

RoyalTek
GPS Speed Camera Warning Device
RCD-1000
Quick Manual
Version 0.3

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1.Product Introduction

1.1 Overview



The Device is equipped with the latest generation SiRF Star III digital processor specially designed for fast and accurate fix on GPS signals. It had been designed to help you drive safety within the confines of today's speed limits, by alerting you quickly and easily to the presence of Police speed traps, often located at Accident black spots, electronically indicating potentially dangerous and hazardous situations. The RCD-1000 will help you to drive safely, when the database has been downloaded, the device will compare your position using its built-in GPS antenna with the position of every known danger locations and give you an audible and visual warning as you approach them.

- READ FIRST -

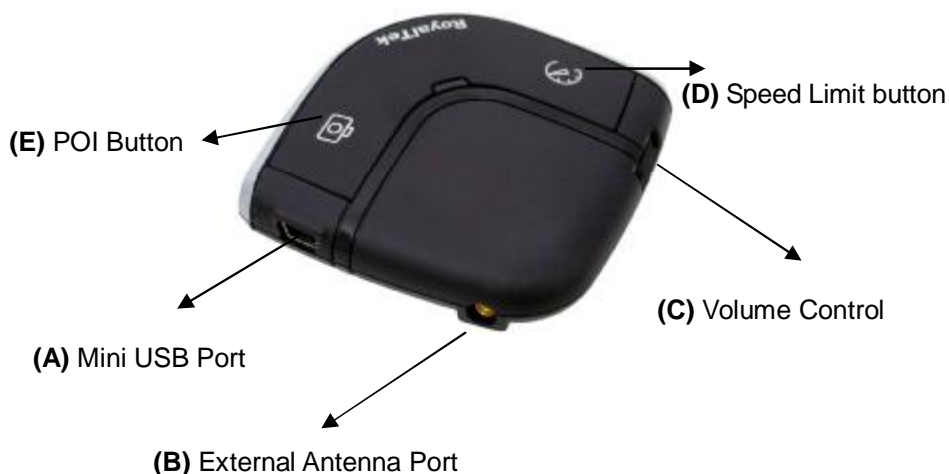
The RCD-1000 comes with a database of cameras pre-loaded. However you must register your RCD-1000 to receive username and password. Please note that the database on the device will have been downloaded at the time of production so may not be 100% accurate at the time of purchase. To ensure that your RCD-1000 works affectively we recommend that you download it as soon as possible after purchase.

1.2 Check the Package Content

Before using *RCD-1000*, please make sure the package includes the items listed below. Please contact the reseller immediately for any missing/damaged items.

1. RCD-1000 Device
2. USB cable
3. Car Charger
4. External antenna (optional)
5. CD (user manual, SW utility)
6. Dashboard Pad

1.3 Install RCD-1000 in your vehicle



- I Place the Dashboard Pad on your dashboard as close to the windscreen as possible in clear view of the driver's line of sight.
- I Place your RCD-1000 device on the dashboard pad, which is designed to hold it firmly in place.
- I Now connect the USB cable to the cigar lighter adapter provided and insert the other end to socket (A). Plug the adapter into the vehicle's

cigar lighter. RCD-1000 powers on once you turn your ignition key and the green and red LEDs will sweep backwards and forwards with one beep tells you that the unit is functioning correctly.

1.4 Product Notification- Using Tips

1. Use the supplied dashboard pad, remove the backing from the base, fix it on the dashboard as close to the windscreen as possible in clear view of the driver's line of the sight and place your Detector onto the pad
2. Cars that are equipped with heat dissipation films for the windshield and windows will degrade the GPS performance.
3. For the most accurate position fix results and quickest acquisition time, please make sure that your device is not in motion but stationary and in open spaces.
4. Connect to PC or Notebook for "Speed Camera Detector Utility"
@User can update the Camera database and manage the POI points using the supplied "Speed Camera Detector Utility".
Refer to the software installation and usage to install the software utility.

*POI: point of interest

2.Specification

2.1 Specification

| GPS | |
|--|--|
| GPS Chipset | - Sirf GSC3f/LP |
| Frequency | - L1, 1,575.42 MHz |
| Channel | - 20 parallel |
| C/A Code | - 1,023 MHz |
| Chipset TTFF (Open SKY,typical) | - Reacquisition: less than 1s - Hot start: less than 1s - Warm start: less than 35s - Cold start: less than 35s |
| Accuracy | - Position: within 10m for 90% - Velocity: 0.1m/s |
| Dynamics | |
| Altitude | - 18,000 meter maximum |
| Velocity | - 514 meter/second maximum |
| Internal Antenna | |
| Type | -Build in Patch Antenna |
| External Antenna | |
| Type | -MMCX |
| Camera database storage | |
| Flash Type | - 16Mb Serial Flash |
| Device Interface (External Connector port) | -USB 1.1 Mini USB (5pin) for Car charger and data transfer |
| Button | -POI Setting x1 -Speed Limit Setting x1 |
| Volume Control | -VR Type |
| LED | -3X Tri-Color for GPS, Speed Limit setting, POI Setting |
| Power Source | -Power from Car charger 5V 500 mAh |
| Temperature | -Operating : -20℃ ~ + 60 ℃ -Storage : -20℃ ~ + 85 ℃ |
| Size | - Dimension: 65mm X 65mmX18.5mm |
| Weight | ≤ 45g |
| Voltage Type | - 5V 500mAh |

2.2 Hardware Overview



(1) The POI record Button:

Press for more than 2 seconds to record current position.

