

# M300 Series Industrial 3G/4G Modem

## User Manual

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# Chapter 1

## 1 Prologue

This document is just suit for the following mode type; it helps you quickly to used M300 Modem function and resolves some common questions.

Type	Marks
M300e	EDGE Modem
M300ev	EVDO Modem
M300d	HSDPA Modem
M300u	HSUPA Modem
M300t	LTE Modem

### 1.1 Version

Version No.	Date	Description
1.00	2008-07-07	
1.01	2008-07-14	Add FAQ
1.02	2008-8-19	Add ZTE S/W operation

### 1.2 Referenced Documents

M300 Series Modem Datasheet.pdf

### 1.3 Notice

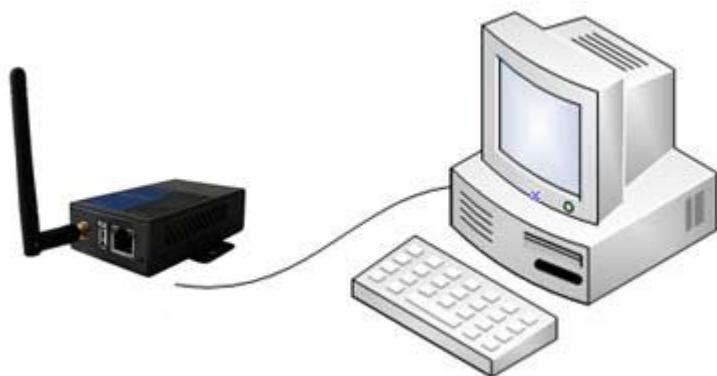
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# Chapter 2

## 2 Getting Started

### 2.1 Connect to product

Please connect antenna and cable with our products, make sure the following.  
The port is COM1 or COM2.

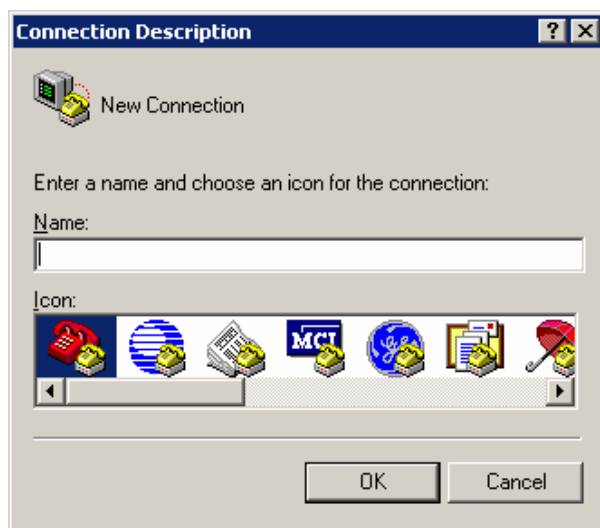


### 2.2 Insert SIM Card

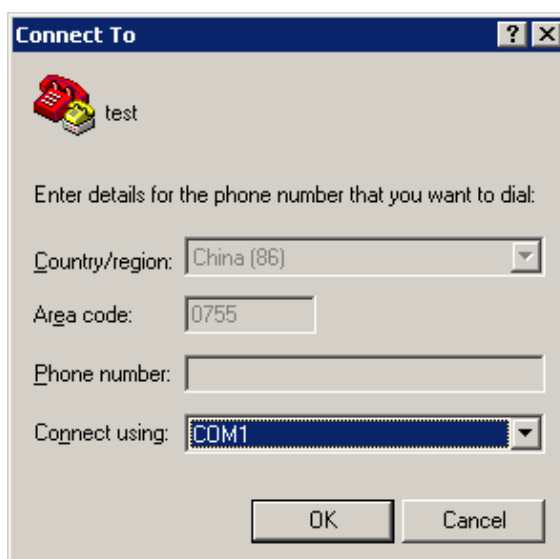
Open the SIM Card Slot/Tray and insert into SIM card,

### 2.3 Hyper Terminal

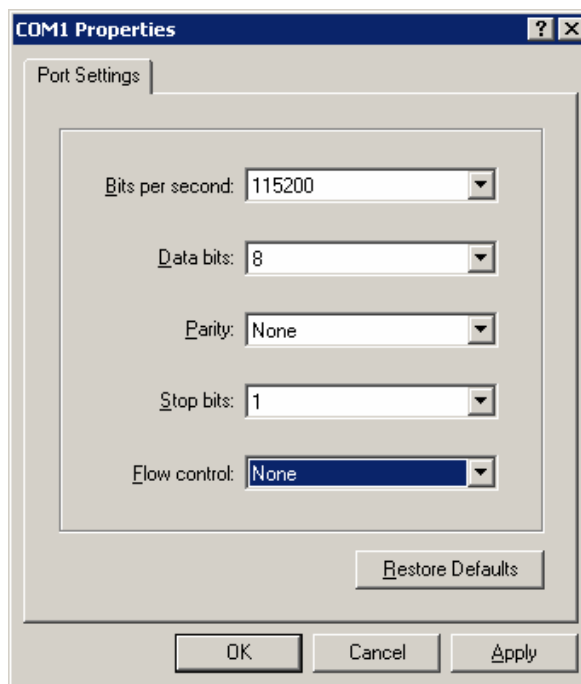
1) Open the HyperTerminal and input \*\*\*( any) as follows



2) Choose a right port

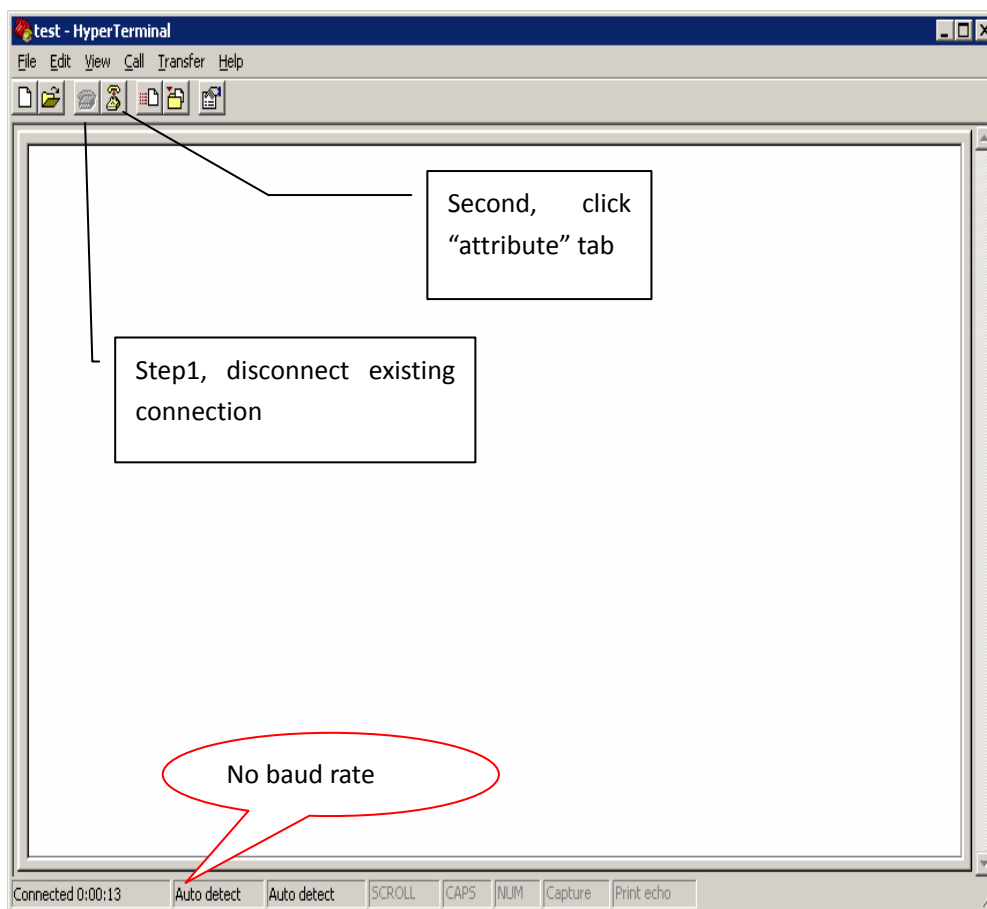


3) The right configuration as following

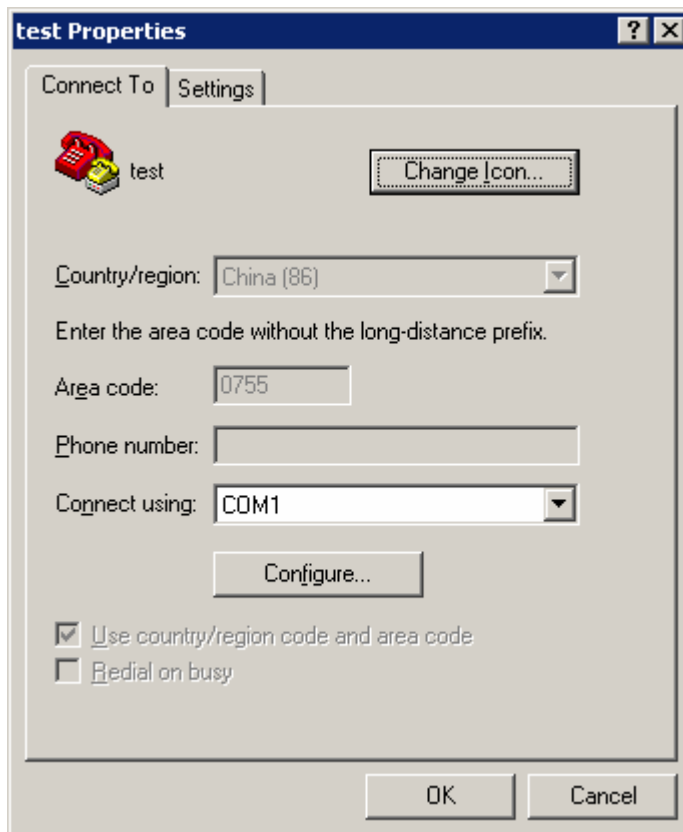


(图 3-3)

