

F1103 GPRS MODEM

USER MANUAL



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Chapter 1 Brief Introduction of Product

1.1 General

F1103 GPRS MODEM is based on GPRS network and adopts industrial wireless GPRS module. It supports SMS, CSD and data function. It is designed with industrial standard and has been widely used on finance, water supply, environment protection, electric power system, post, weather fields and so on.

1.2 Product Features

- ✧ Designed with industrial standard
- ✧ Support SMS, CSD and data function
- ✧ Support RS232
- ✧ Power range: DC 5~35V

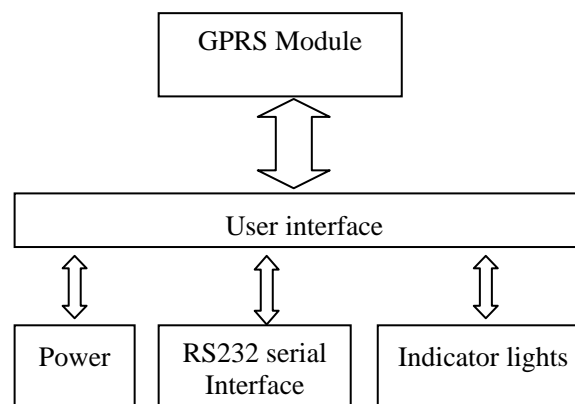
1.3 System Component

The MODEM is composed of the following parts mainly:

- ✧ Industrial GPRS module
- ✧ DC/DC module
- ✧ RS232 module

1.4 Working Principle

The principle chart of the MODEM is as following:



1.5 Technical Specification

Wireless specification:

- ✧ Dual Band EGSM 900 and GSM 1800
- ✧ Multislot class 10
- ✧ ETSI GSM Phase 2+
- ✧ Support DTMF
- ✧ Support SMS, CSD and data function
- ✧ Standard AT command interface

Interface:

- ◇ RS232 serial port, rates: 110~230400bits/s
- ◇ Indicator lights: “Power”, “ACT”, “Online”
- ◇ Antenna interface: standard SMA female interface, 50 ohm
- ◇ SIM/UIM interface: standard user card interface
- ◇ Power interface: standard 3-PIN power jack

Power supply:

- ◇ Standard power: DC 12V/0.5A
- ◇ Power range: DC 5~35V

Others:

- ◇ Operation temperature: -25~+65°C
- ◇ Storage temperature: -40~+85°C
- ◇ Humidity: 95% (unfreezing)
- ◇ Outline dimension: 91x58.5x22 mm

Chapter 2 Installation Introduction

2.1 General

The MODEM must be installed correctly to make it work properly.

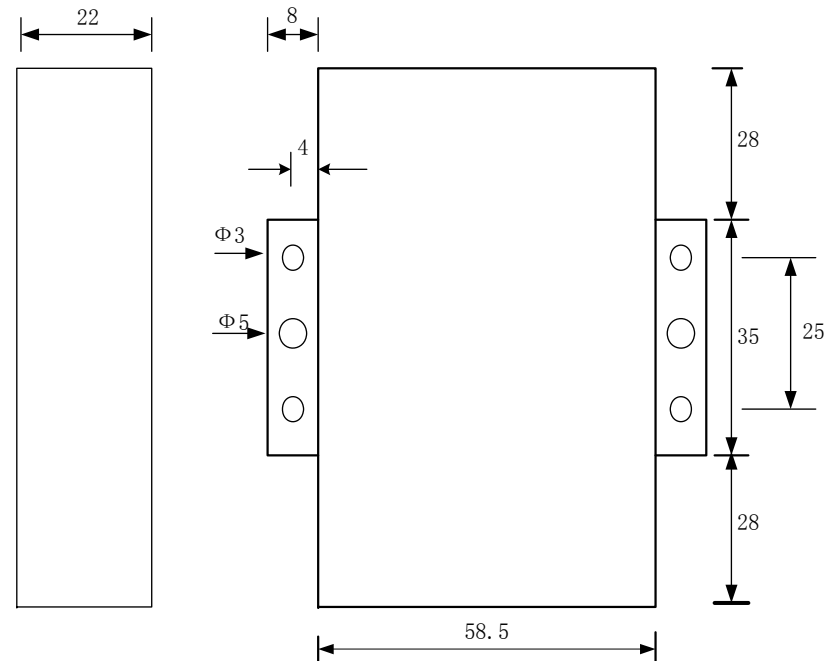
Warning: Forbid to install the MODEM when powered!

2.2 Encasement List

Name	Quantity	Remark
MODEM host	1	
Antenna	1	
Power adapter	1	
RS232 data cable	1	
Manual CD	1	
Certification card	1	
Maintenance card	1	

2.3 Installation and Cable Connection

Dimension: (unit: mm)



Installation of SIM/UIM card:

Firstly power off the MODEM, and press the out button of the SIM/UIM card outlet with a needle object. Then the SIM/UIM card sheath will flick out at once. Put SIM/UIM card into the card sheath (Pay attention to put the side which has metal point

outside), and insert card sheath back to the SIM/UIM card outlet.

Warning: Forbid to install SIM/UIM card when powered!

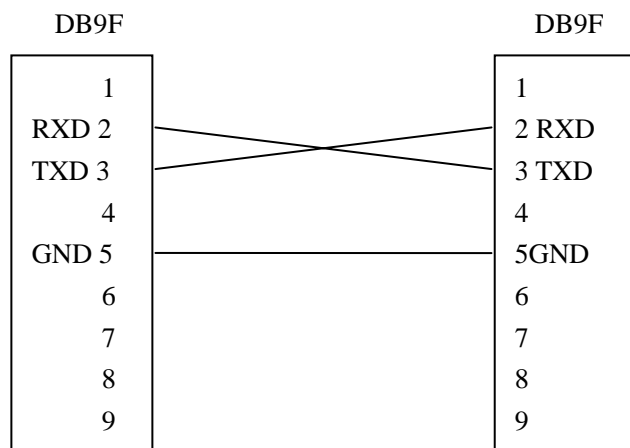
Installation of antenna:

Screw the SMA male pin of the antenna to the female SMA outlet of the MODEM tightly. Warning: The antenna must be screwed tightly, or the signal quality of antenna will be influenced!

Installation of cable:

Insert DB9F end of the RS232 data cable into the DB9M interface of MODEM, and connect the other end with user's device.

The signal connection of the RS232 data cable is as follows:



RS232 data cable

2.4 Power

The power range of the MODEM is 5~35V.

Warning: When we use other power, we should make sure that the power can supply power above 4W.

We recommend user to use the standard DC 12V/0.5A power adaptor.