A short beep sound and blinking LED will inform you that the POI has been successfully store.

Note: The user must use the software to carry out the POI management.

Note: The POI Record Button function will be enabled after GPS is fixed and the Speed Camera database was successful pre-uploaded into memory.

(2) The Speed limit setting Button:

Press for more than 4 seconds to record current speed of your vehicle. A short beep sound and glowing LED will inform you that current speed limit has been successfully done. If you exceed the speed limit, the device will beep until your speed fall below the limit. To revise the speed you can push this button for one second then the speed limit will change to the current speed. To cancel the setting, press the button for more than 4 seconds again.

Note: The Speed limit setting value will be cancelled after removing the charger power.

(3) Volume control:

Rotate forward and backward to adjust the volume.

2.3 LED Display & Audio Alarm

Front View



| | Event | | LED Display | | Audio Alarm |
|----|--|------------------|--------------------------------------|---------------------------------------|------------------------------------|
| 1 | System Initialize | | Green+Red (No 1+No 2+No3), Sweeping | | 1 beep |
| 2 | GPS Search | | Green (No 1), Blinking | | 2 beeps after GPS Fixed |
| 3 | GPS is fixed | | Green (No 1), Glowing | | X |
| 4 | Memory full /Erase | | | | X |
| 5 | Approach Certified Fix Camera Zone and pre-alert (distance less than *1500 meter- Notification range) | Not exceed speed | Red (No 2+No3) | Glowing | 3 beeps |
| | | Over speed | | Blinking 1 time per second Continuous | 1 beep for 3 second s continuously |
| 6 | Approach Certified Fix Camera Zone and pre-alert (distance less than *500 meter- Critical range) | Not exceed speed | Red (No 1+No 2+No3) | Glowing | 3 beeps |
| | | Over speed | | Blinking 1 time per second Continuous | 3 beeps per second continuously |
| 7 | Approach Certified Mobile Camera Zone or User defined POI and pre-alert (distance less than *1500 meter- Notification range) | Not exceed speed | Amber (No 2+No3) | Glowing | 3 beeps |
| | | Over speed | | Blinking 1 time per second Continuous | 1 beep for 3 second s continuously |
| 8 | Approach Certified Fix Camera Zone or User defined POI and pre-alert (distance less than *500 meter- Critical range) | Not exceed speed | Amber (No 1+No 2+No3) | Glowing | 3 beeps |
| | | Over speed | | Blinking 1 time per second Continuous | 1 beep for 3 second s continuously |
| 9 | Record User Defined POI | | Green (No 1+No 2+No3), Flashing once | | 1 beep |
| 10 | User Defined POI full | | Amber (No.2), Glowing | | X |
| 11 | Speed Limit function enable/Disable | | Green (No.1,2,3), blink 1 time | | 1 beep |
| 12 | Speed Limit activate | | Red (No.3), Glowing | | X |
| 13 | Over Speed only (W/O Camera or POI Zone) | | Amber (No.3), Blinking | | 1 beep for 3 second s continuously |

***Depending on local SCDB conditions.**

3.Product Registration

3.1 Registering RCD-1000

The RCD-1000 had been pre-loaded with the latest speed camera database. However the road network is constantly being modified. For best results therefore, we strongly advise you to install the SCD utility software and then register your device with us, so that you may update the database from our web site.

To register your RCD-1000 as follows:-

Register On-line

Go to the official website http://www.cricel.com/register_scdb.asp and register on-line. After the registration you will have a username(email) and password. You can use the username to get the SCDB update by using SCD utility.

4. Software Installation and Usage

4.1 Start to use “Speed Camera Detector Utility”

Check the COM port of RCD-1000 first. Click “Start” à “Control Panel” à “Performance and Maintenance” à “System”, and you will see the System Properties dialog box; click on “Hardware” tab and then the “Device Manager” button. Expand the “Ports (COM & LPT)” item, and the “Prolific USB-to-Serial Comm Port” is the COM port of your RCD-1000.

The user should connect the device first. (Connect device with PC via USB Cable)

Please select comm. port and press the “connect” button.

When you execute the program, the following figures are shown. Figure 1 and Figure 2 are shown.

Note: System will download the POI points from device automatically. figure 3 is shown.

