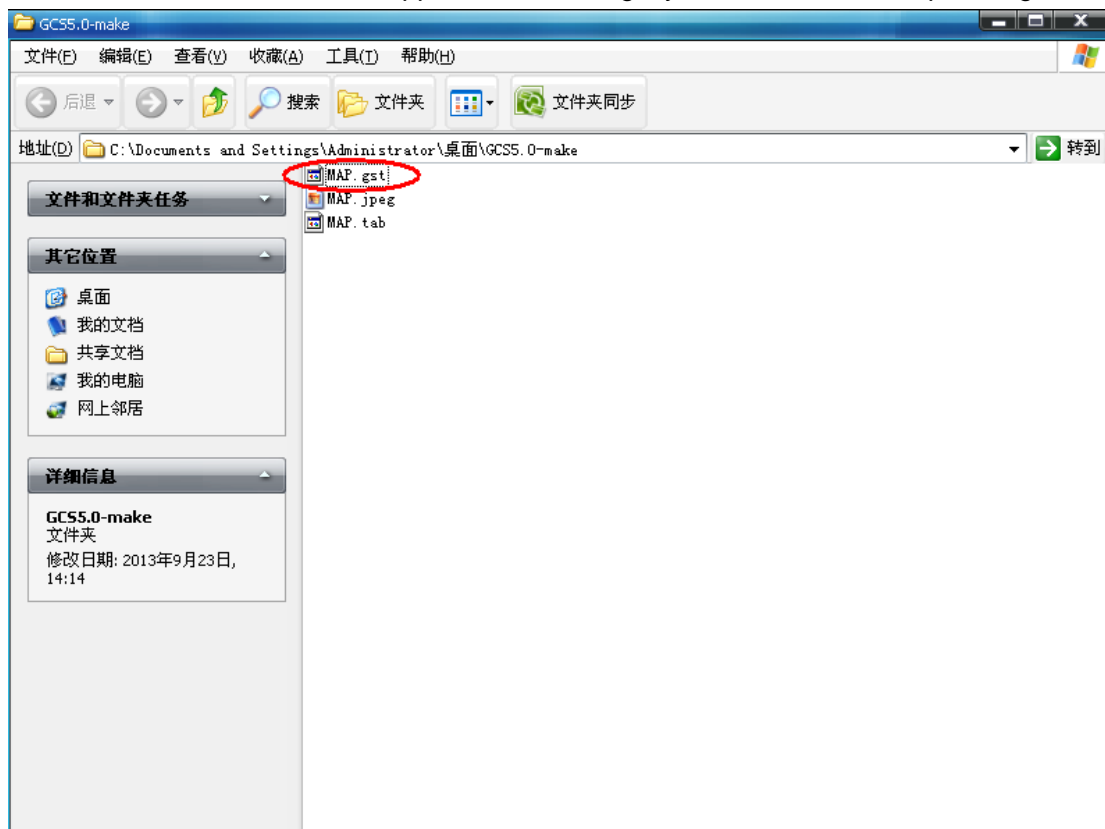
2.3.2 Attention to matters of map making

In the process of making map, please hidden the toolbar ,   make the GCS software to maximize window .
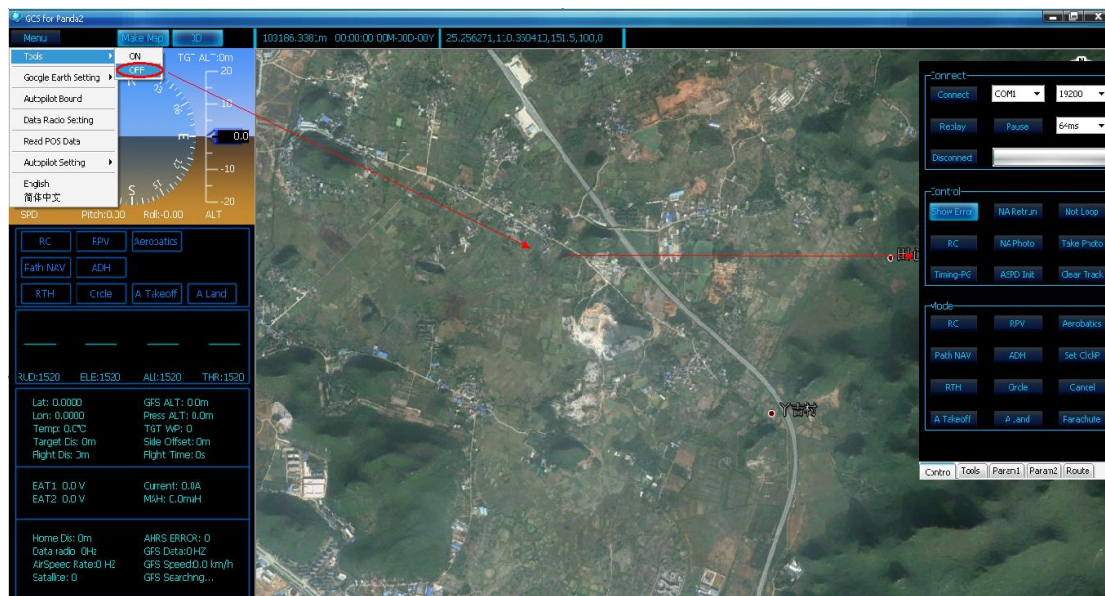
(2)In the process of grabbing the map, you can't do any operation, click and move the mouse is also forbid.

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