2.5 Indicator Lights Introduction

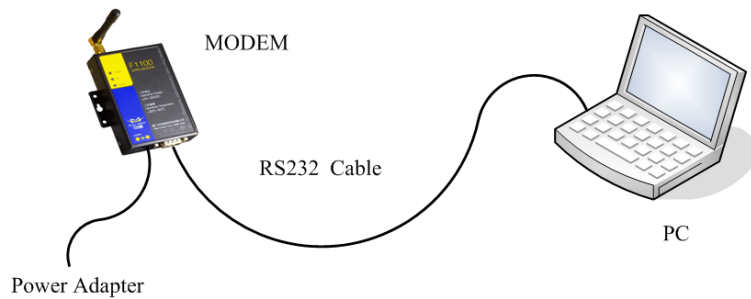
The MODEM provides three indicator lights: "Power", "ACT", "Online".

Indicator Light	State	Introduction
Power	Bright	MODEM is powered on
	Dark	MODEM is powered off
ACT	Twinkle	Data is communicating
	Dark	No data
Online	Bright/ Twinkle	MODEM has logged on network
	Dark	MODEM hasn't logged on network

Chapter 3 Dial-Up Settings

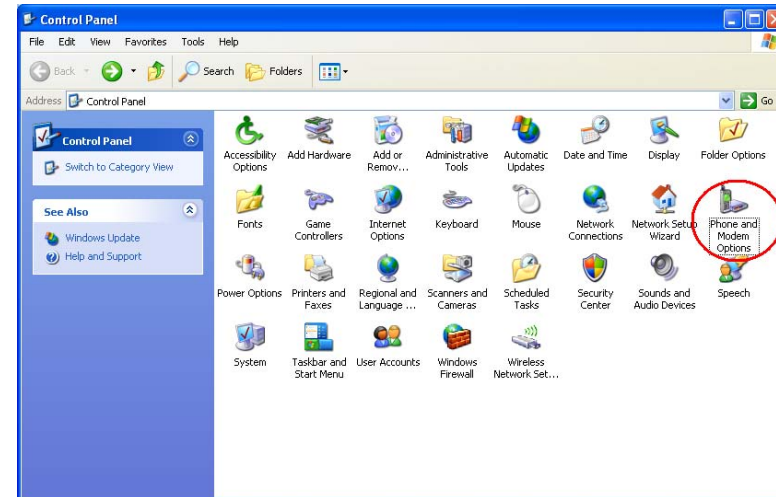
3.1 MODEM Connection

Connect Modem and PC with the shipped RS-232 cable as following:

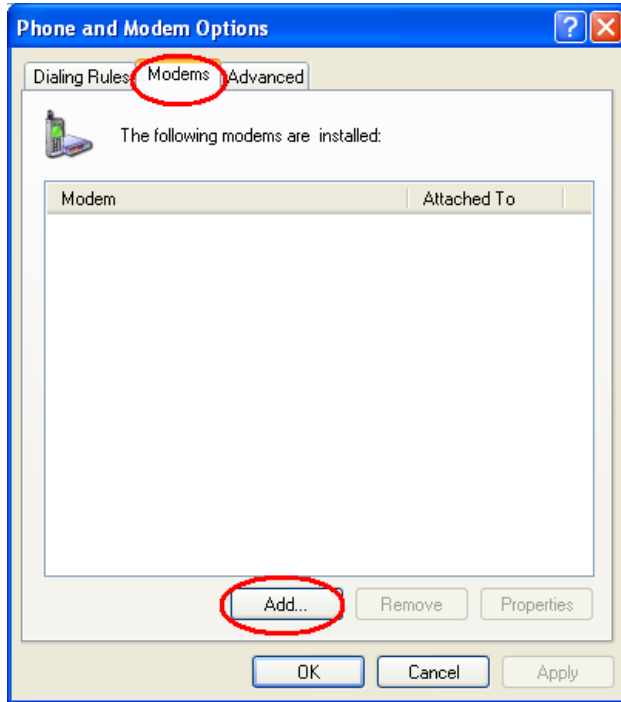


3.2 Dial-Up Settings

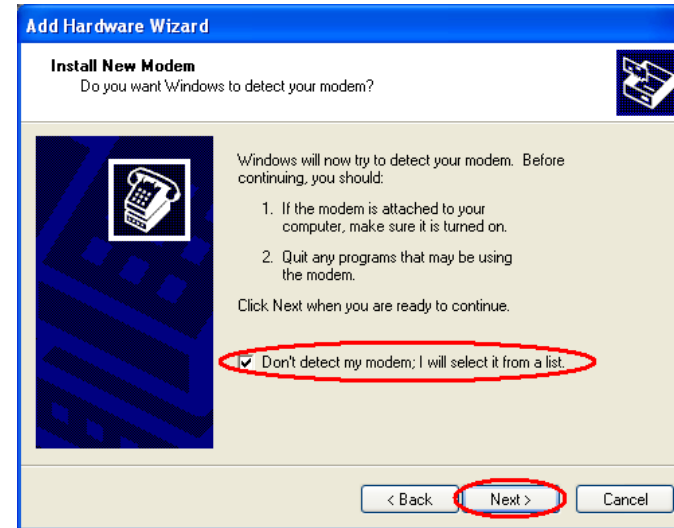
1. Press “start” → “Settings” → “Control Panel”, Double click “Phone and Modem Options”