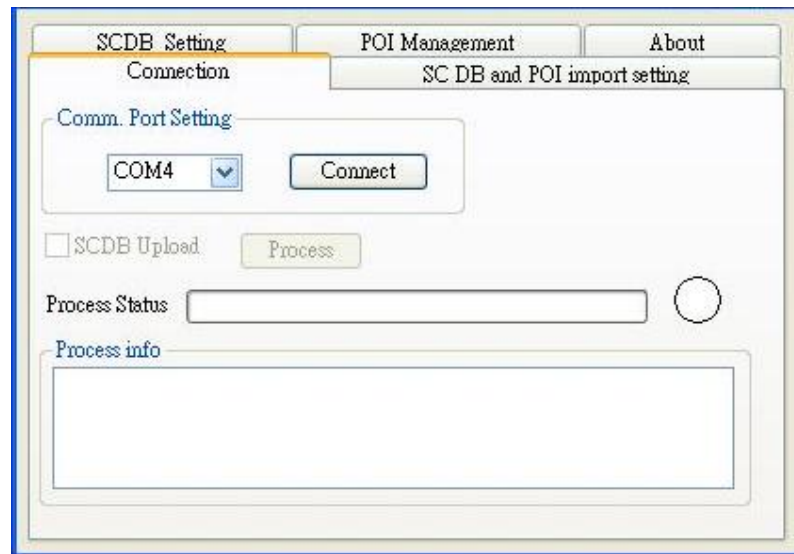


Figure1



Figure2

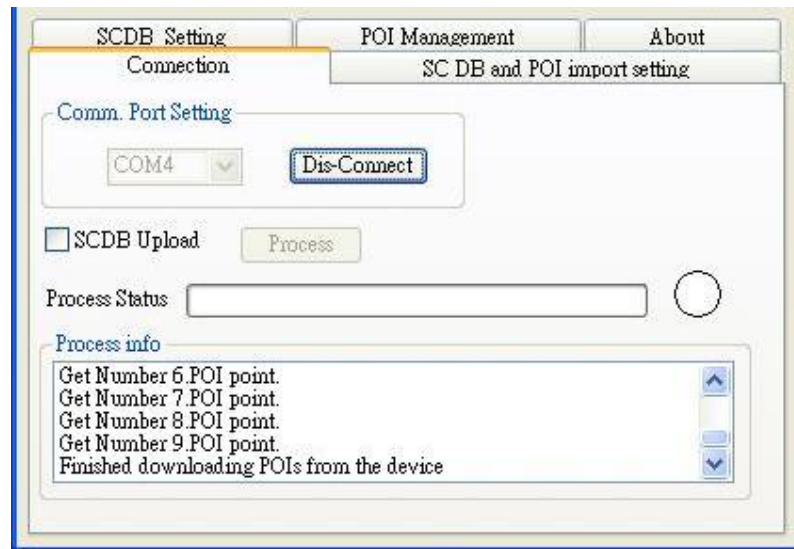


Figure3

If the figure 4 dialog is shown, it means there is no POI data in the device.

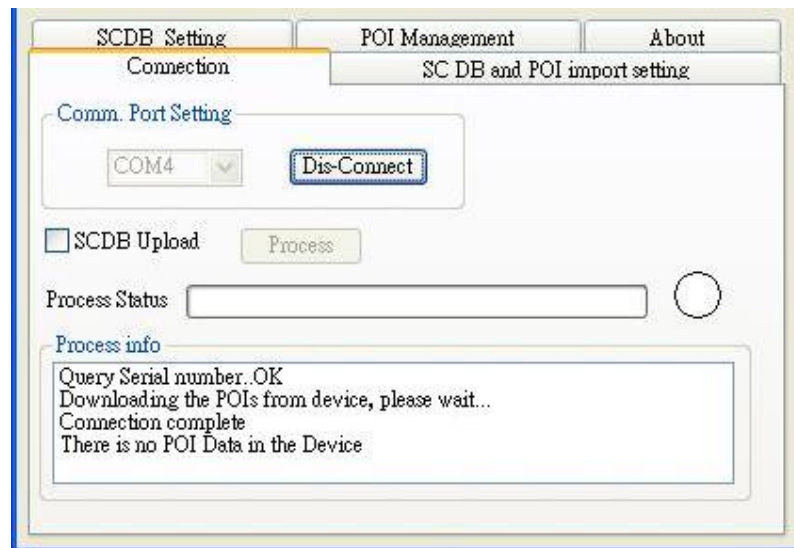


Figure4

4.2 POI Management Procedure

User can load POI data, delete POI data or Save POI data by using the Utility.

Note:

◆**Load POI:** User can edit the POI points by click the checkbox.

There are 4 types of status will show on the Utility screen after loading POI action done.

***Duplicated:** means the current POI point and the previous POI point distance less than 1km.

***Out of SCDB range:** means the current POI point is not in the SCDB distance range.

***OK:** means the valid POI point.

***Speed is out of range:** means the POI's speed is over the spec " the speed range is

from 0 to 300km/hr”

- ◆ **Delete POI:** User can delete the POI points by click the checkbox.
- ◆ **Save POI:** When user complete the POI points edition, user can return to save the POI points in the device. **Note: Please don't close the utility program after saving POI process done.**

Check the checkbox “**POI management**”, and the AP will go to the page “POI management”, please refer to Figure 5 and Figure 6.