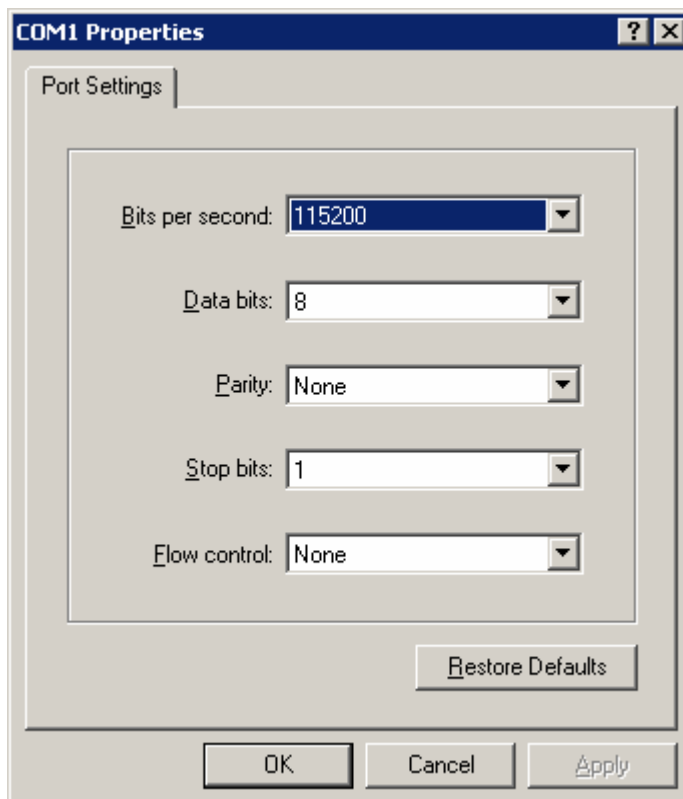
- 4) When your start-up Hyper Terminal, it is not connected really, you can see the red mark of follow picture without any number .And then, first Disconnect existing connection, second ,Click the red arrowhead



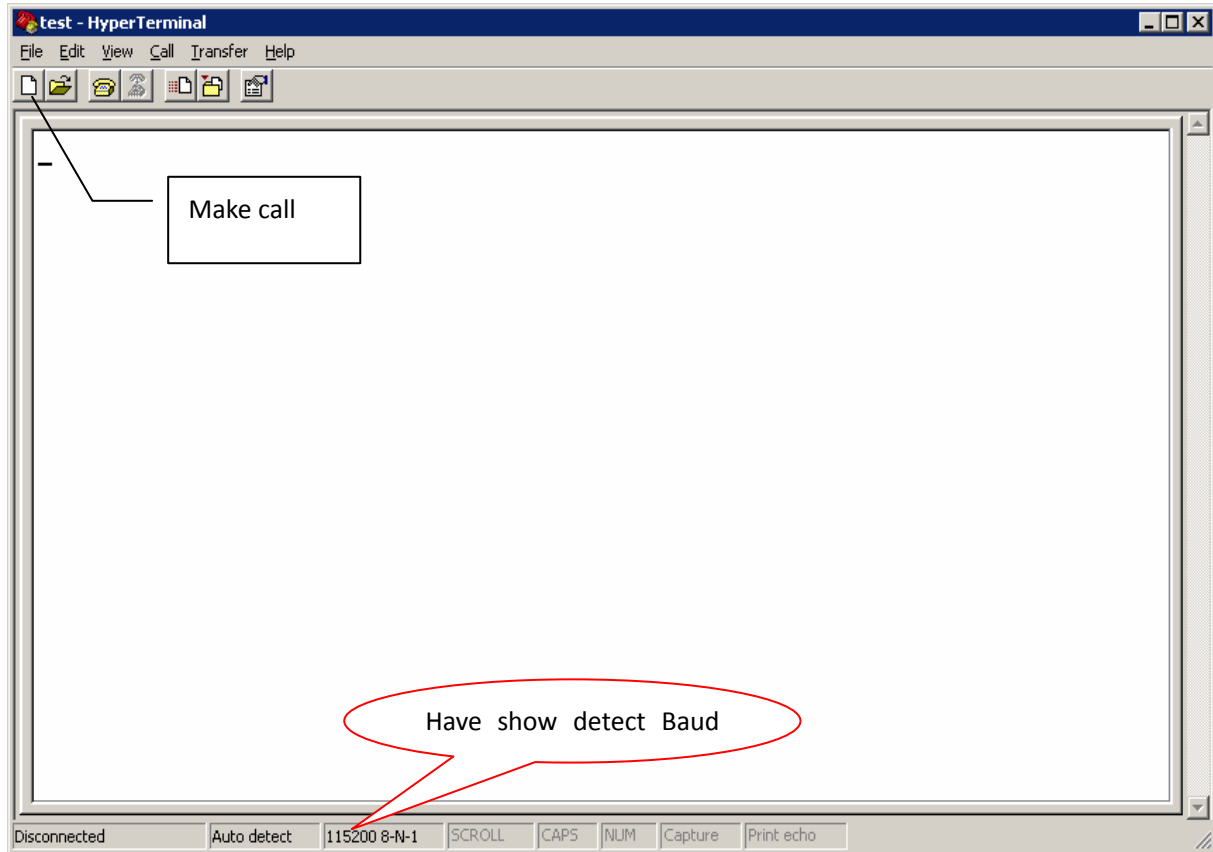
- 5) Click the "configure", and double confirm your modified configuration



6) Double confirm your modified configuration and click "OK"



7) Then you can see it appeared baud rate on white label, then click the black label to make call



8) provide power supply with our products, you configured the Hyper Terminal successfully

## 2.4 Test command

### Test AT command

AT<CF> //Test "at"command  
I/OK //Response ok parameter if successfully connected, you can make sure the module have no malfunction

AT+CSQ<CF> // to check the Signal quality  
+CSQ: \*\*, ## // \*\* Should be the number between 10 and 31, the signal quality becomes better as the number grows. ## should be is 99, Or you should checking the equipment of antenna or SIM card.

**If you succeed in testing command, at now, you can begin to use Modem**



# Chapter 3

## 3 Configure directory

Notes: the following at command is for example. Please refer to exact AT Command Manual for dedicated modules.

### 3.1 About SMS

#### How to used SMS:

Please follow the SMS User Manual

### 3.2 About CSD

#### 3.2.1 Introduce CSD

CSD (Circuit Switched Data) is 9.6kbps speed circuit Switched Data from GSM network, GSM+2 operations could attainability 14.4kb/s speed. and encrypts the data at the same time, so the GSM system has the encryption function. It can connect with the line Modem,

#### 3.2.2 Getting started

- Connect two modems with each two computers" cable and open up Hyper Terminal
- Setting Modems baud rate 9600bps
- Register the CSD function. if you used this function, the SIM card have Register CSD. Dredge CSD Function usually have two number. one is "pn" for voice message .and other is" un" for date message

#### 3.2.3 Mutuality command

##### 3.2.3.1 Generally command

ATD136*****	//make call
ATA	//answer a call
+++	//Switch from date mode or PPP online mode to command mode
ATO	//Switch from command mode to data mode or PPP online mode
ATH	//Disconnect existing Connection

### 3.2.3.2 Set the auto answer in ringing

ATS0=n //Set number of ring before automatically answering the call  
AT+IPR=n //Setting Baud Rate of Module (default is auto-acclimatize)

**Note:** n=0/300/600/1200/2400/4800/9600/14400/28800/38400/57600/115200 (in M300S211, this parameter default is 0; in M300H111, this parameter default is 115200)

### 3.2.4 Test

Initialization commands"

AT&F0 // renew default parameter  
AT+IPR=9600 // setting fixed baud rate  
AT&W // save parameter

Initialization command of Callee

ATS0=1

Initialization command of caller

ATD[dn] //note: not ending as" ; "is data call, end as";" is voice call make call [dn ]is data number.

Callee answer command

ATA // answer call

Communicate account command

+++ // abort communicate, return command mode  
ATO // Switch from command mode to data mode or PPP online mode

Disconnect existing Connection

ATH // Disconnect existing Connection, in command mode

When Callee receives a ring, it answers automatically. Both them will show connect 9600and enter data state .then you can used CSD.

There is a simple test course; it is suitable for modem products, and fit for the wireless modem connect with line modem.

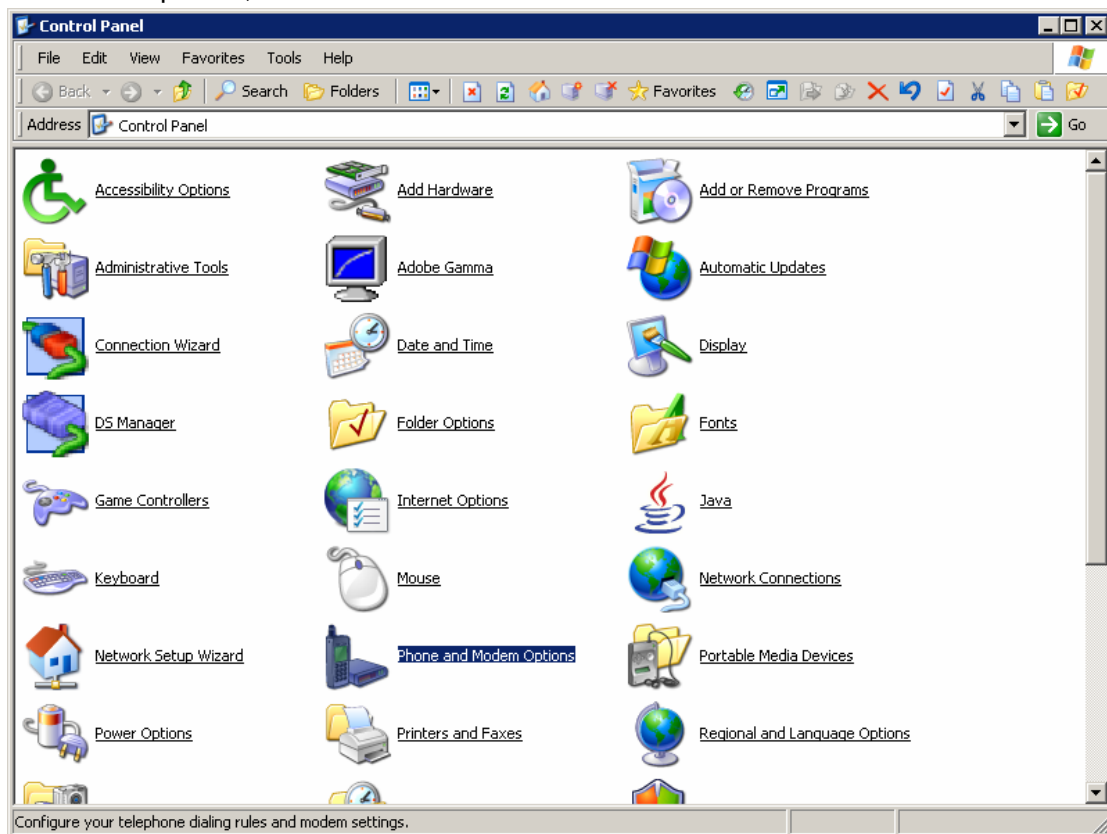
The Connecting mode of the CSD is same with line modem, even replace, but it is expensive, and not always online, only point to point, can not be one point to many points (center need to use modem, if come true point to point)