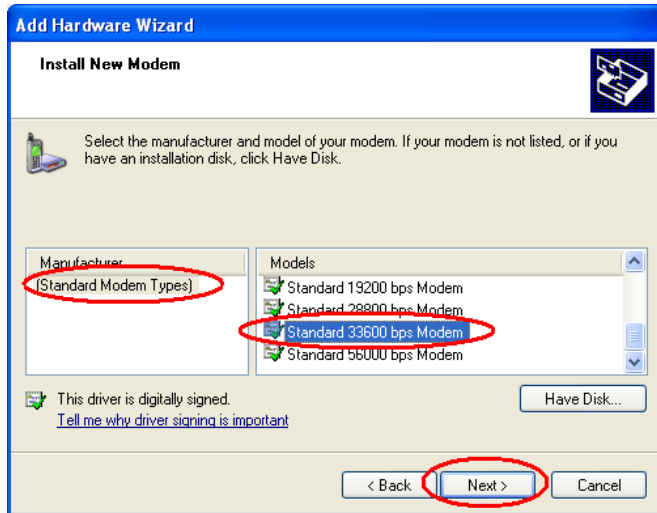
2. Choose “Modems”, Press “Add” button



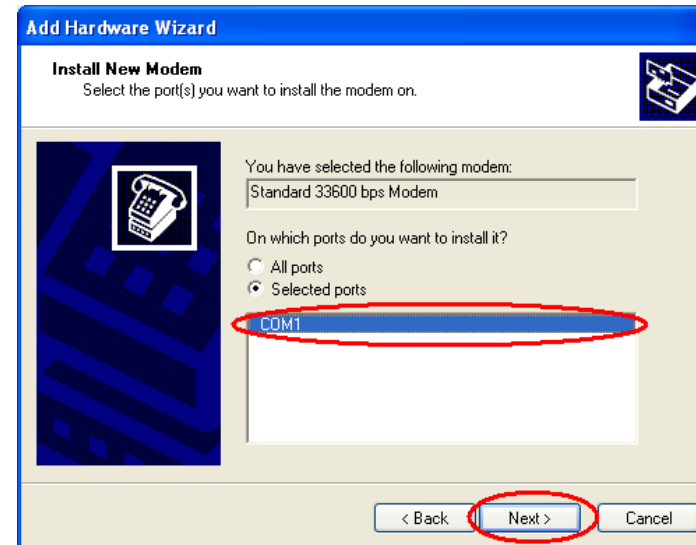
3. Choose “Don’t detect my modem;I will select it from a list”, and click “Next”



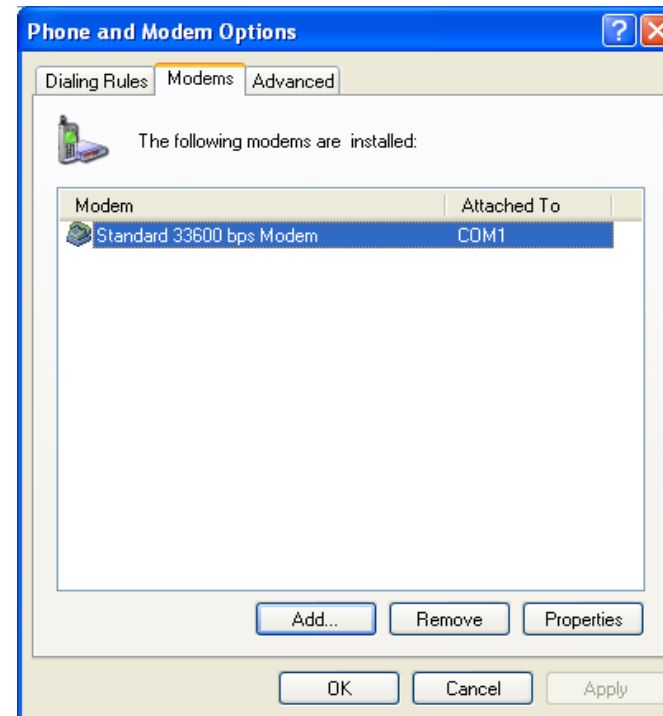
4. Manufacture choose ”Standard Modem Types”, Models choose “Standard 33600 bps Modem”, click “Next” button



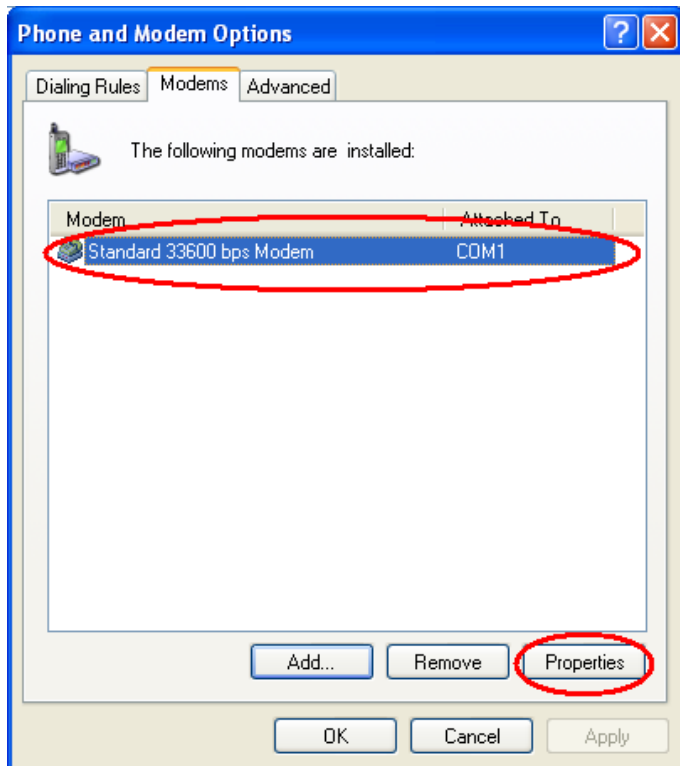
5. “Selected ports” choose the actual COM port which connects to Modem, click “Next” button.



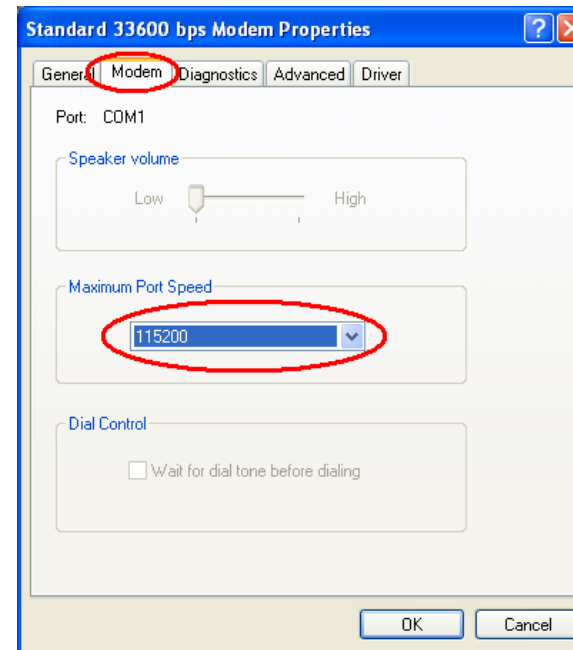
6. click “Finish” button, return back to “Modems” page



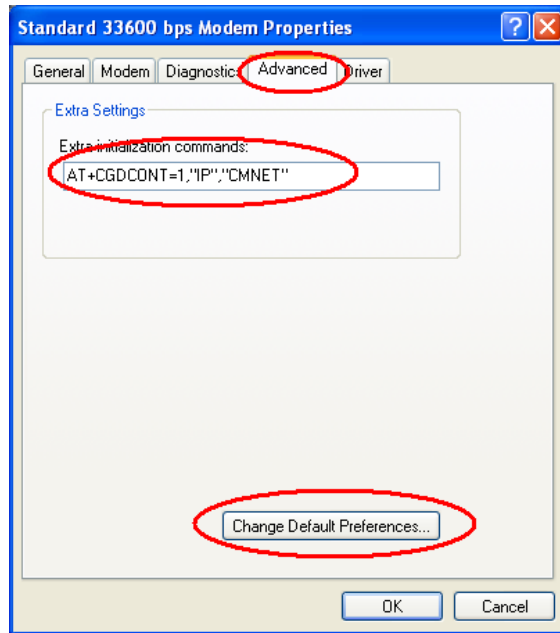
7. Choose the modem you have just installed, click “properties“ button to configure the modem driver