The interface shows a window titled "SC DB and POI import setting" with three tabs: "Connection", "SCDB Setting", and "POI Management". The "POI Management" tab is active. It contains a table with columns: No, Latitude, Longitude, Speed, and Status. Below the table are buttons: "Select All", "Delete POI", "Load POIs" (highlighted with a blue box), and "Save POIs".

| No | Latitude | Longitude | Speed | Status |
|----|----------|-----------|-------|--------|
| | | | | |
| | | | | |
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| | | | | |
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| | | | | |
| | | | | |

☐ Select All Delete POI **Load POIs** Save POIs

Note: Speed range is from 0 to 300 km/hr. Valid POIs
Note: -1 means the speed of this POI is ignored.

Figure 5

The interface is the same as Figure 5, but the table now contains data. The "Status" column header is highlighted with a blue box. Below the table, the "Valid POIs" count is shown as 1.

| No | Latitude | Longitude | Speed | Status |
|----------------------------|-----------|------------|-------|-----------------------|
| <input type="checkbox"/> 1 | 25.016369 | 121.298027 | -1 | OK |
| <input type="checkbox"/> 2 | 25.016361 | 121.298027 | -1 | Duplicated with No. 1 |
| <input type="checkbox"/> 3 | 25.016361 | 121.298027 | -1 | Duplicated with No. 1 |
| <input type="checkbox"/> 4 | 25.016361 | 121.298027 | -1 | Duplicated with No. 1 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

☐ Select All Delete POI **Load POIs** Save POIs

Note: Speed range is from 0 to 300 km/hr. Valid POIs 1
Note: -1 means the speed of this POI is ignored.

Figure 6

Figure 7 show the save POI process done.

Note: Please reset and re-connect the device with PC.



Figure 7

4.2.1 POI Management and shown on Google Map

Move the mouse cursor to the required "Latitude" or "Longitude" point column then press the mouse right key, the message **"showed on Google Map"** showed as Figure 7-1

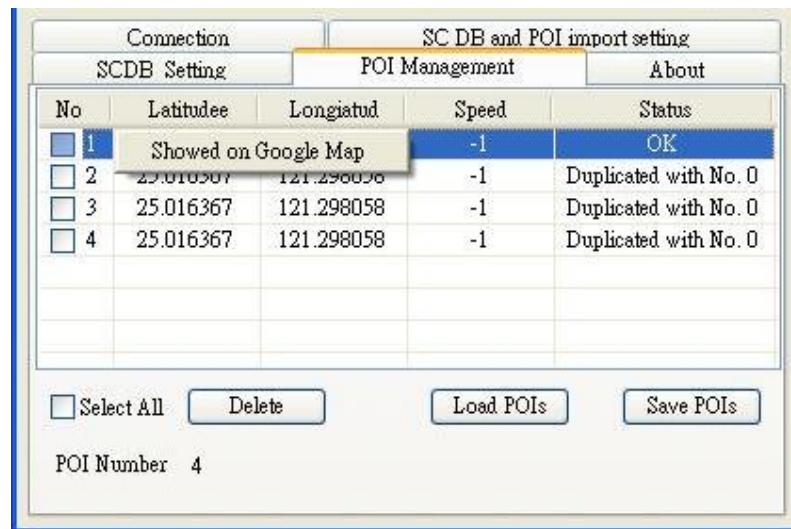


Figure 7-1

4.3 SCDB and POI import setting

◆SCDB Setting :

There are two types Camera database data. Fixed Speed Camera database data and Mobile Speed Camera database data.

User can download the database from website.

◆POI Setting :

The function will be enabled after the Save POI action was done by user.

User can integrate the POI data into SCDB database.

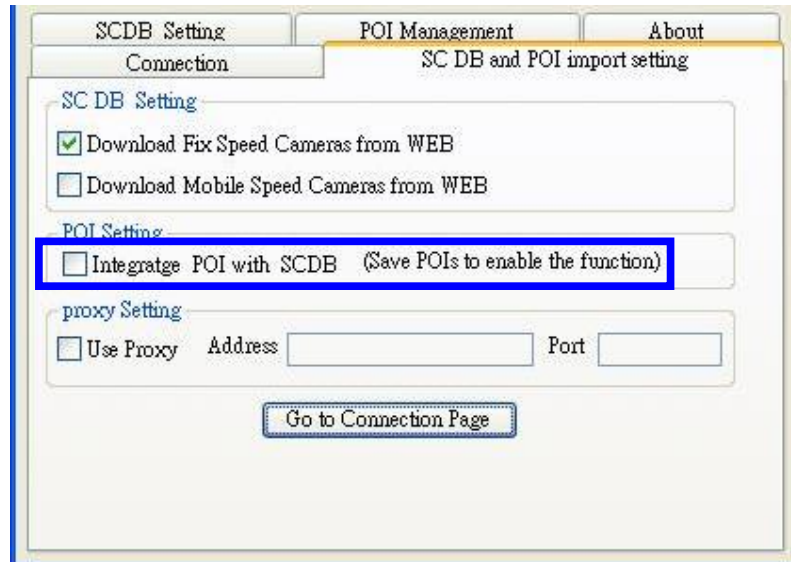


Figure 8

◆Proxy Setting :

If your region network hypothesis needs to use the proxy server, please input the information.