## 3.3 Dial-up

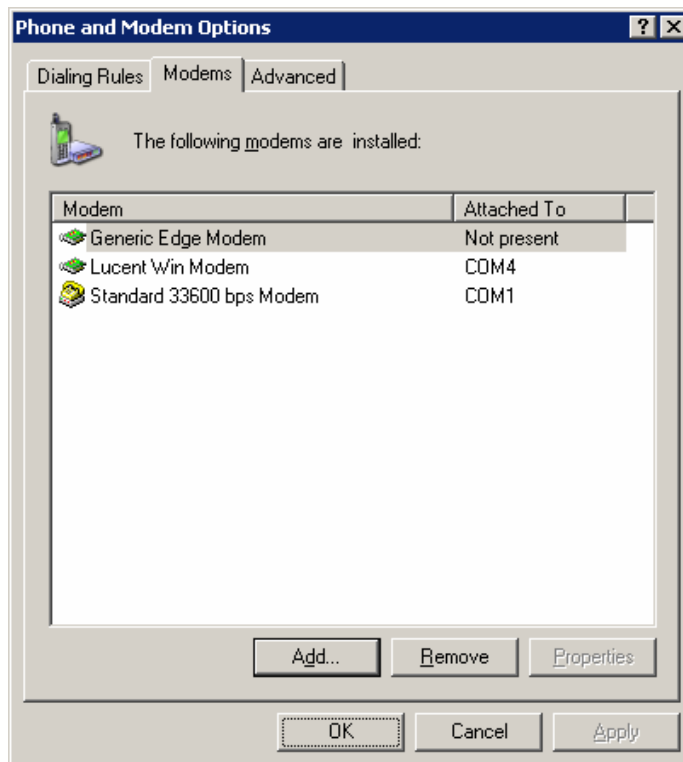
Dial-up to connect network in windows XP operation System

### 3.3.1 Setup Modem

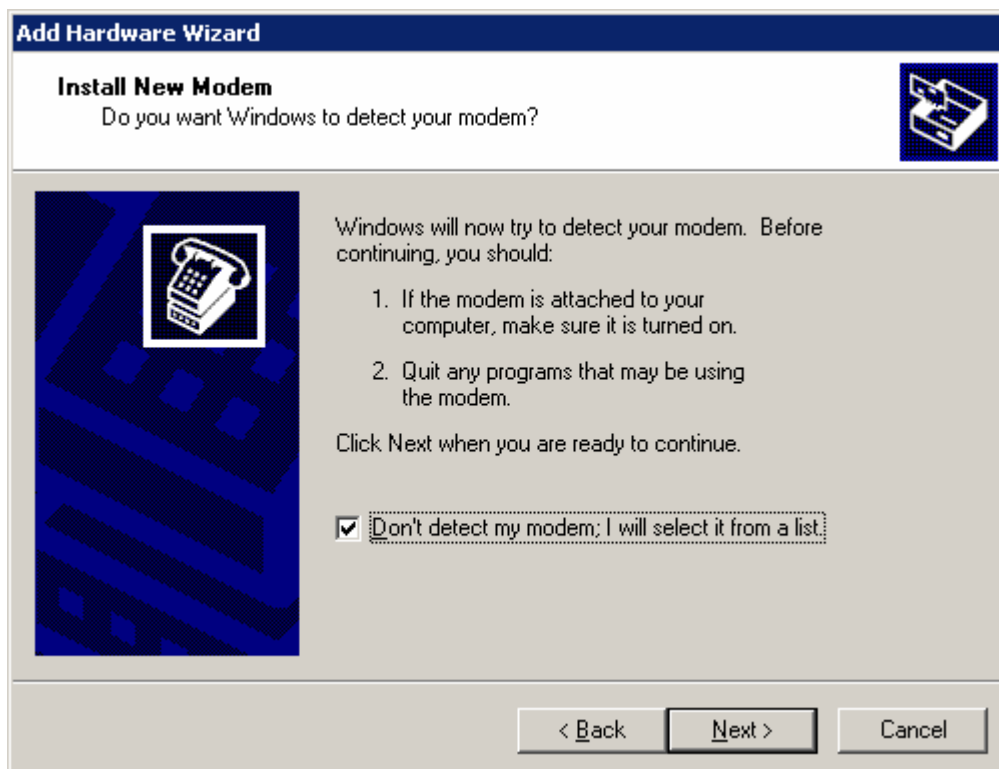
Please connect Modem with your computer Rs232 interface cable .then Start from “Control Panel”, click “Phone and Modem Options”, and select “Modem”:



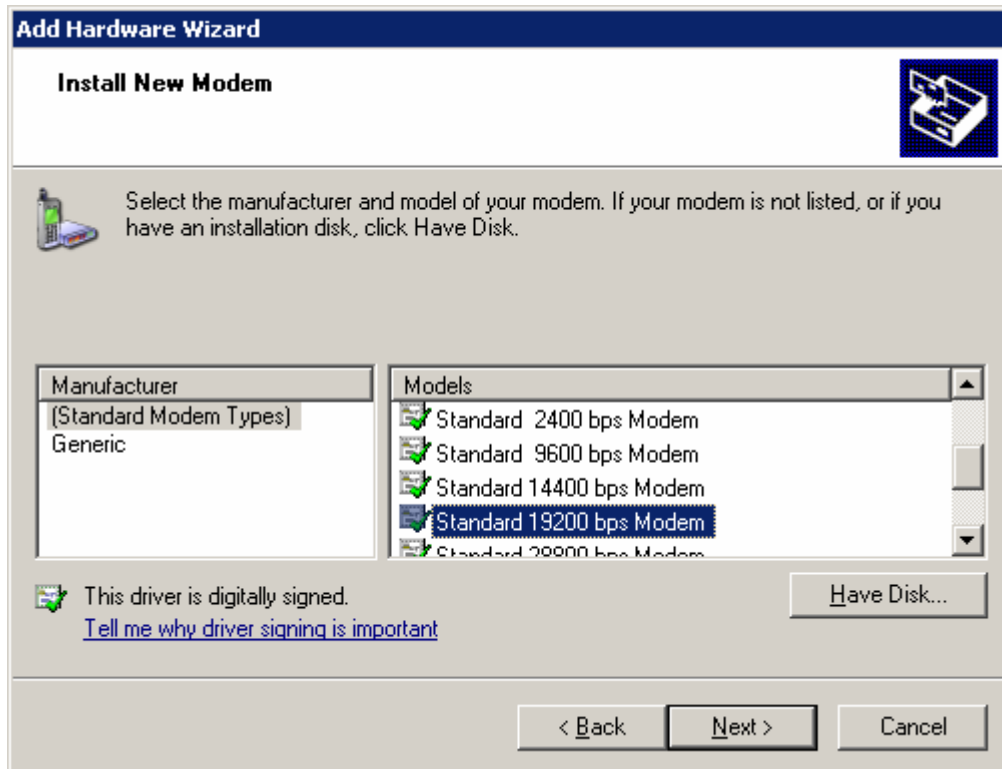
click “New location” to add a new modem:



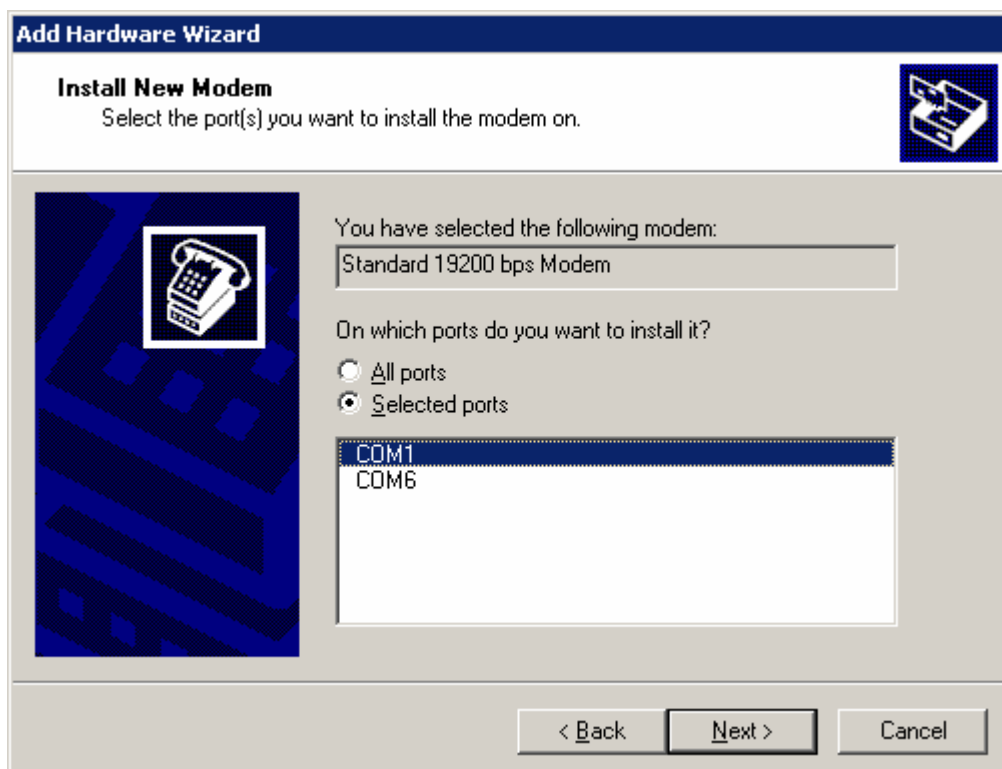
Tap “Don’t detect my modem; I will select it from a list “, and then click” Next” to continue



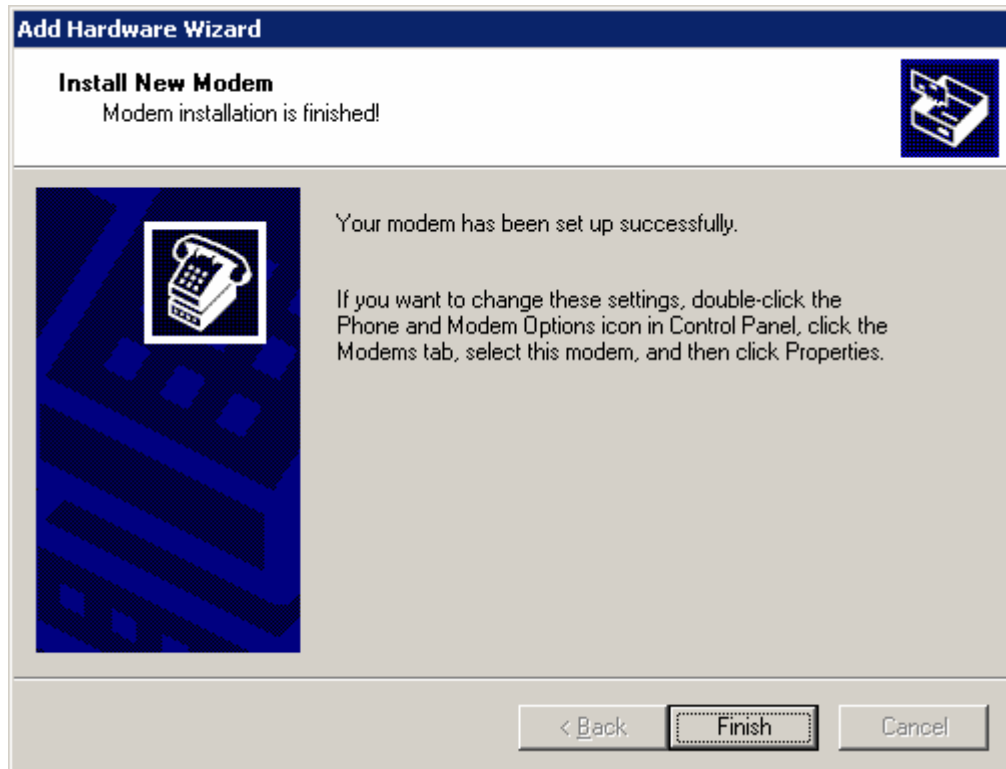
When appear “install new modem” dialog box, choose “standard Modem Types” in the left manufacturer, and choose “Standard 19200 bps Modem” in the right Models



Select COM port: Choose the right port (it depends your computer, may be not "COM1".), and click "next" then you will finish installation.