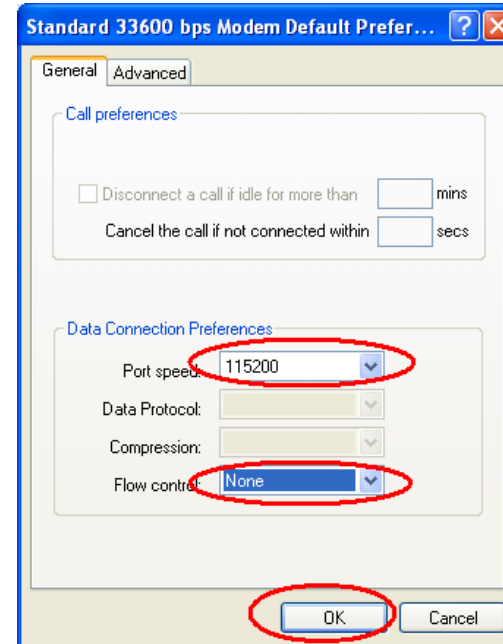
8. Choose "Modem" page, set Maximum Port Speed as 115200.



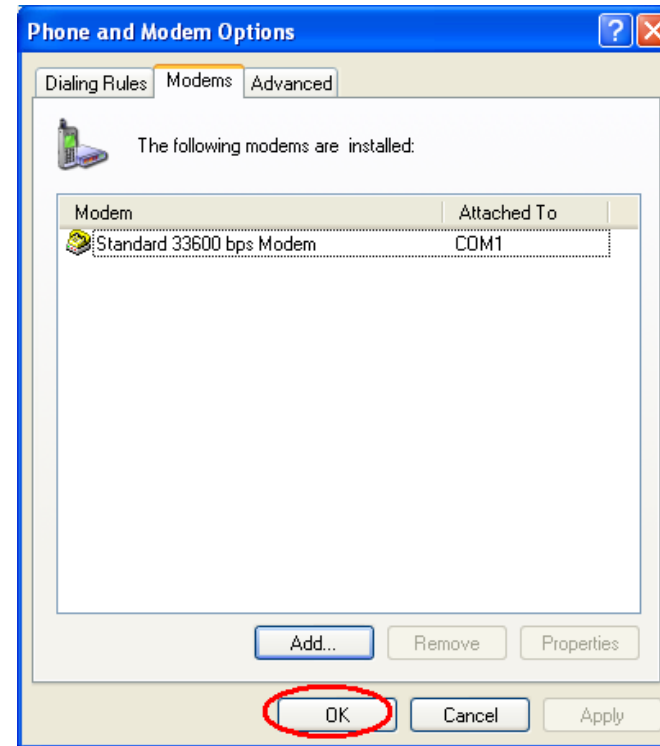
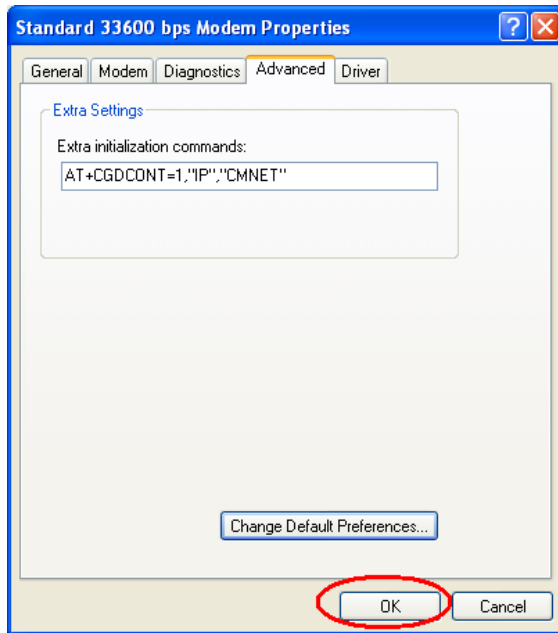
9. Choose "Advanced" page, input Extra Initialization commands: AT+CGDCONT=1,"IP","CMNET", CMNET is the Access Point Name(APN) of China, please replace it with your own APN name, click "Change Default Preferences" button



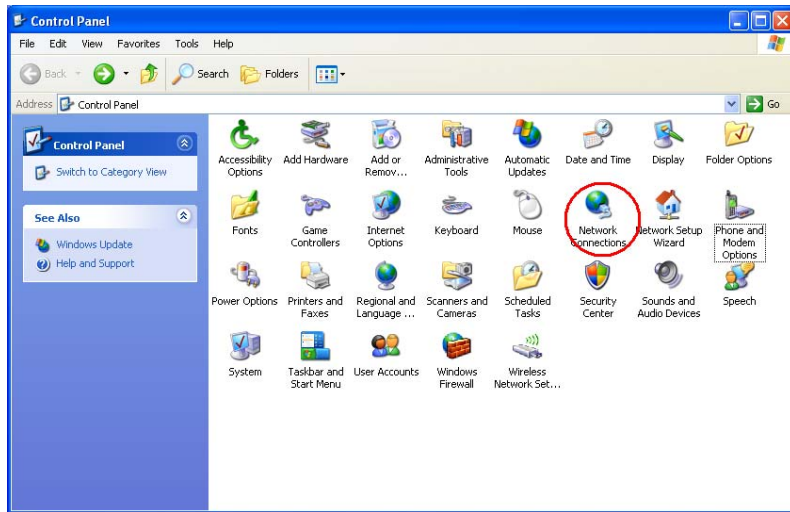
10. "Port Speed" choose 115200, "Flow control" choose None, click "OK" button.