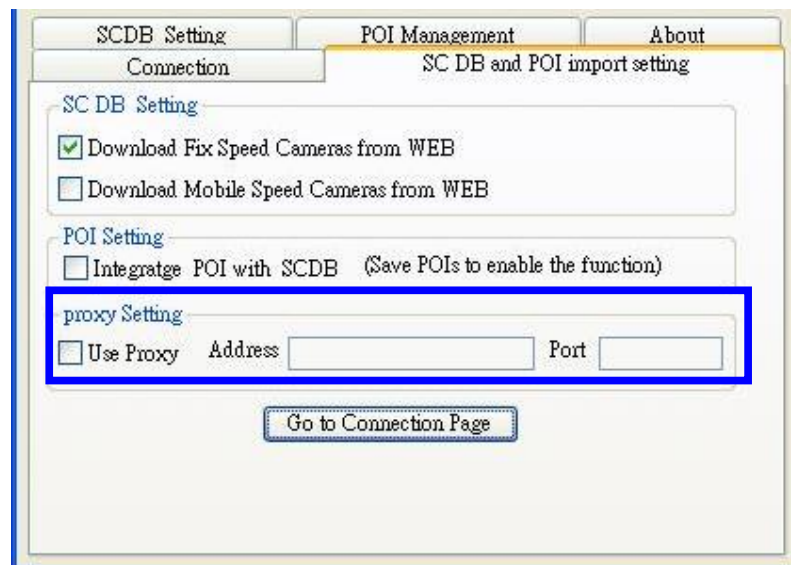


Figure 9

4.3.1 Download SCDB data from Website

Figure 10 show: There is no SCDB data in the device. Please execute the following step to download the SCDB data.

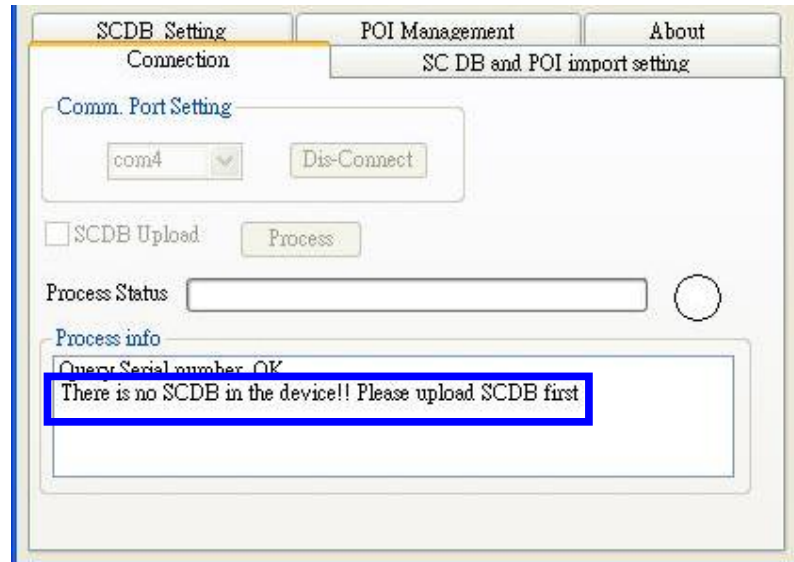


Figure 10

Check the checkbox “**SCDB and POI import setting**’ and the AP will go to the page “SCDB and POI import setting”, please refer to Figure 11.

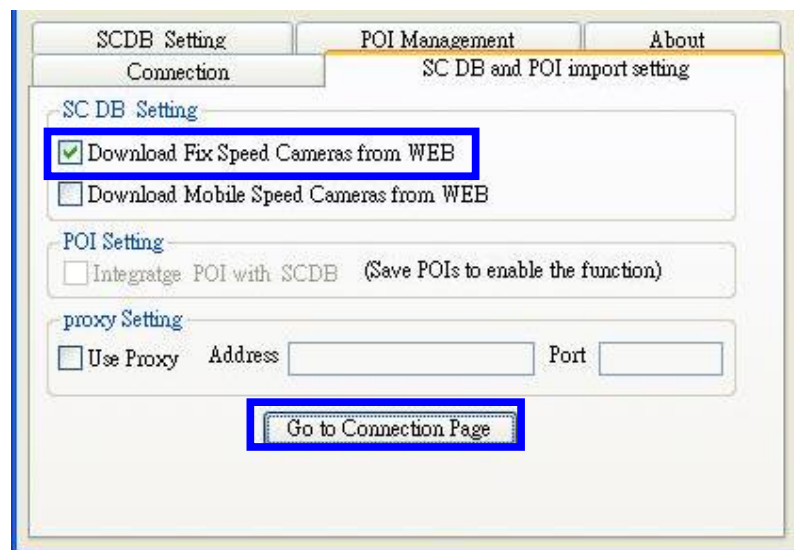


Figure 11

Figure12 shows press the button “Go to Connection Page” and the AP will go to the “connection” page.

Check the checkbox “**SCDB upload**’, then press the button “**Process**’ and go to upload process.