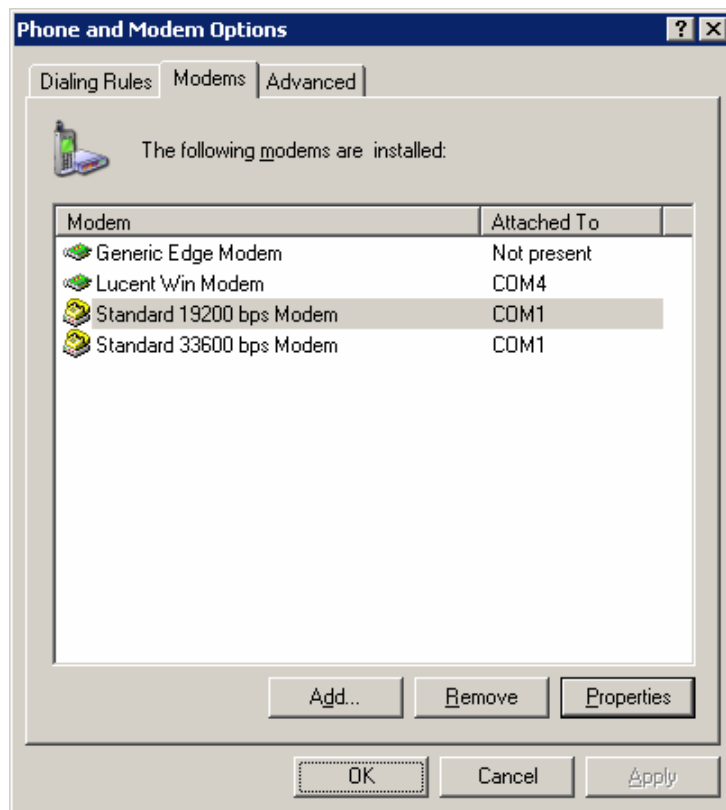


When appear Following Frame, Click "Finish" to succeed your modem installation.

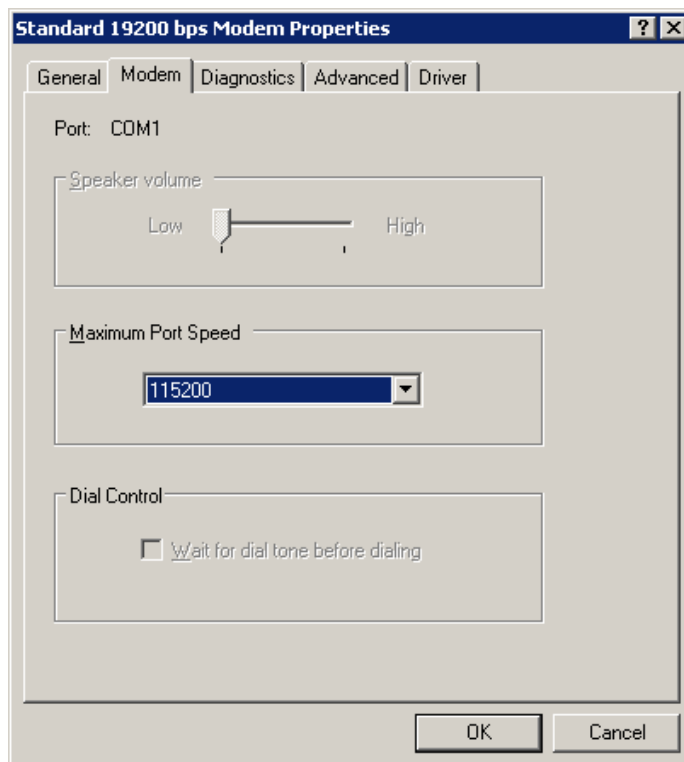


### 3.3.2 Setup 19200 Modem

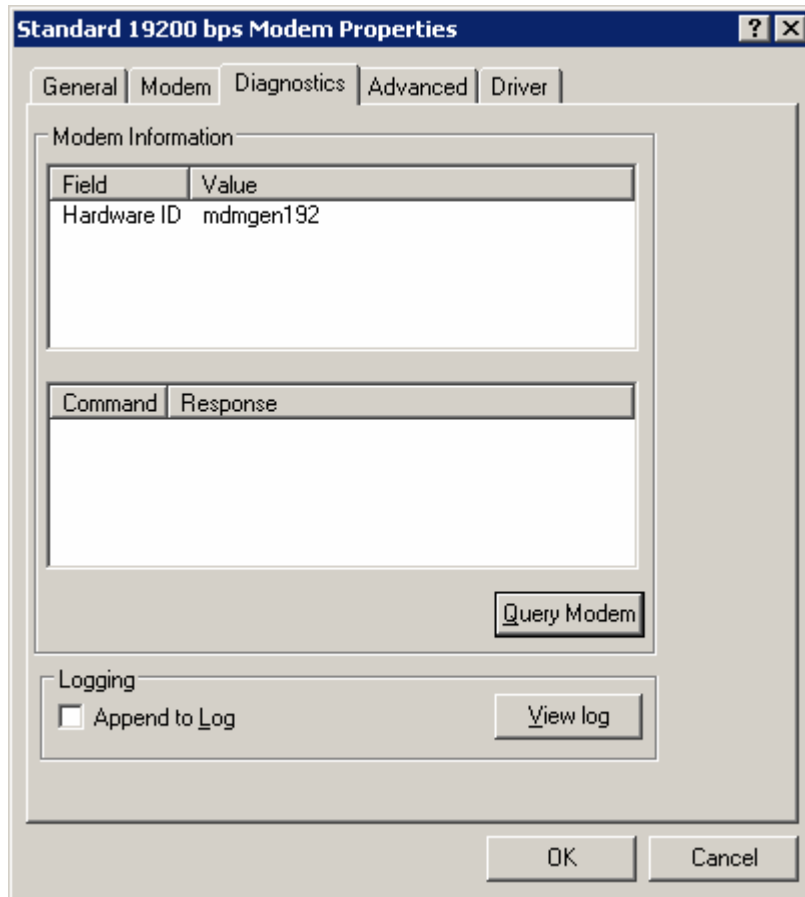
Click "Phone and Modem Options" from "Control Panel", Click "Modems" tab; select the modem that choose the "Standard 19200 bps modem", and then click "Properties" button.



At "Modem" tab, set the "Maximum Port Speed" to "115200".



Choose "Diagnostics" tab, click the "Query Modem, if Baud rate setting and so on is right, there are automatic indication that it is have pass

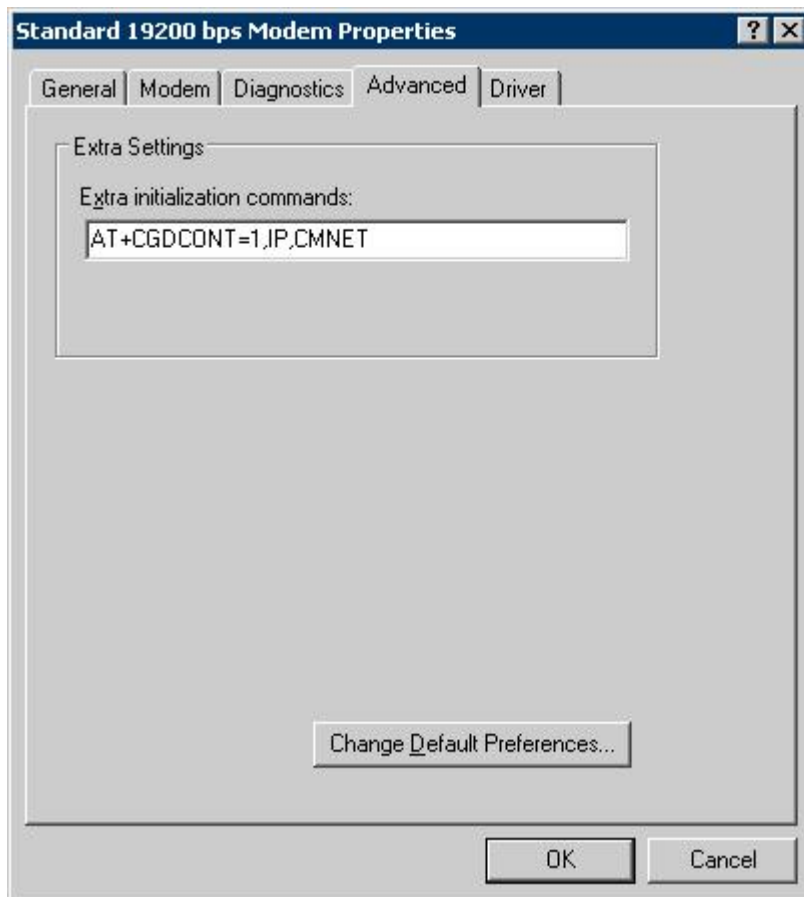


Next, click “Advanced” tab, Here, you can add or change settings by filling in Extra initialization commands at “Advanced” tab