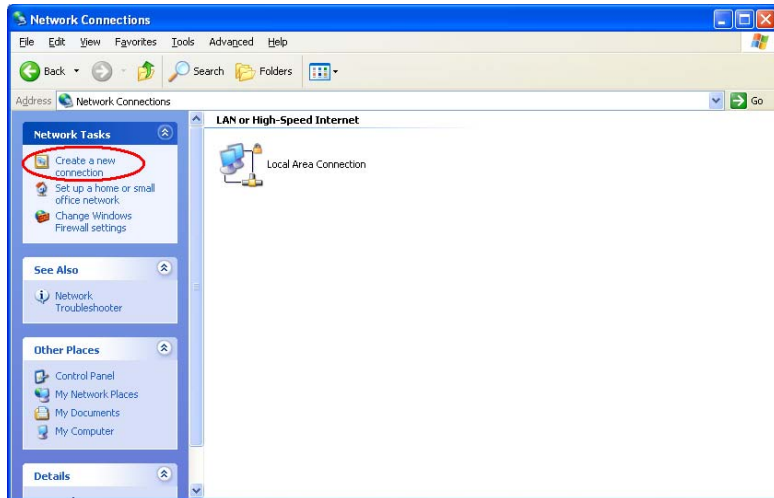
11. On the "Advanced" page, click "OK" button return to "Phone and Modems" page, click "OK" button to finish the Modem driver installation



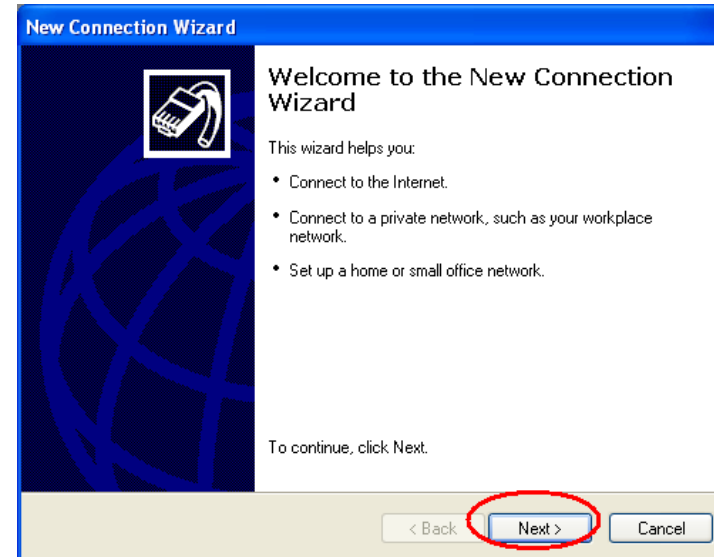
12. Finish installing Modem driver, It's necessary to install the Dial-Up connection. Open "Control Panel", double click "Network connections"



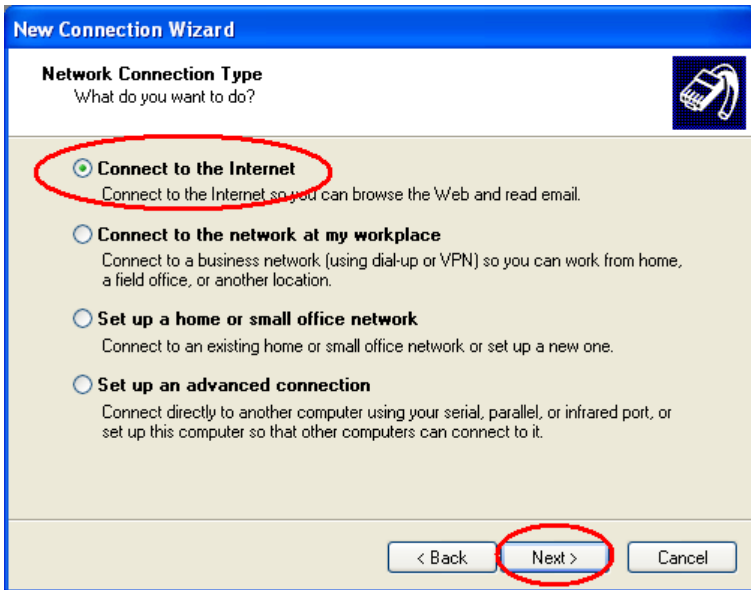
13. Click “Create a new connection” to start creating a new Dial-Up connection.



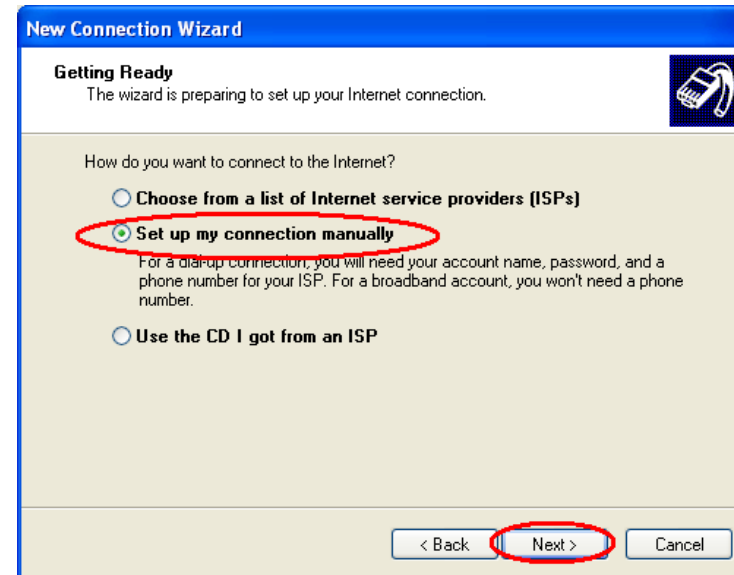
14. Click “Next” button



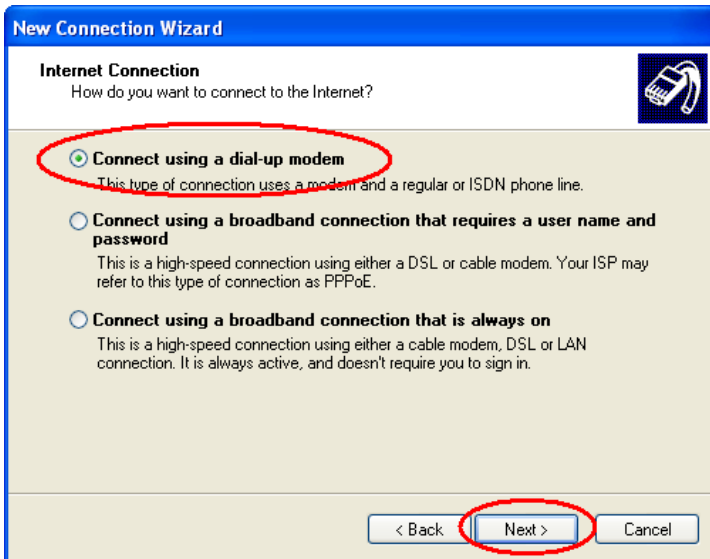
15. Choose “Connect to the Internet”, click “Next” button