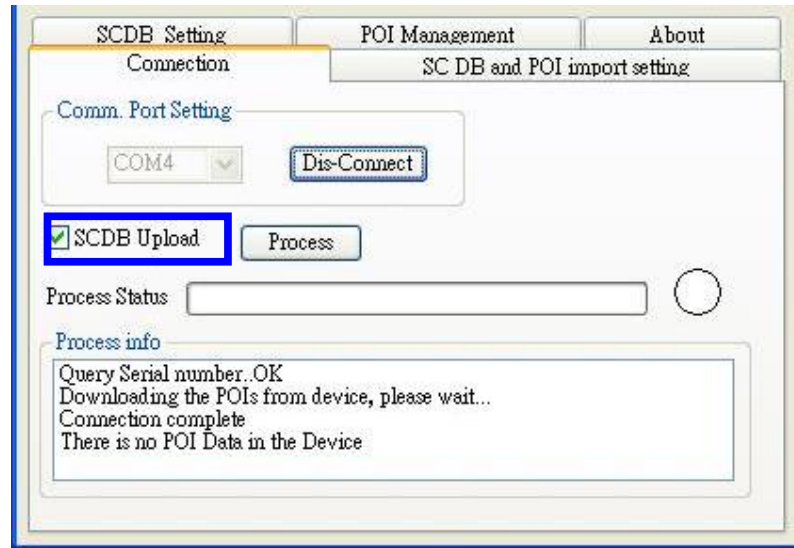


Figure12

Figure13 shows the username and password message. Please key in the username and password. You should register this product by going to the <http://www.epoi.fr/> website and get the username and password.



Figure 13

Figure14,15 show the notification message.



Figure 14

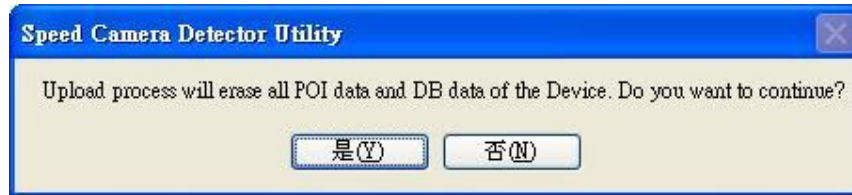


Figure 15

When SCDB upload, the light twinkle in red color.

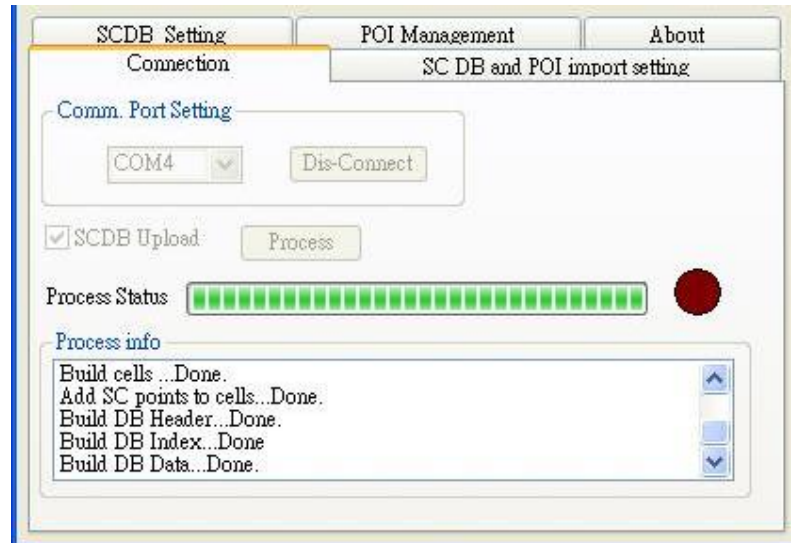


Figure 16

Figure17 shows that the upload process is processing.

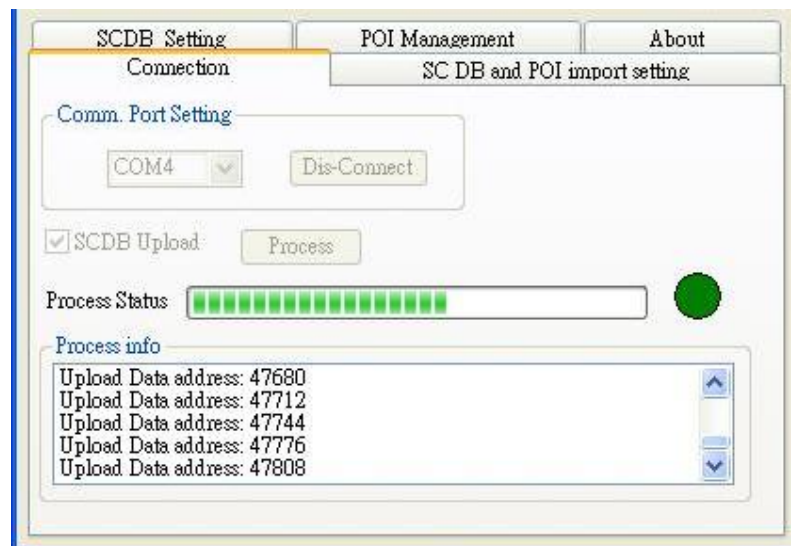


Figure17

Figure18 shows that the upload process is completed. And system will auto alert you to do the action "RESRT and Reconnect the device" after the upload process was completed.