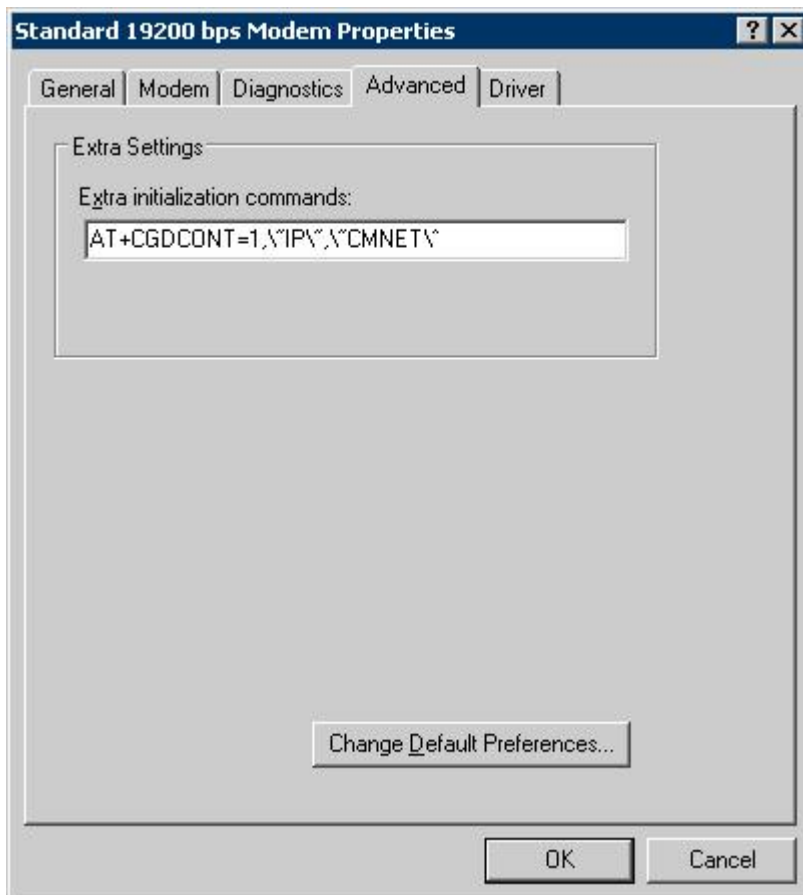
- M300d            Extra initialization commands: AT+CGDCONT=1, IP, **CMNET**
- EL-M300d2     Extra initialization commands: AT+CGDCONT=1, \\"IP\\", \\"**CMNET**\\"
- EL-M300ev     Extra initialization commands: AT&D2

Notes: CMNET is the APN from the network. Different network provider has different APN. Please confirm before setting.

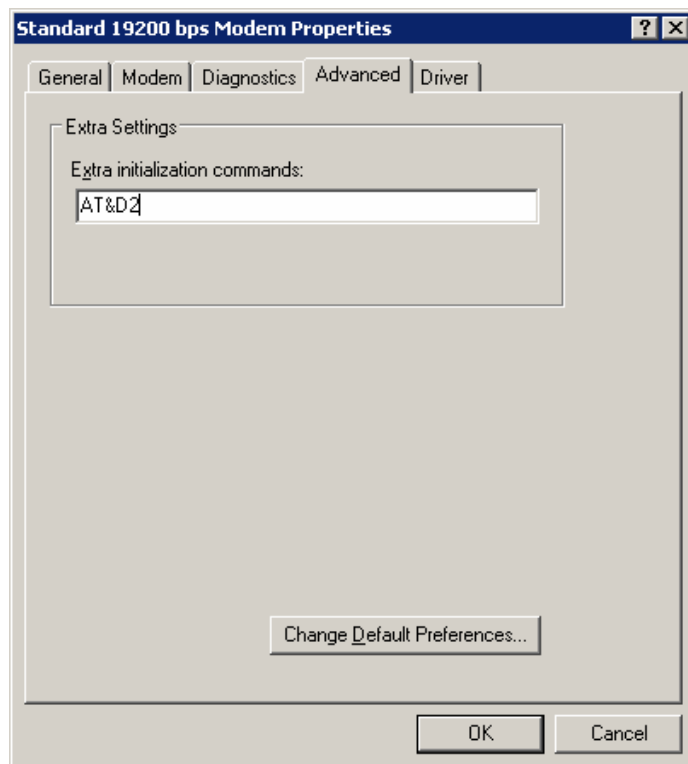




(this picture is the example to the modem for reference)



(this picture is the example to the modem for reference)

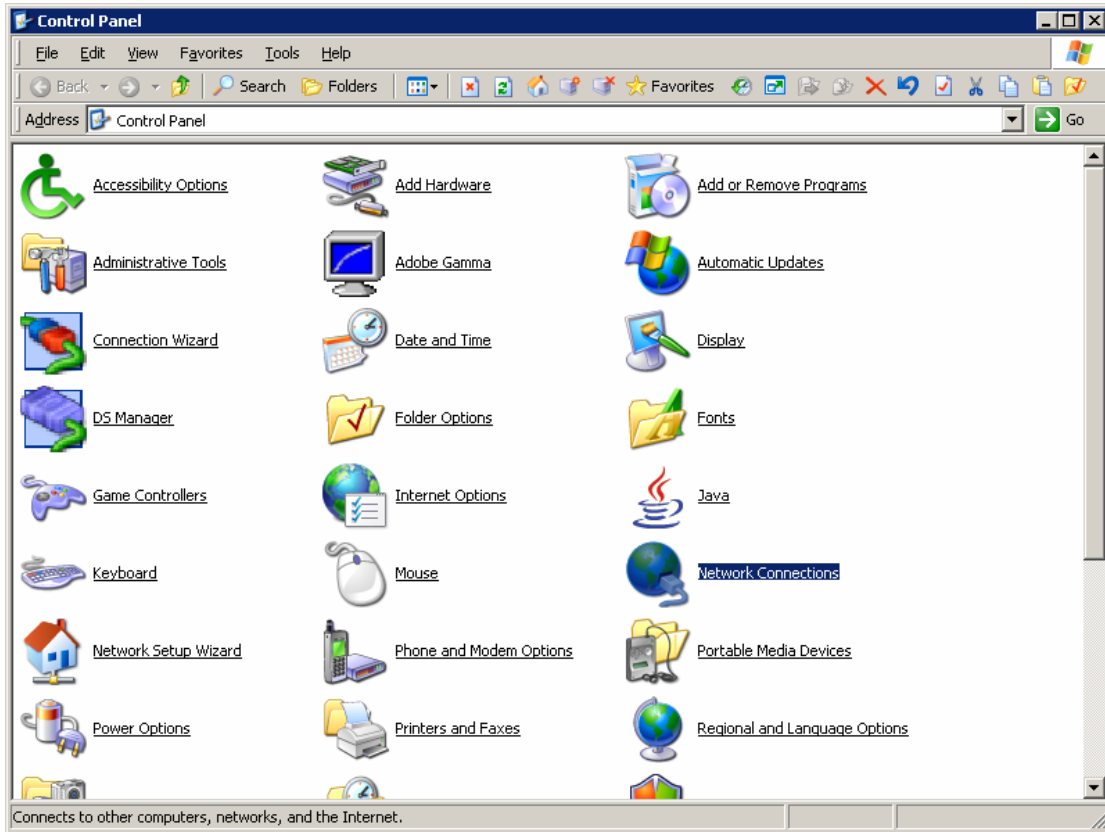


(this picture is the example to the modem for reference)

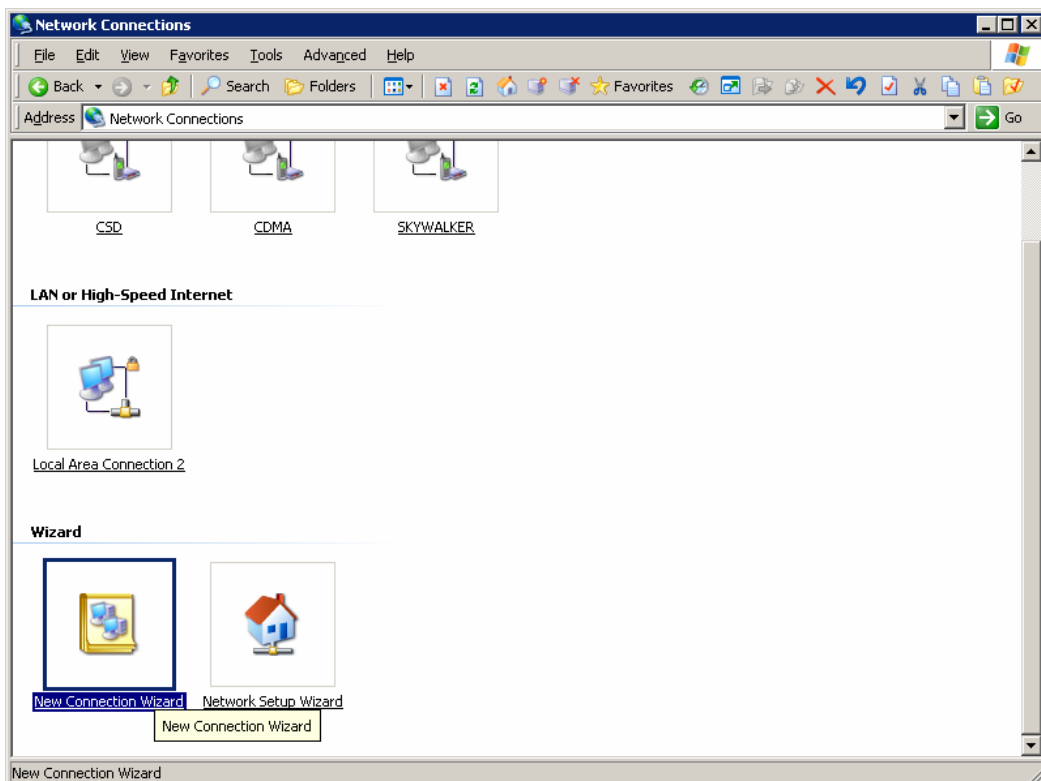
**NOTICE:** "CMNET" is China Mobile APN setting; you should change it in accordance with the information provided by your local service provider.