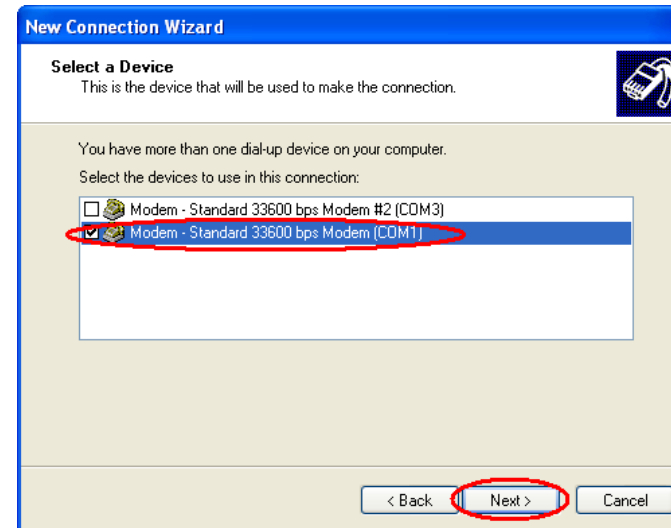
16. Choose "Set up my connection manually", click "Next"



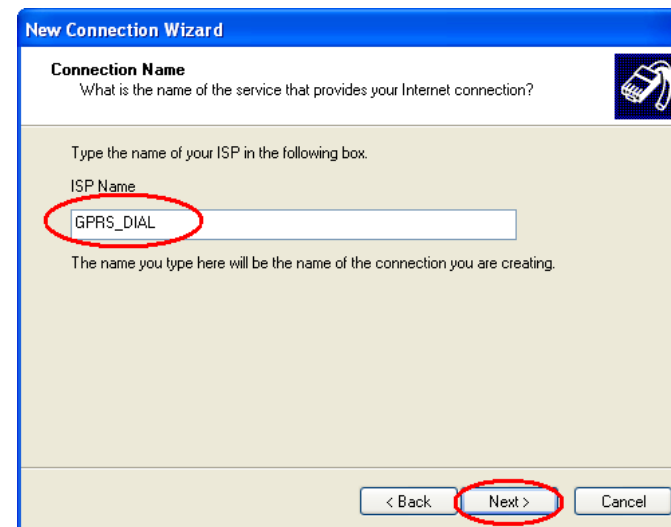
17. Choose "Connect using a dial-up modem", click "Next"



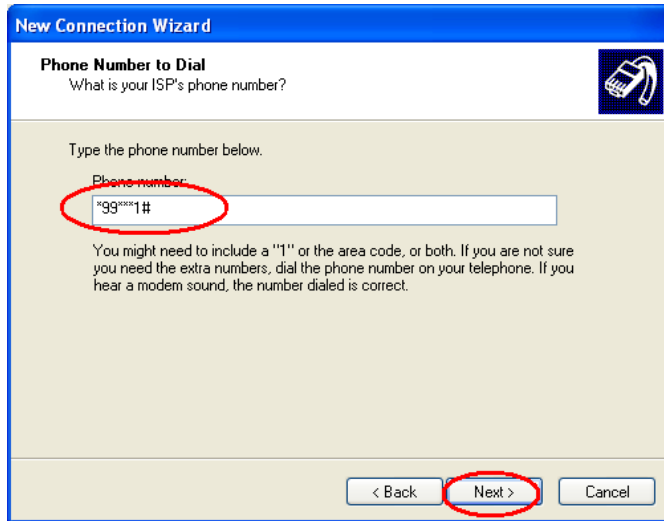
18. Choose the Modem driver installed just now, click “Next” button



19. Input the ISP Name , click “Next” button



20. Input the call center number of your ISP. In China, It is *99***1#. Click “Next” button.



New Connection Wizard

Phone Number to Dial
What is your ISP's phone number?

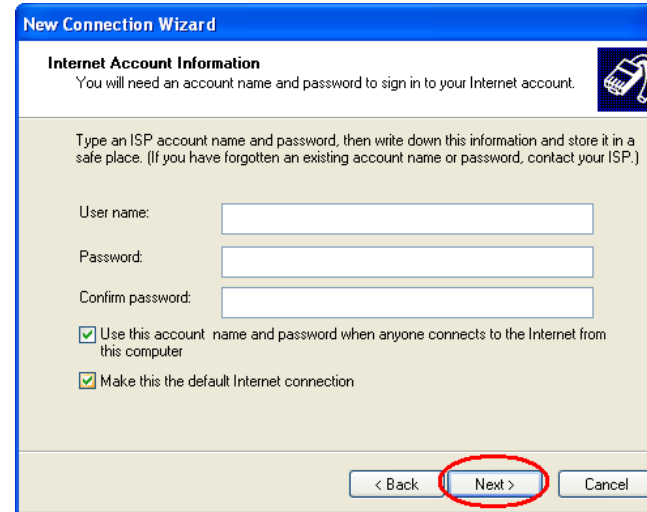
Type the phone number below.

Phone number:
*99***1#

You might need to include a "1" or the area code, or both. If you are not sure you need the extra numbers, dial the phone number on your telephone. If you hear a modem sound, the number dialed is correct.

< Back Next > Cancel

21. Input the username and password. In china they are both null. Click “Next”.



New Connection Wizard

Internet Account Information
You will need an account name and password to sign in to your Internet account.

Type an ISP account name and password, then write down this information and store it in a safe place. (If you have forgotten an existing account name or password, contact your ISP.)

User name:

Password:

Confirm password:

Use this account name and password when anyone connects to the Internet from this computer

Make this the default Internet connection

< Back Next > Cancel

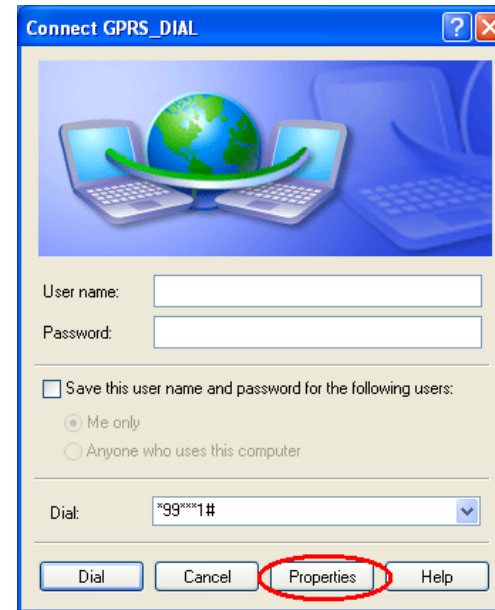
22. Choose “Add a shortcut to this connection to my desktop”, click “Finish” button.