Please re-connect the device.



Figure18

4.3.2 POI Setting process

Check the checkbox "**Integrate POI with SCDB**", then press the button "**Go to continue Page**" and go to upload process.

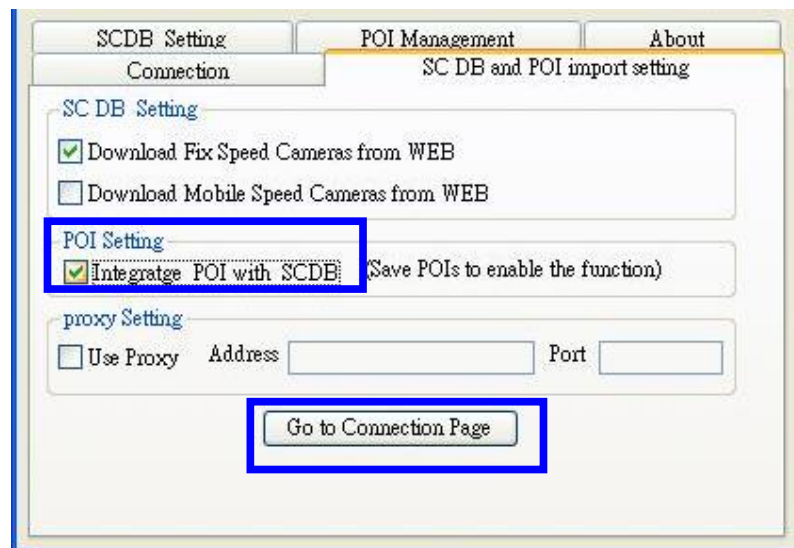


Figure19

Press the button "Go to Connection Page" and the AP will go to the "connection" page. Check the checkbox "**SCDB upload**", then press the button "**Process**" then system go to POI data and SCDB date integrate process.

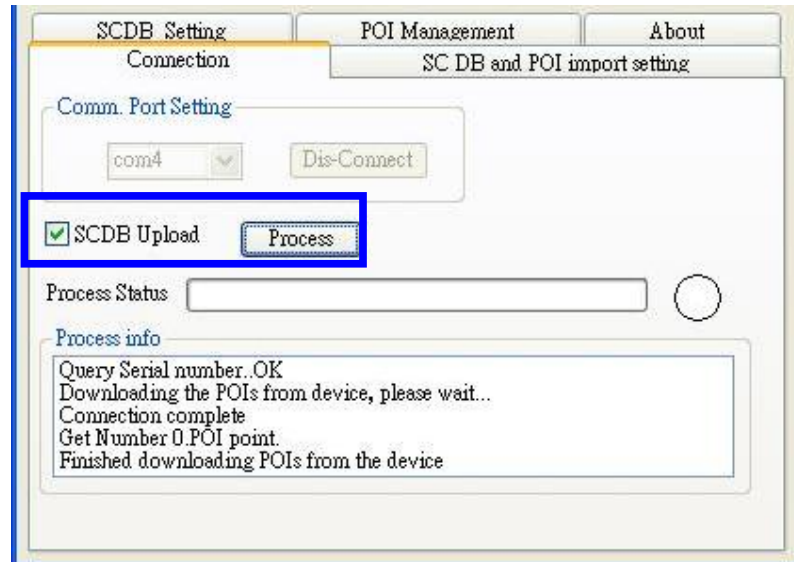


Figure20

Figure21 shows the username and password message. Please key in the username and password.



Figure 21

Figure22, 23 show the notification message.



Figure 22



Figure 23

Figure 24 shows when SCDB and POI integrate process, the light twinkle in red color.

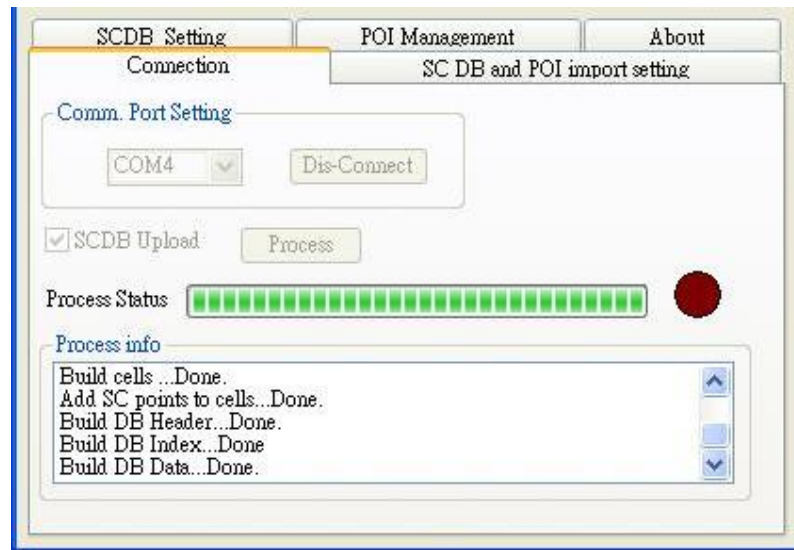


Figure 24

Figure25 shows that the upload process is in processing.