### 4.3.3 Create Dial-up network

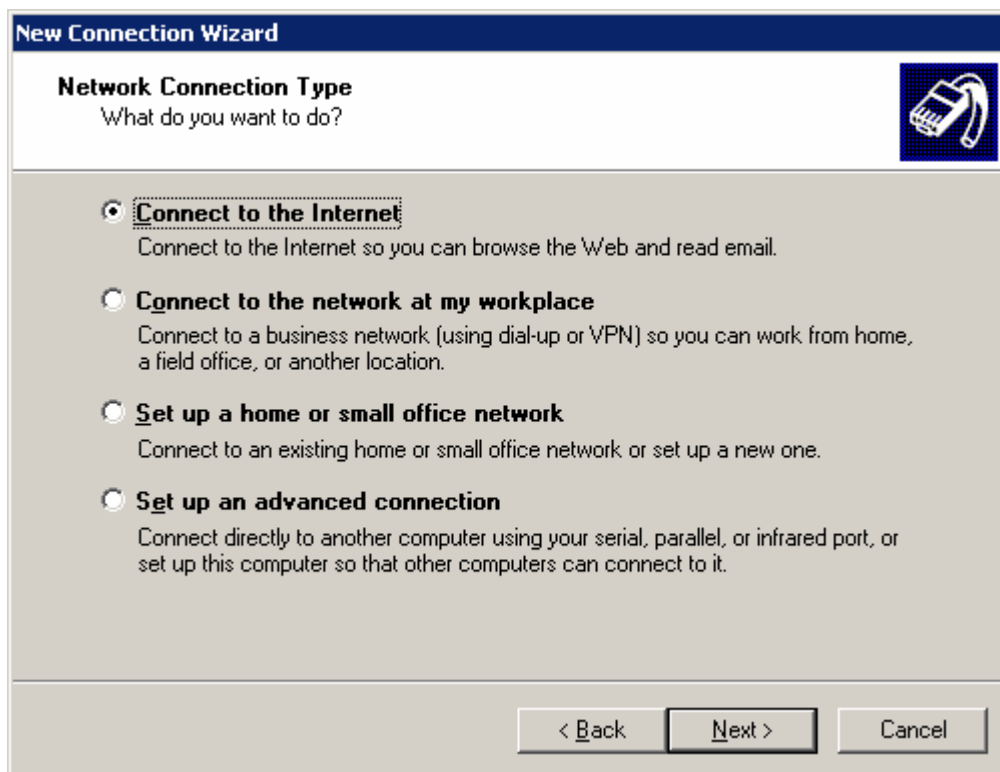
The Modem have been right setting as following picture, next ,To setup your GPRS/CDMA/EDGE/EVDO/HSDPA Dial-up network, Open “Network Connections”.



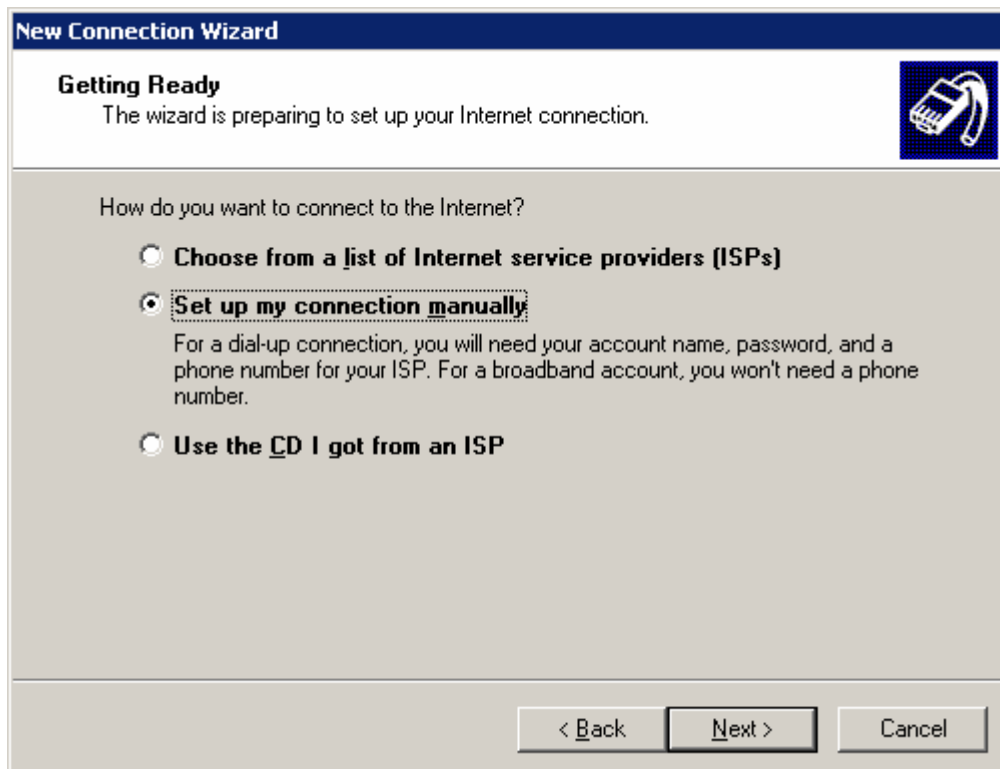
Double click “network Connection”, click “Next” to continue



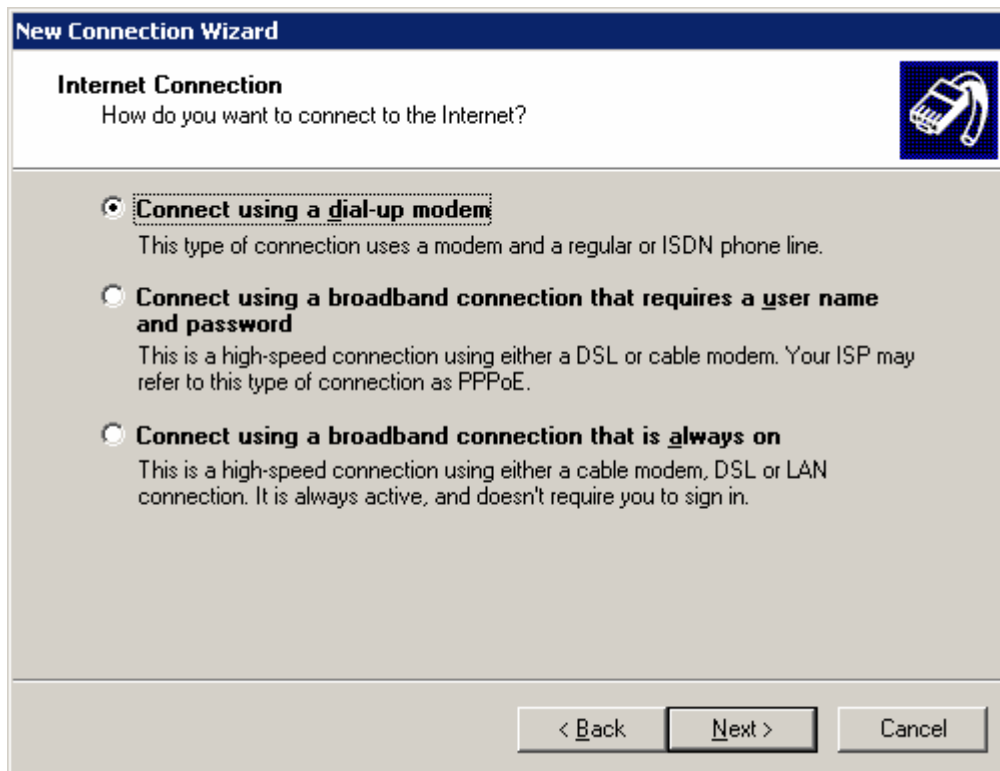
The Network Connection Wizard opens. Click “Next” to continue. Put a check mark on Connect to the Internet and click next.



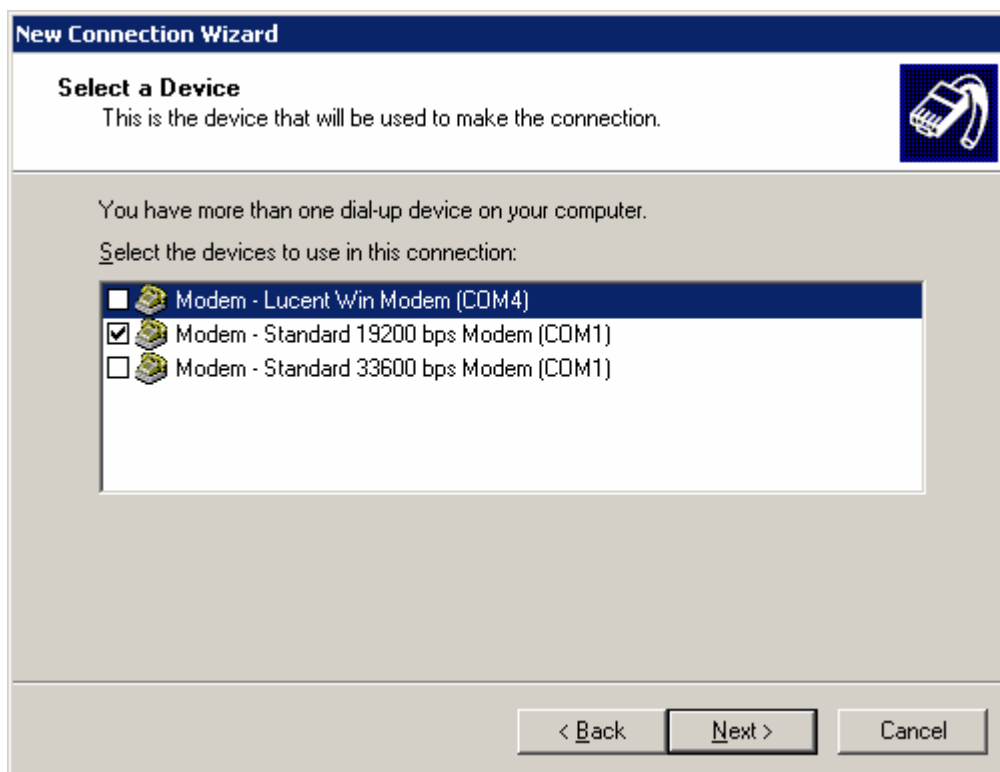
Select the options Set up my connection manually and click next.



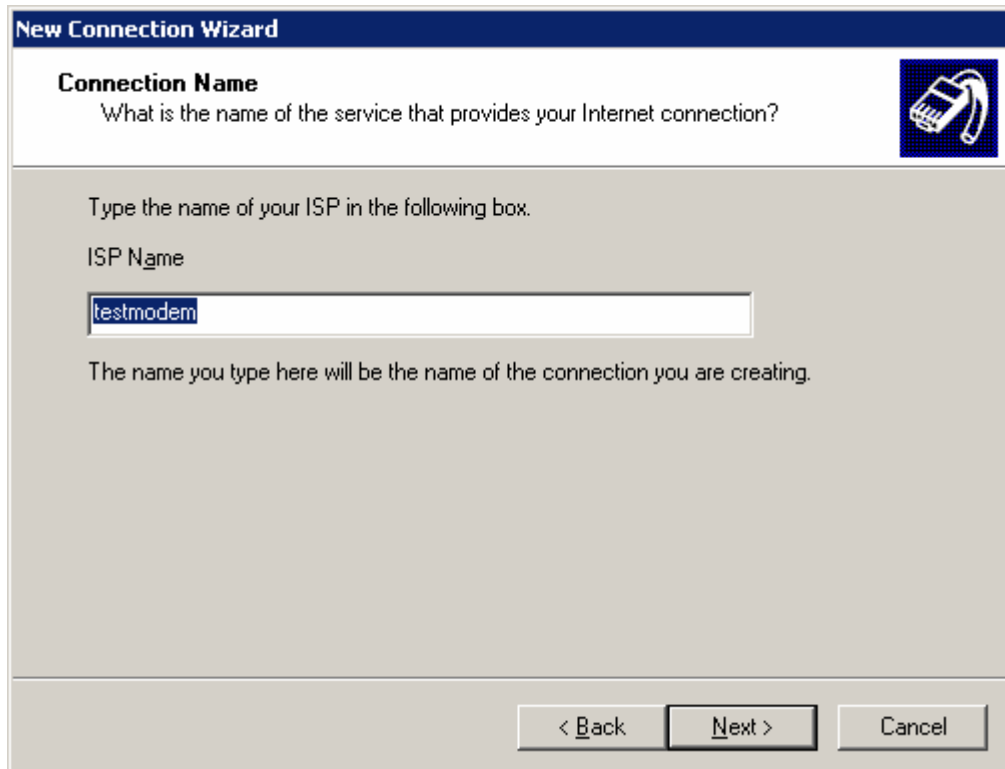
Select Connect using a dial-up modem and click “next” button to continue.