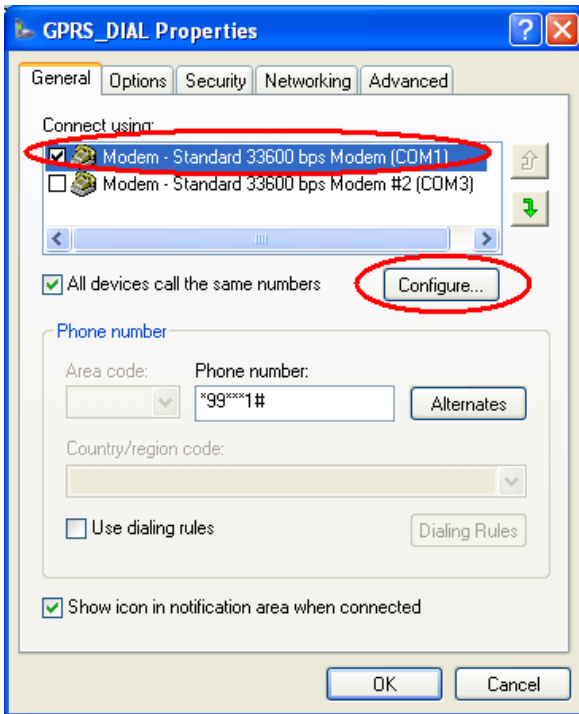
23. Double click the Dial-Up shortcut on your desktop to run Dial-Up program.



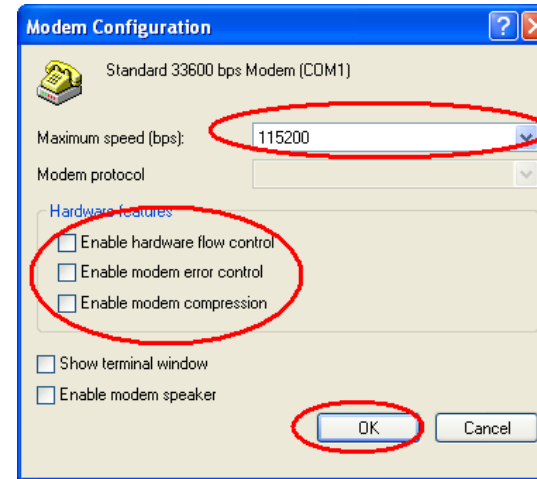
24. Click the "Properties" button of the Dial-Up program



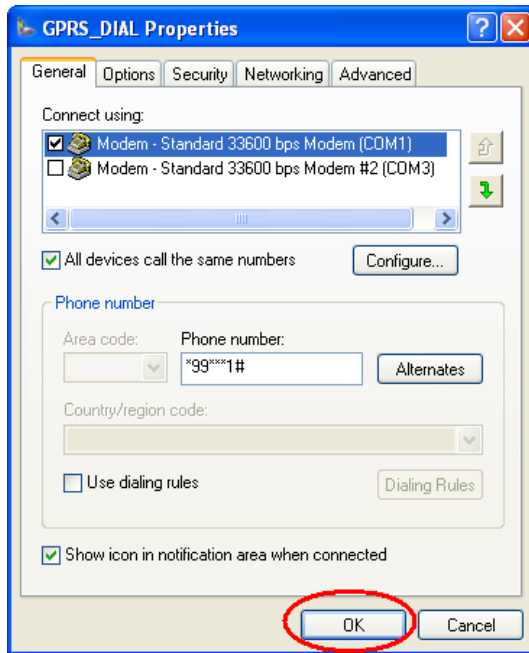
25. Choose the Modem driver installed before, Click "Configure" button



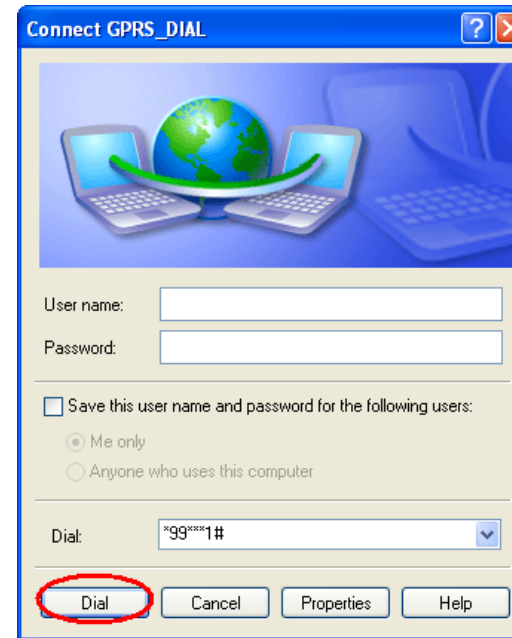
26. Set “Maximum Speed [bps]” as 115200, set Hardware features as following, click “OK” button