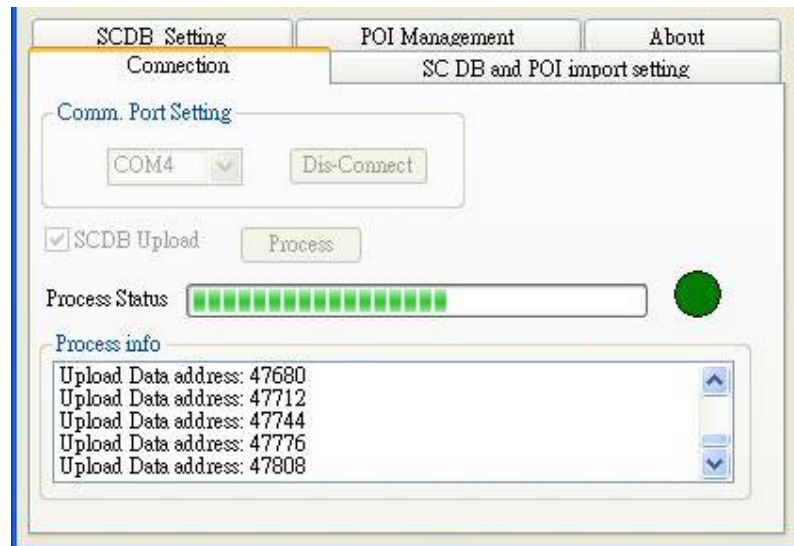


Figure 25

Figure26 shows that the upload process is completed. And system will auto alert you to do the action "RESRT and Reconnect the device" after the upload process was completed.

Please re-connect the device.



Figure 26

4.4 SCDB Setting

◆Speed Camera Alert Setting :

User can select the Critical Range value and Notification range.

Note: Notification range should be bigger than Critical range 200m.

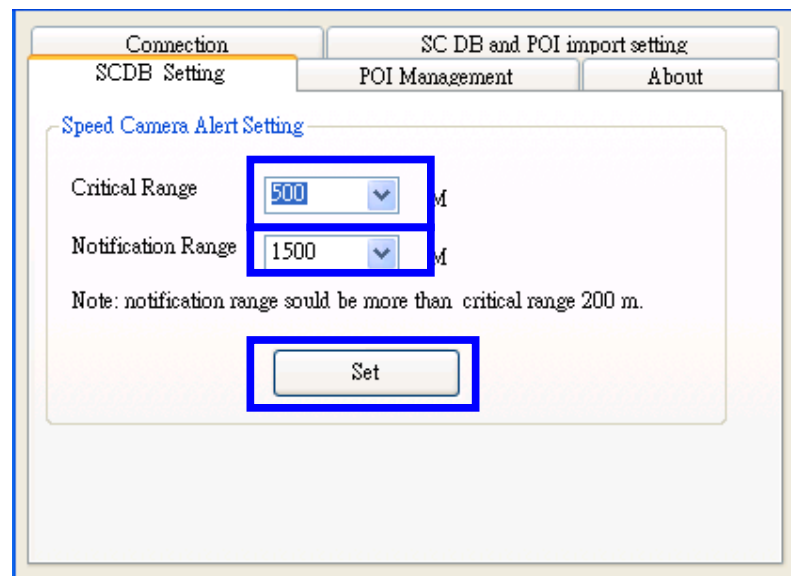


Figure30

4.5 Utility Revision information

Change to "About" menu bar

User can get the Royaltek SCDB Utility version.

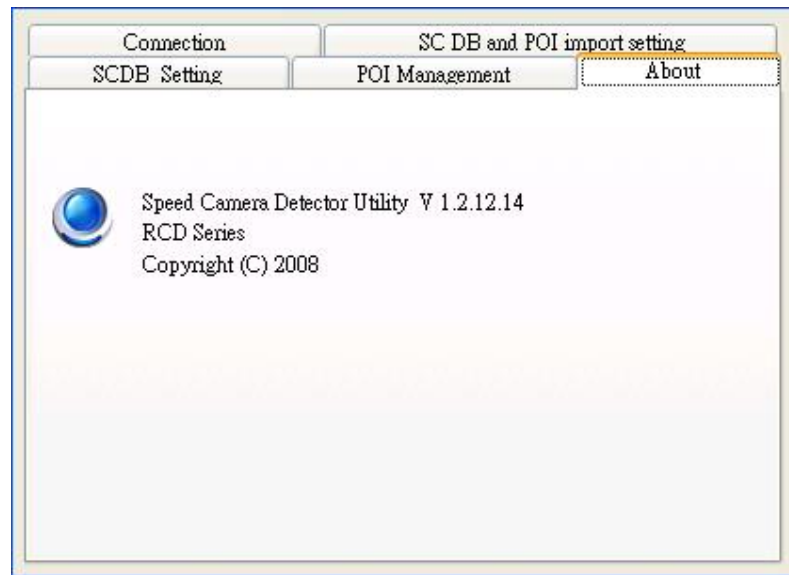


Figure31