Select the modem driver that you want to use for the dial-up connection. Click Next to Continue.

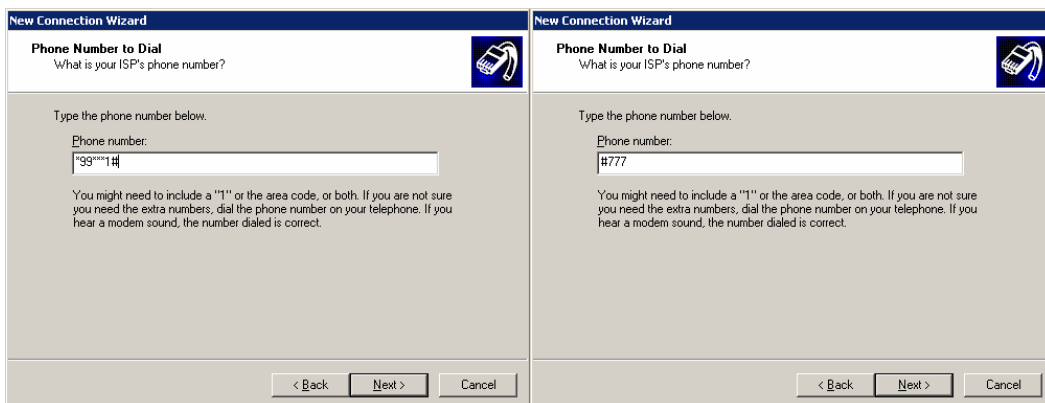


Type an appropriate Connection name and click next.



AS showing below picture, Depending on the network, input ISP phone number in “phone number” box,

if modem type is GSM that standard phone number is “\*99\*\*\*1#”,  
If modem type is CDMA that standard phone number is “#777”



(Modem phone number)

It will display the following “Internet Account Information” Frame. You may be required to put a User name and a Password for the dial-up connection

If modem type is GSM that user name and password both are “wap”,  
If modem type is CDMA that user name and password both is “Card”.

**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: wap

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

(example to gsm modem)

**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: card

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

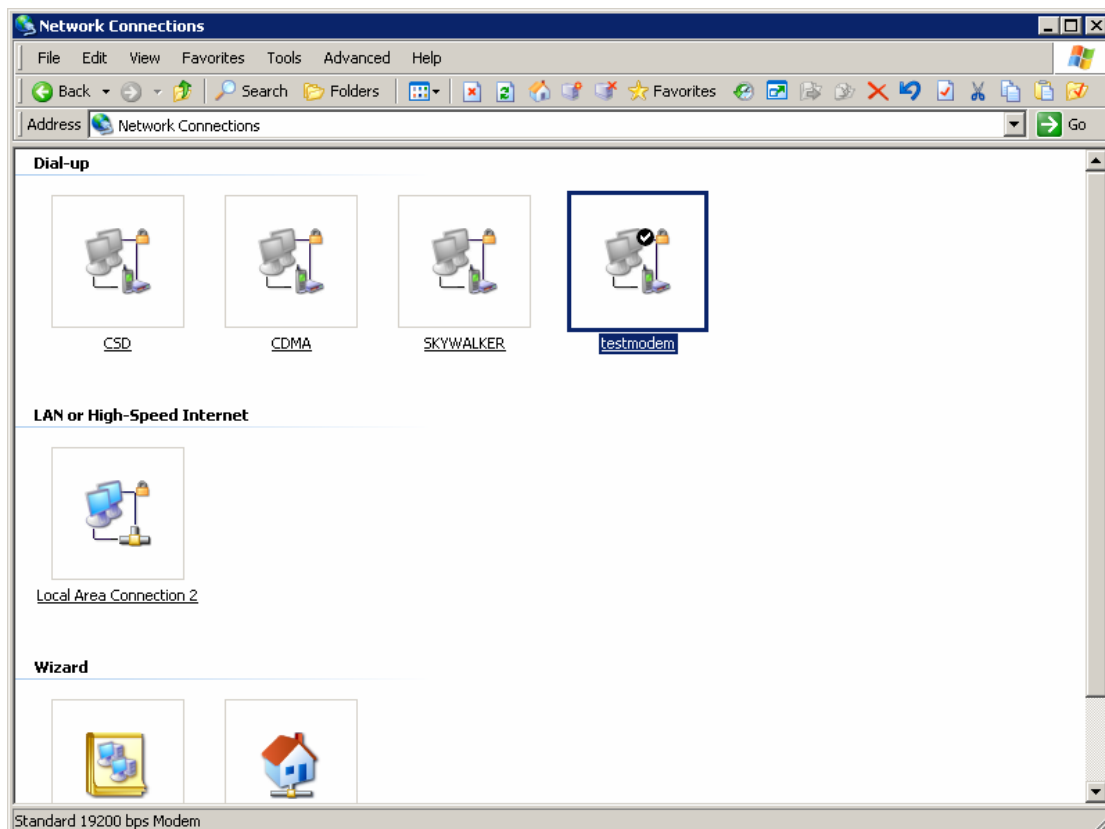
(example to cdma modem)

Click "next" button, as showing below picture, Click "Finish" to succeed your new Connection installation



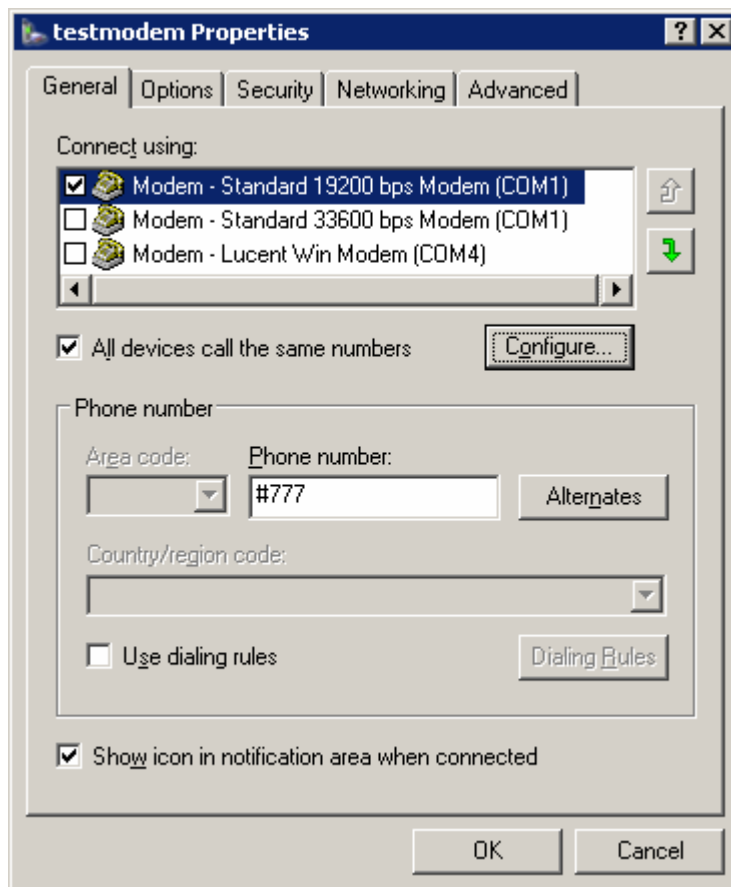
**Notice:** The modem may be initialized for Chinese market options. If it is, it should be changed with your local operator initializations.

Every newly created dial-up connection should be configured before using it to establish a PPP connection. Select the dial-up connection you want to configure. And click the “Properties,