27. Click “OK” button to finish Dial-Up program configuration



28. Click “Dial” button to start dial

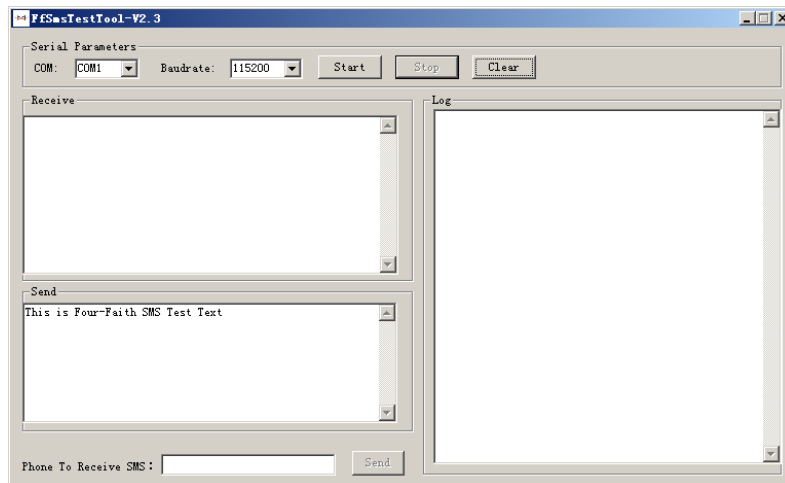


29. When dial success, There is a connection icon  on the right of your taskbar.

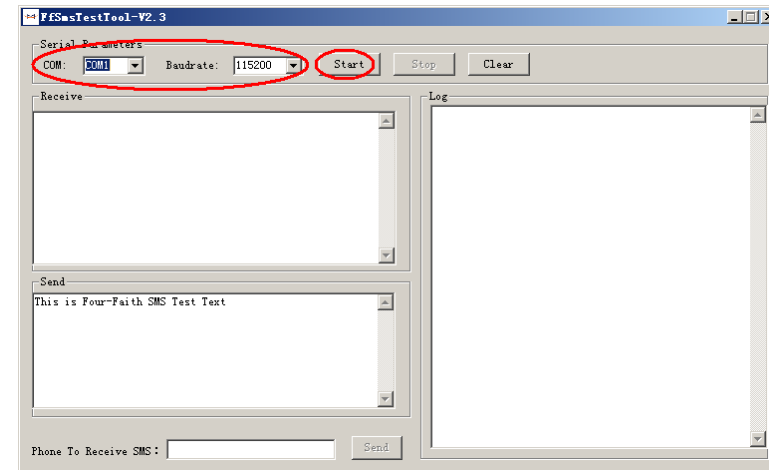
Chapter 4 SMS Test

Modem can also be used to send and receive SMS (Short Message Service) except setting up dial-up connection. To simplify customer program, we supply a DLL(Dynamic Link Library) and sample program source code, all the SMS operations can be processed through simple API functions. The following describes how to test the SMS function.

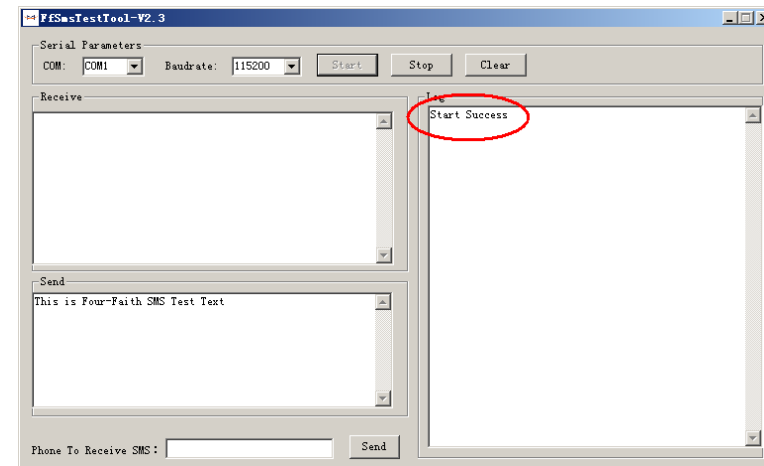
1. Connect PC and Modem with the shipped RS-232 cable and power on Modem, The connection diagram please refer chapter 3.1
2. Run FfSmsTestTool-En.exe



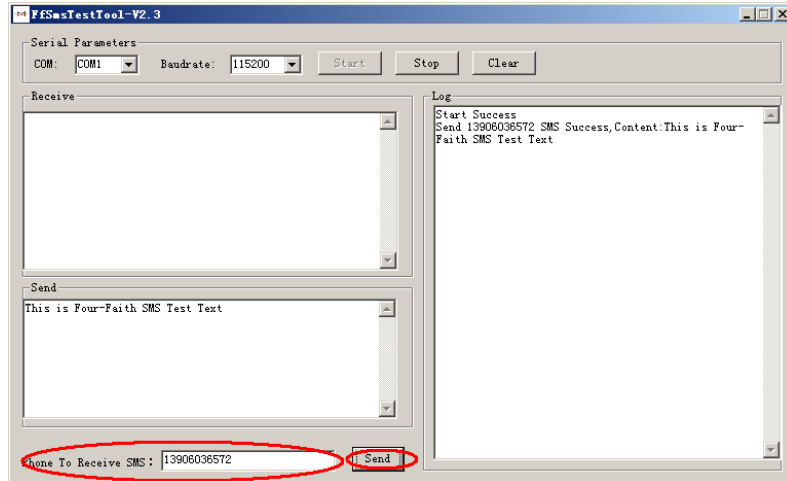
3. Choose the COM port which connect to MODEM, baud rate is 15200, click “Start” button



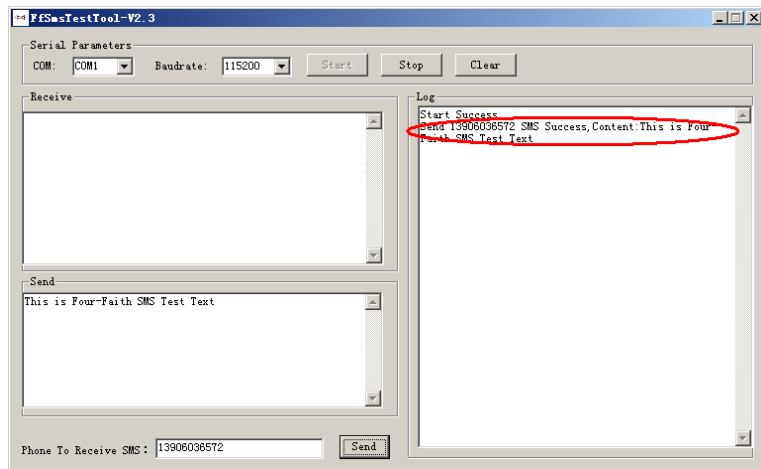
4. The tool will initiate Modem after clicking the “Start” button, If initiate success, the log column will show “Start Success”, It’s now ready for sending and receiving SMS.



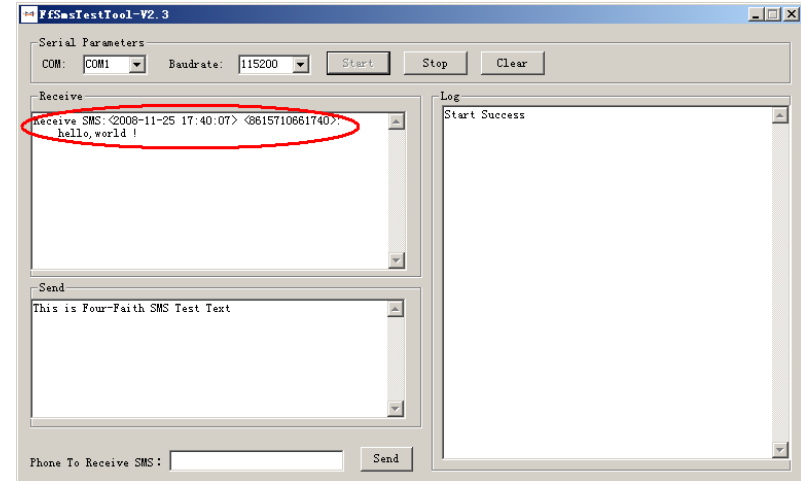
5. Input the phone to receive this test SMS, click “Send” button



6. The result state will display in the Log column



7. When received SMS, It will display in the receive column



8. Complete SMS test.