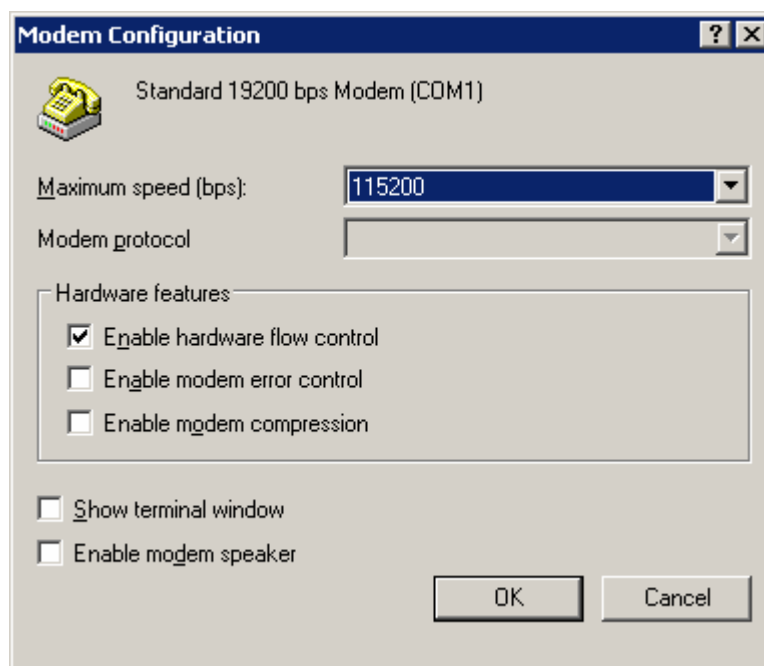




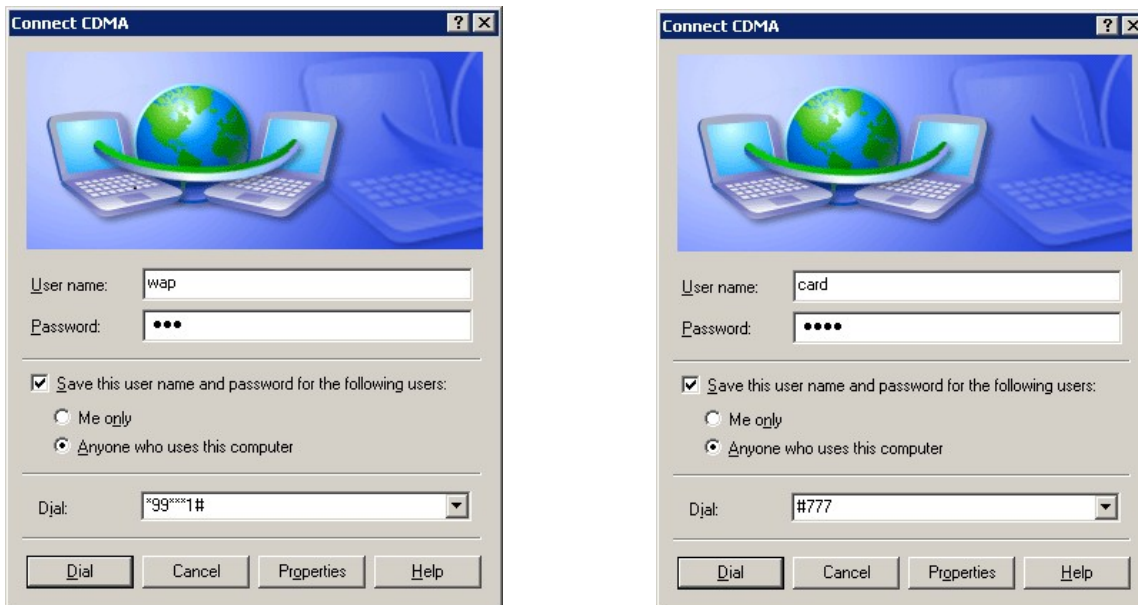
Select a right device as you're just having setup modem. Make an example to "modem standard 19200bps modem (com 1). Then Click "configure" button to continue.



Setting Maximum speed (Bps) is 115200 and click "ok" to finish modem configuration.



### 3.3.4 Login on network



Double click new network connection, dial up directly, depends on the network, input user name and password both,

If modem type is gsm that user name and password both are “wap”,  
If modem type is cdma that user name and password both is “Card”.

After detecting user name and password, login on network. The symbol of dial-up network will appear at the right corner, open IE and then you can browse web. If in connect network have any problem. Please sure

- A. Your SIM block GPRS is CMNET server, but CNWAP server
- B. For else Internet Explorer of network set is right
- C. It's without any modem is running in the currently computer

### 3.4 Setting APN or VPDN

When you dial-up network, you need to set up APN or VPDN configuration after you created a19200 modem. You need to input extra initialization command in different network

Click “Advanced” tab, Here, you can add or change settings by filling in Extra initialization commands at “Advanced” tab.

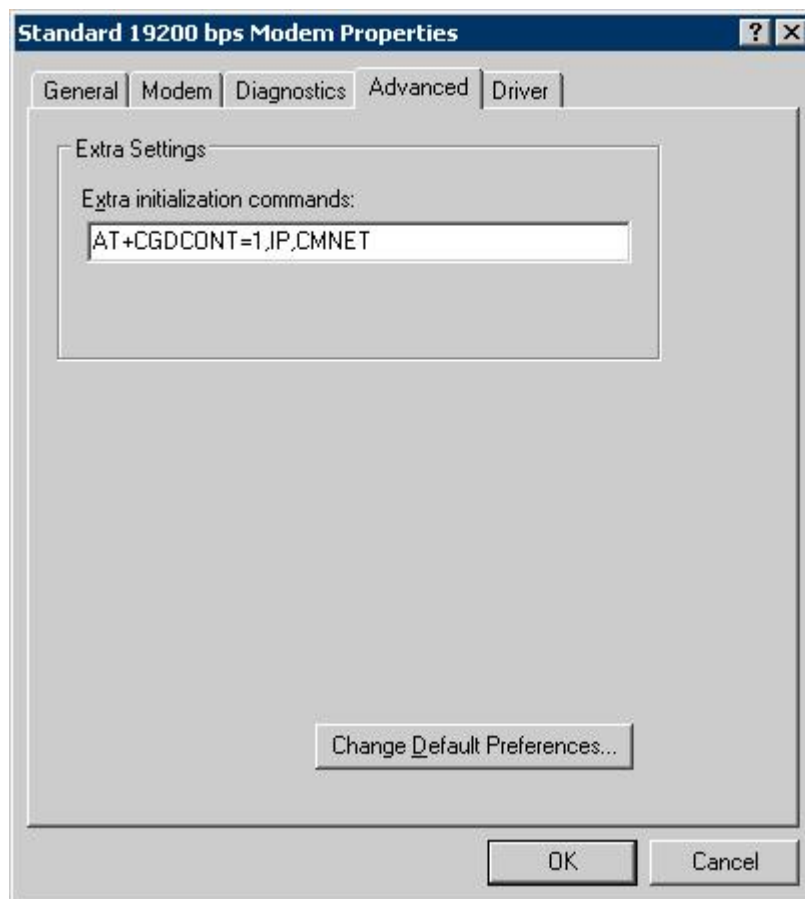
**Notice: the Dial-up function is not only supported by the GSM Modem, but also for other modems**

### 3.4.1 Setting APN

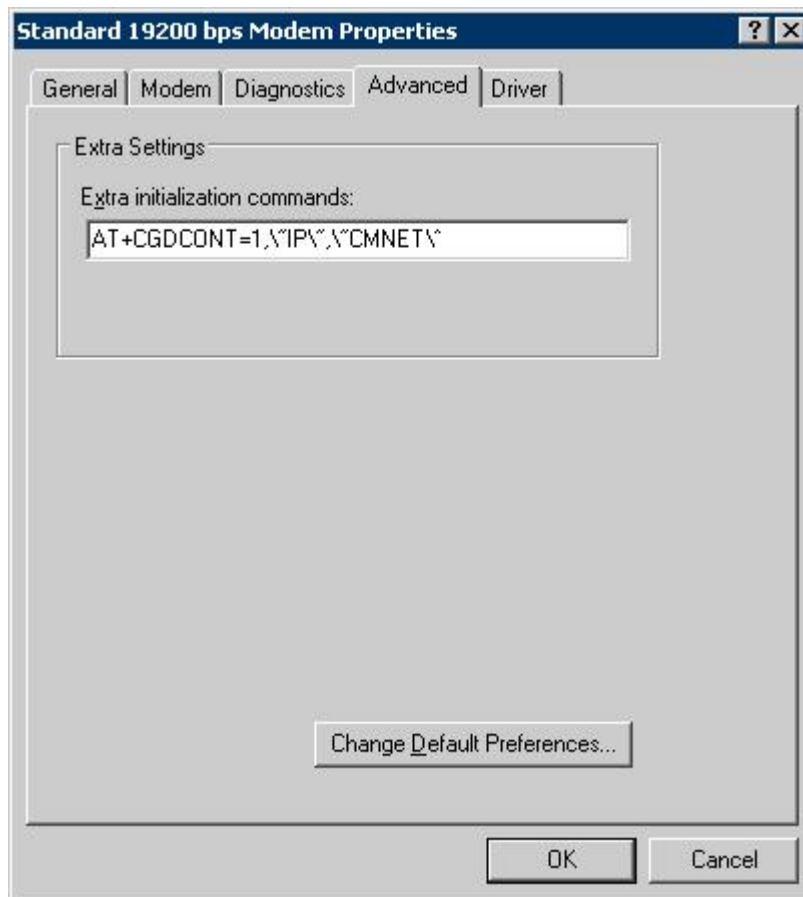
Extra initialization commands:

GSM: AT+CGDCONT=1, IP, CMNET

GSM: AT+CGDCONT=1, \"IP\", \"CMNET\"

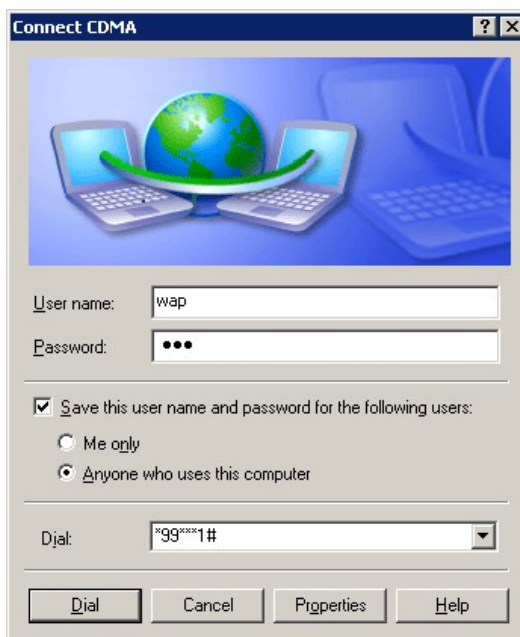


(this picture is the example for GSM modem)



(example to GSM modem)

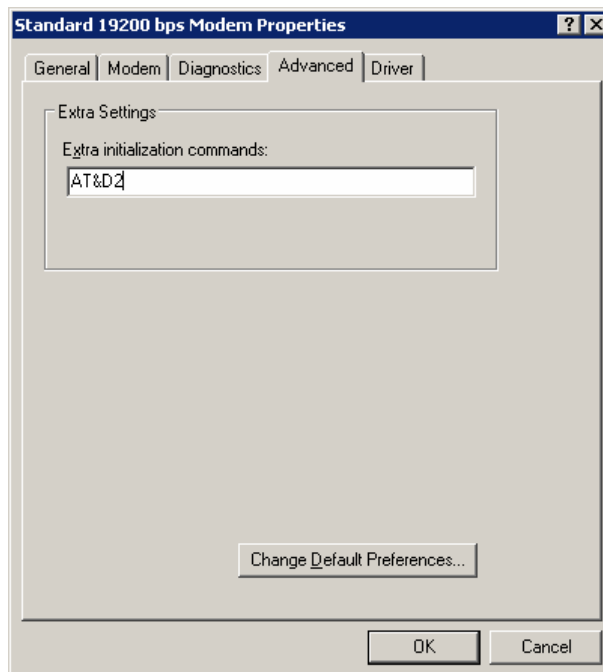
It showing below picture, You may be required to put a User name and a Password for the dial-up connection; setting the APN user name and password both are "wap" and save it



### 3.4.2 Setting VPDN

VPDN Extra initialization commands:

AT&D2 // suitable for CDMA/EVDO Modem



(example to GSM modem)

Double click new network connection, dial up directly, depend on the network, input VPDN user name and password both are "card".



# Chapter 4

## 4 Terminology

<b>Internet</b>	A network of computer networks which operates world-wide using a common set of communications protocols.
<b>GPRS</b>	Short for General Packet Radio Service, a standard for Cellular communications which runs at speeds up to 115 kilobits per
<b>SIM</b>	Subscriber Identity Module – a small rectangular piece of plastic with a layer of copper. Provided as a part of mobile telephone service.
<b>ISP</b>	Internet Service Provider
<b>DDNS</b>	Dynamic Domain Name Server